TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-104365-1
Client Project/Site: Powerton CCR
Sampling Event: Quarterly Powerton CCR Samplling

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*12/14/2015 3:36:34 PM*

Bonnie Stadelmann, Senior Project Manager
(708)534-5200
bonnie.stadelmann@testamericainc.com

LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-104365-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-104365-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 11/20/2015 2:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.7º C and 3.1º C.

**Metals**
Method(s) 6020A: The low level check standard (ICVL) recovery associated with batch 500-314797 is above the acceptance criteria for the following analyte: Beryllium. The associated sample concentrations were non-detect; therefore, re-analysis was not performed.

Method(s) 6020A: The laboratory control sample (LCS) for batch preparation batch 500-314478 and analytical batch 500-314797 recovered outside control limits for the following analytes: Lead and Thallium. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-1

## Client Sample ID: MW-01

## Lab Sample ID: 500-104365-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.057 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.0 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 98 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 530 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 44 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 93 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-104365-1 | MW-01 | Water | 11/16/15 14:45 | 11/20/15 14:45 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-1

## Client Sample ID: MW-01

**Date Collected: 11/16/15 14:45**
**Date Received: 11/20/15 14:45**

## Lab Sample ID: 500-104365-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/03/15 16:00 | 12/08/15 12:18 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/30/15 09:15 | 12/01/15 19:34 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/30/15 09:15 | 12/01/15 19:34 | 1 |
| **Barium** | **0.057** | | 0.0025 | | mg/L | | 11/30/15 09:15 | 12/01/15 19:34 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 11/30/15 09:15 | 12/01/15 19:34 | 1 |
| **Boron** | **1.0** | | 0.050 | | mg/L | | 11/30/15 09:15 | 12/01/15 19:34 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/30/15 09:15 | 12/01/15 19:34 | 1 |
| **Calcium** | **98** | | 0.20 | | mg/L | | 11/30/15 09:15 | 12/02/15 13:56 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/30/15 09:15 | 12/01/15 19:34 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/30/15 09:15 | 12/01/15 19:34 | 1 |
| Lead | <0.00050 | * | 0.00050 | | mg/L | | 11/30/15 09:15 | 12/01/15 19:34 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/30/15 09:15 | 12/01/15 19:34 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/30/15 09:15 | 12/01/15 19:34 | 1 |
| Thallium | <0.0020 | * | 0.0020 | | mg/L | | 11/30/15 09:15 | 12/01/15 19:34 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/30/15 14:15 | 12/01/15 14:03 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **530** | | 10 | | mg/L | | | 11/21/15 07:25 | 1 |
| **Chloride** | **44** | | 2.0 | | mg/L | | | 12/01/15 16:27 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 11/21/15 18:11 | 1 |
| **Sulfate** | **93** | | 20 | | mg/L | | | 12/07/15 04:36 | 4 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-1

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| ^ | ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits. |
| * | LCS or LCSD is outside acceptance limits. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Filtration Batch: 314464

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 500-314464/1-B | Method Blank | Total Recoverable | Water | FILTRATION | |

### Prep Batch: 314478

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-104365-1 | MW-01 | Total Recoverable | Water | 3005A | |
| LCS 500-314478/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| MB 500-314464/1-B | Method Blank | Total Recoverable | Water | 3005A | 314464 |

### Prep Batch: 314529

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-104365-1 | MW-01 | Total/NA | Water | 7470A | |
| LCS 500-314529/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| MB 500-314529/12-A | Method Blank | Total/NA | Water | 7470A | |

### Analysis Batch: 314697

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-104365-1 | MW-01 | Total/NA | Water | 7470A | 314529 |
| LCS 500-314529/13-A | Lab Control Sample | Total/NA | Water | 7470A | 314529 |
| MB 500-314529/12-A | Method Blank | Total/NA | Water | 7470A | 314529 |

### Analysis Batch: 314797

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-104365-1 | MW-01 | Total Recoverable | Water | 6020A | 314478 |
| LCS 500-314478/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 314478 |
| MB 500-314464/1-B | Method Blank | Total Recoverable | Water | 6020A | 314478 |

### Analysis Batch: 314972

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-104365-1 | MW-01 | Total Recoverable | Water | 6020A | 314478 |
| LCS 500-314478/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 314478 |
| MB 500-314464/1-B | Method Blank | Total Recoverable | Water | 6020A | 314478 |

### Prep Batch: 315088

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-104365-1 | MW-01 | Total Recoverable | Water | 3005A | |
| LCS 500-315088/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| MB 500-315088/1-A | Method Blank | Total Recoverable | Water | 3005A | |

### Analysis Batch: 315576

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-104365-1 | MW-01 | Total Recoverable | Water | 6010C | 315088 |
| LCS 500-315088/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 315088 |
| MB 500-315088/1-A | Method Blank | Total Recoverable | Water | 6010C | 315088 |

## General Chemistry

### Analysis Batch: 313548

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-104365-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-104365-1 DU | MW-01 | Total/NA | Water | SM 2540C | |

## General Chemistry (Continued)

### Analysis Batch: 313548 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-313548/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| MB 500-313548/1 | Method Blank | Total/NA | Water | SM 2540C | |

### Analysis Batch: 313599

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-104365-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| LCS 500-313599/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| MB 500-313599/3 | Method Blank | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 314726

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-104365-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-314726/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-314726/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 315345

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-104365-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-315345/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-315345/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-315088/1-A**
**Matrix: Water**
**Analysis Batch: 315576**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 315088**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/03/15 16:00 | 12/08/15 12:10 | 1 |

**Lab Sample ID: LCS 500-315088/2-A**
**Matrix: Water**
**Analysis Batch: 315576**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 315088**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.517 | | mg/L | | 103 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-314464/1-B**
**Matrix: Water**
**Analysis Batch: 314797**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 314478**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/30/15 09:15 | 12/01/15 18:45 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/30/15 09:15 | 12/01/15 18:45 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 11/30/15 09:15 | 12/01/15 18:45 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 11/30/15 09:15 | 12/01/15 18:45 | 1 |
| Boron | <0.050 | | 0.050 | | mg/L | | 11/30/15 09:15 | 12/01/15 18:45 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/30/15 09:15 | 12/01/15 18:45 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/30/15 09:15 | 12/01/15 18:45 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/30/15 09:15 | 12/01/15 18:45 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/30/15 09:15 | 12/01/15 18:45 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/30/15 09:15 | 12/01/15 18:45 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/30/15 09:15 | 12/01/15 18:45 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/30/15 09:15 | 12/01/15 18:45 | 1 |

**Lab Sample ID: MB 500-314464/1-B**
**Matrix: Water**
**Analysis Batch: 314972**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 314478**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | <0.20 | | 0.20 | | mg/L | | 11/30/15 09:15 | 12/02/15 13:48 | 1 |

**Lab Sample ID: LCS 500-314478/2-A**
**Matrix: Water**
**Analysis Batch: 314797**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 314478**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.567 | | mg/L | | 113 | 80 - 120 |
| Arsenic | 0.100 | 0.106 | | mg/L | | 106 | 80 - 120 |
| Barium | 0.500 | 0.569 | | mg/L | | 114 | 80 - 120 |
| Beryllium | 0.0500 | 0.0538 | ^ | mg/L | | 108 | 80 - 120 |
| Boron | 1.00 | 1.05 | | mg/L | | 105 | 80 - 120 |
| Cadmium | 0.0500 | 0.0539 | | mg/L | | 108 | 80 - 120 |
| Chromium | 0.200 | 0.230 | | mg/L | | 115 | 80 - 120 |
| Cobalt | 0.500 | 0.576 | | mg/L | | 115 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-314478/2-A**
**Matrix: Water**
**Analysis Batch: 314797**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 314478**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lead | 0.100 | 0.122 | * | mg/L | | 122 | 80 - 120 |
| Molybdenum | 1.00 | 1.09 | | mg/L | | 109 | 80 - 120 |
| Selenium | 0.100 | 0.107 | | mg/L | | 107 | 80 - 120 |
| Thallium | 0.100 | 0.126 | * | mg/L | | 126 | 80 - 120 |

**Lab Sample ID: LCS 500-314478/2-A**
**Matrix: Water**
**Analysis Batch: 314972**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 314478**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Calcium | 10.0 | 11.1 | | mg/L | | 111 | 80 - 120 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-314529/12-A**
**Matrix: Water**
**Analysis Batch: 314697**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 314529**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/30/15 14:15 | 12/01/15 13:04 | 1 |

**Lab Sample ID: LCS 500-314529/13-A**
**Matrix: Water**
**Analysis Batch: 314697**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 314529**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00192 | | mg/L | | 96 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-313548/1**
**Matrix: Water**
**Analysis Batch: 313548**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 11/21/15 06:30 | 1 |

**Lab Sample ID: LCS 500-313548/2**
**Matrix: Water**
**Analysis Batch: 313548**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 296 | | mg/L | | 118 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: 500-104365-1 DU** — **Client Sample ID: MW-01**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 313548**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 530 | | | 500 | | mg/L | | | | 5 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-314726/4** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 314726**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 12/01/15 16:14 | 1 |

**Lab Sample ID: LCS 500-314726/5** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 314726**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 52.6 | | mg/L | | 105 | 80 - 120 | | |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-313599/3** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 313599**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 11/21/15 17:01 | 1 |

**Lab Sample ID: LCS 500-313599/4** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 313599**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | | | 10.0 | 9.98 | | mg/L | | 100 | 80 - 120 | | |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-315345/3** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 315345**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 12/07/15 04:29 | 1 |

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: LCS 500-315345/4**
**Matrix: Water**
**Analysis Batch: 315345**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 19.5 | | mg/L | | 97 | 80 - 120 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-1

## Client Sample ID: MW-01

**Date Collected: 11/16/15 14:45**
**Date Received: 11/20/15 14:45**

## Lab Sample ID: 500-104365-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 315088 | 12/03/15 16:00 | PJH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 315576 | 12/08/15 12:18 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 314478 | 11/30/15 09:15 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 314972 | 12/02/15 13:56 | BJH | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 314478 | 11/30/15 09:15 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 314797 | 12/01/15 19:34 | BJH | TAL CHI |
| Total/NA | Prep | 7470A | | | 314529 | 11/30/15 14:15 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 314697 | 12/01/15 14:03 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 313548 | 11/21/15 07:25 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 314726 | 12/01/15 16:27 | CCK | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 313599 | 11/21/15 18:11 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 315345 | | CLB | TAL CHI |
| | | | | | (Start) | 12/07/15 04:36 | | |
| | | | | | (End) | 12/07/15 04:37 | | |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-1

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-16 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chicag
2417 Bond St.
University Park, IL 60
708-534-5200
Fax. 708-534-5211

500-104365 COC

**Report To:**

| | |
|---|---|
| Contact: | Richard Gnat |
| Company: | KPRG and Associates, Inc |
| Address: | 14665 W. Lisbon Rd., Suite 2B |
| | Brookfield, WI 53005 |
| Phone: | 262-781-0475 |
| Email: | richardg@kprginc.com |

**Bill To:**

| | |
|---|---|
| Contact: | Accounts Payable |
| Company: | NRG Energy |
| Address: | 112 Telly St |
| | New Roads, LA 70760 |
| Phone: | 713 465-4113 |
| Email | invoices@nrg.com |
| PO #: | 4501569118 |

**Lab Lot #** 500-104365

| Package Sealed | Samples Sealed |
|---|---|
| Yes (No) | Yes (No) |
| **Received on Ice** | **Samples Intact** |
| (Yes) No | (Yes) No N/A |

**Temperature °C of Cooler** 3.1,2.7

| Within Hold Time | Preserv. Indicated |
|---|---|
| (Yes) No | (Yes) No N/A |
| **pH Check OK** | **Res $CL_2$ Check OK** |
| (Yes) No | Yes No (N/A) |

Sample Labels and COC Agree: (Yes) No COC not present

Sampler Name: Ian John Howieson

Signature:

Project Name: POWERTON CCR QUARTERLY

TestAmerica Project Number: [redacted] 500116I2

Project Location: [redacted] PEKIN, IL

TAT: 15 Days

Lab PM: Bonnie Stadelmann

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # Cont. | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | [redacted] MW-01 | 11-16-15 | 14:45 | W | 3 | X | X | X | X | X | X | |
| 2 | | MW-02 | 11-17-15 | 09:00 | W | 3 | | | | | | | |
| 3 | | MW-03 | 11-17-15 | 11:25 | W | 3 | | | | | | | |
| 4 | | MW-04 | 11-17-15 | 12:50 | W | 3 | | | | | | | |
| 5 | | MW-05 | 11-17-15 | 14:45 | W | 3 | | | | | | | |
| 6 | | MW-08 | 11-18-15 | 08:58 | W | 3 | | | | | | | |
| 7 | | MW-09 | 11-18-15 | 14:25 | W | 3 | | | | | | | |
| 8 | | MW-10 | 11-18-15 | 16:30 | W | 3 | | | | | | | |
| 9 | | MW-12 | 11-19-15 | 13:45 | W | 3 | | | | | | | |
| 10 | | MW-15 | 11-18-15 | 16:10 | W | 3 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| ISH | KPRG | 11-20-15 | 14:45 | [illegible] Keedy | TA-CHI | 11/20/15 | 1445 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

_____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received ___/___/___

Courier:

Hand Delivered ☐

Bill of Lading:

1 of 2

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING


**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211


| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | Accounts Payable |
| Company: | KPRG and Associates, Inc | Company: | NRG Energy |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | 112 Telly St |
| | Brookfield, WI 53005 | | New Roads, LA 70760 |
| Phone: | 262-781-0475 | Phone: | 713 465-4113 |
| Email: | richardg@kprginc.com | Email | invoices@nrg.com |
| | | PO #: | 4501569118 |

**Lab Lot #** 500-104365

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No N/A |

Temperature °C of Cooler

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No N/A |
| **pH Check OK** | **Res $CL_2$ Check OK** |
| Yes No | Yes No N/A |

Sample Labels and COC Agree
Yes No COC not present

Sampler Name: Ian John Howieson
Signature:
Project Name: POWERTON CCR QUARTERLY
TestAmerica Project Number: [redacted] 500116I2
Project Location: [redacted] PEKIN, IL
TAT: 15 Days
Lab PM: Bonnie Stadelmann

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | Comp/Grab | # / Cont. | Volume | Preserv. | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C - TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | [redacted] MW-17 | 11-19-15 | 12:10 | W | 3 | | | | X | X | X | X | X | X | |
| 2 | | MW-18 | 11-19-15 | 10:55 | W | 3 | | | | X | X | X | X | X | X | |
| 3 | | DUPLICATE | 11-17-15 | — | W | 3 | | | | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| ISH | KPRG | 11-20-15 | 14:45 | Andrew Scott | TA-CHI | 11/20/15 | 1445 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

_____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received ___/___/___
Courier:
Hand Delivered ☐
Bill of Lading:

2 of 2

STL-8208 (0600)

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-104365-1

**Login Number: 104365**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.1,2.7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica

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# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-104365-5
Client Project/Site: Powerton CCR
Sampling Event: Quarterly Powerton CCR Samplling

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*1/28/2016 2:37:02 PM*
Jim Knapp, Project Manager II
(630)758-0262
jim.knapp@testamericainc.com

Designee for

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-5

## Job ID: 500-104365-5

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-104365-5**

**Comments**
No additional comments.

**Receipt**
The samples were received on 11/20/2015 2:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.7º C and 3.1º C.

**RAD**
Method(s) PrecSep_0: Radium-228 Prep Batch 160-230278:
Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-08 (500-104365-6), MW-09 (500-104365-7), MW-11 (500-104365-8), MW-12 (500-104365-9), MW-15 (500-104365-10), MW-17 (500-104365-11), MW-18 (500-104365-12) and Duplicate (500-104365-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead. Lot 500-104365 was prepared at a reduced aliquot due to limited sample volume available.

Method(s) PrecSep_0: Radium 228 Prep Batch: 160-233545
Insufficient sample volume was available to perform a sample duplicate (DUP) for sample MW-08 (500-104365-6), MW-09 (500-104365-7), MW-11 (500-104365-8), MW-12 (500-104365-9), MW-15 (500-104365-10), MW-17 (500-104365-11), MW-18 (500-104365-12) and Duplicate (500-104365-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead.

Method(s) PrecSep-21: Radium-226 Prep Batch 160-230274:
Insufficient sample volume was available to perform a sample duplicate (DUP) for the following samples: MW-08 (500-104365-6), MW-09 (500-104365-7), MW-11 (500-104365-8), MW-12 (500-104365-9), MW-15 (500-104365-10), MW-17 (500-104365-11), MW-18 (500-104365-12) and Duplicate (500-104365-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead. Lot 500-104365 was prepared at a reduced aliquot due to limited sample volume available.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-233548:
insufficient sample volume was available to perform a sample duplicate (DUP) for sample MW-08 (500-104365-6), MW-09 (500-104365-7), MW-11 (500-104365-8), MW-12 (500-104365-9), MW-15 (500-104365-10), MW-17 (500-104365-11), MW-18 (500-104365-12) and Duplicate (500-104365-13). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-5

## Client Sample ID: MW-08 — Lab Sample ID: 500-104365-6

No Detections.

## Client Sample ID: MW-09 — Lab Sample ID: 500-104365-7

No Detections.

## Client Sample ID: MW-11 — Lab Sample ID: 500-104365-8

No Detections.

## Client Sample ID: MW-12 — Lab Sample ID: 500-104365-9

No Detections.

## Client Sample ID: MW-15 — Lab Sample ID: 500-104365-10

No Detections.

## Client Sample ID: MW-17 — Lab Sample ID: 500-104365-11

No Detections.

## Client Sample ID: MW-18 — Lab Sample ID: 500-104365-12

No Detections.

## Client Sample ID: Duplicate — Lab Sample ID: 500-104365-13

No Detections.

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-5

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-5

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-104365-6 | MW-08 | Water | 11/18/15 09:58 | 11/20/15 14:45 |
| 500-104365-7 | MW-09 | Water | 11/18/15 11:25 | 11/20/15 14:45 |
| 500-104365-8 | MW-11 | Water | 11/18/15 16:30 | 11/20/15 14:45 |
| 500-104365-9 | MW-12 | Water | 11/19/15 13:45 | 11/20/15 14:45 |
| 500-104365-10 | MW-15 | Water | 11/18/15 16:10 | 11/20/15 14:45 |
| 500-104365-11 | MW-17 | Water | 11/19/15 12:10 | 11/20/15 14:45 |
| 500-104365-12 | MW-18 | Water | 11/19/15 10:55 | 11/20/15 14:45 |
| 500-104365-13 | Duplicate | Water | 11/17/15 00:00 | 11/20/15 14:45 |

## Client Sample ID: MW-08

**Date Collected: 11/18/15 09:58**
**Date Received: 11/20/15 14:45**

## Lab Sample ID: 500-104365-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.180 | U | 0.174 | 0.174 | 1.00 | 0.275 | pCi/L | 12/31/15 14:35 | 01/26/16 06:58 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *54.4* | | *40 - 110* | *12/31/15 14:35* | *01/26/16 06:58* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0872 | U | 0.320 | 0.320 | 1.00 | 0.559 | pCi/L | 01/21/16 14:08 | 01/27/16 11:46 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *107* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:46* | *1* |
| *Y Carrier* | *91.8* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:46* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.267 | U | 0.364 | 0.365 | 5.00 | 0.559 | pCi/L | | 01/28/16 13:10 | 1 |

## Client Sample ID: MW-09

**Date Collected: 11/18/15 11:25**
**Date Received: 11/20/15 14:45**

## Lab Sample ID: 500-104365-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.125 | U | 0.171 | 0.172 | 1.00 | 0.289 | pCi/L | 12/31/15 14:35 | 01/26/16 06:58 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *42.3* | | *40 - 110* | *12/31/15 14:35* | *01/26/16 06:58* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.123 | U | 0.377 | 0.377 | 1.00 | 0.655 | pCi/L | 01/21/16 14:08 | 01/27/16 11:46 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.6* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:46* | *1* |
| *Y Carrier* | *89.9* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:46* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.248 | U | 0.414 | 0.415 | 5.00 | 0.655 | pCi/L | | 01/28/16 13:10 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-5

## Client Sample ID: MW-11

**Date Collected: 11/18/15 16:30**
**Date Received: 11/20/15 14:45**

## Lab Sample ID: 500-104365-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.338** | | 0.199 | 0.202 | 1.00 | 0.284 | pCi/L | 12/31/15 14:35 | 01/26/16 06:58 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *58.8* | | *40 - 110* | *12/31/15 14:35* | *01/26/16 06:58* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.450 | U | 0.463 | 0.465 | 1.00 | 0.755 | pCi/L | 01/21/16 14:08 | 01/27/16 11:46 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.3* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:46* | *1* |
| *Y Carrier* | *94.0* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:46* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.788** | | 0.504 | 0.506 | 5.00 | 0.755 | pCi/L | | 01/28/16 13:10 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-5

**Client Sample ID: MW-12**
**Date Collected: 11/19/15 13:45**
**Date Received: 11/20/15 14:45**

**Lab Sample ID: 500-104365-9**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0580 | U | 0.134 | 0.134 | 1.00 | 0.244 | pCi/L | 12/31/15 14:35 | 01/26/16 06:58 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *44.8* | | *40 - 110* | *12/31/15 14:35* | *01/26/16 06:58* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0689 | U | 0.390 | 0.390 | 1.00 | 0.685 | pCi/L | 01/21/16 14:08 | 01/27/16 11:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.0* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:47* | *1* |
| *Y Carrier* | *89.9* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:47* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.127 | U | 0.412 | 0.412 | 5.00 | 0.685 | pCi/L | | 01/28/16 13:10 | 1 |

## Client Sample ID: MW-15

**Date Collected: 11/18/15 16:10**
**Date Received: 11/20/15 14:45**

## Lab Sample ID: 500-104365-10

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.227 | | 0.147 | 0.148 | 1.00 | 0.202 | pCi/L | 12/31/15 14:35 | 01/26/16 06:59 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *59.1* | | *40 - 110* | *12/31/15 14:35* | *01/26/16 06:59* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.214 | U | 0.354 | 0.355 | 1.00 | 0.599 | pCi/L | 01/21/16 14:08 | 01/27/16 11:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.7* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:47* | *1* |
| *Y Carrier* | *88.8* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:47* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.441 | U | 0.383 | 0.384 | 5.00 | 0.599 | pCi/L | | 01/28/16 13:10 | 1 |

## Client Sample ID: MW-17

**Date Collected: 11/19/15 12:10**
**Date Received: 11/20/15 14:45**

## Lab Sample ID: 500-104365-11

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.340** | | 0.154 | 0.157 | 1.00 | 0.182 | pCi/L | 12/31/15 14:35 | 01/26/16 06:59 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *66.9* | | *40 - 110* | *12/31/15 14:35* | *01/26/16 06:59* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.448 | U | 0.483 | 0.484 | 1.00 | 0.790 | pCi/L | 01/21/16 14:08 | 01/27/16 11:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.7* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:47* | *1* |
| *Y Carrier* | *81.3* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:47* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.788 | U | 0.507 | 0.509 | 5.00 | 0.790 | pCi/L | | 01/28/16 13:10 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-5

**Client Sample ID: MW-18**
**Date Collected: 11/19/15 10:55**
**Date Received: 11/20/15 14:45**

**Lab Sample ID: 500-104365-12**
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.286 | | 0.148 | 0.150 | 1.00 | 0.183 | pCi/L | 12/31/15 14:35 | 01/26/16 07:02 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *61.6* | | *40 - 110* | *12/31/15 14:35* | *01/26/16 07:02* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.328 | U | 0.503 | 0.504 | 1.00 | 0.845 | pCi/L | 01/21/16 14:08 | 01/27/16 11:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *74.6* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:47* | *1* |
| *Y Carrier* | *93.6* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:47* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.613 | U | 0.524 | 0.526 | 5.00 | 0.845 | pCi/L | | 01/28/16 13:10 | 1 |

## Client Sample ID: Duplicate

**Date Collected: 11/17/15 00:00**
**Date Received: 11/20/15 14:45**

## Lab Sample ID: 500-104365-13

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.176 | U | 0.163 | 0.164 | 1.00 | 0.252 | pCi/L | 12/31/15 14:35 | 01/26/16 07:02 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *45.9* | | *40 - 110* | *12/31/15 14:35* | *01/26/16 07:02* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0751 | U | 0.409 | 0.409 | 1.00 | 0.720 | pCi/L | 01/21/16 14:08 | 01/27/16 11:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *84.6* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:47* | *1* |
| *Y Carrier* | *92.1* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:47* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.252 | U | 0.440 | 0.441 | 5.00 | 0.720 | pCi/L | | 01/28/16 13:10 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-5

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-5

## Rad

### Prep Batch: 230274

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-104365-6 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-104365-7 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-104365-8 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-104365-9 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-104365-10 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-104365-11 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-104365-12 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-104365-13 | Duplicate | Total/NA | Water | PrecSep-21 | |
| LCS 160-230274/2-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| LCSD 160-230274/3-A | Lab Control Sample Dup | Total/NA | Water | PrecSep-21 | |
| MB 160-230274/1-A | Method Blank | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 233545

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-104365-6 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-104365-7 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-104365-8 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-104365-9 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-104365-10 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-104365-11 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-104365-12 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-104365-13 | Duplicate | Total/NA | Water | PrecSep_0 | |
| LCS 160-233545/2-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| LCSD 160-233545/3-A | Lab Control Sample Dup | Total/NA | Water | PrecSep_0 | |
| MB 160-233545/1-A | Method Blank | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-230274/1-A**
**Matrix: Water**
**Analysis Batch: 234234**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 230274**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.08369 | U | 0.0601 | 0.0606 | 1.00 | 0.0884 | pCi/L | 12/31/15 14:35 | 01/26/16 06:56 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.7* | | *40 - 110* | *12/31/15 14:35* | *01/26/16 06:56* | *1* |

**Lab Sample ID: LCS 160-230274/2-A**
**Matrix: Water**
**Analysis Batch: 234234**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 230274**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.2 | 10.64 | | 1.08 | 1.00 | 0.0957 | pCi/L | 95 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *66.6* | | *40 - 110* |

**Lab Sample ID: LCSD 160-230274/3-A**
**Matrix: Water**
**Analysis Batch: 234234**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 230274**

| Analyte | | | Spike Added | LCSD Result | LCSD Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.2 | 10.56 | | 1.10 | 1.00 | 0.150 | pCi/L | 95 | 68 - 137 | 0.03 | 1 |

| *Carrier* | *LCSD %Yield* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *50.3* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-233545/1-A**
**Matrix: Water**
**Analysis Batch: 234621**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 233545**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.2403 | U | 0.331 | 0.332 | 1.00 | 0.553 | pCi/L | 01/21/16 14:08 | 01/27/16 11:45 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *105* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:45* | *1* |
| *Y Carrier* | *88.4* | | *40 - 110* | *01/21/16 14:08* | *01/27/16 11:45* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-233545/2-A**
**Matrix: Water**
**Analysis Batch: 234621**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 233545**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 18.9 | 13.65 | | 1.59 | 1.00 | 0.525 | pCi/L | 72 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *106* | | *40 - 110* |
| *Y Carrier* | *93.3* | | *40 - 110* |

**Lab Sample ID: LCSD 160-233545/3-A**
**Matrix: Water**
**Analysis Batch: 234621**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 233545**

| Analyte | | | Spike Added | LCSD Result | LCSD Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 18.9 | 11.42 | | 1.38 | 1.00 | 0.516 | pCi/L | 61 | 56 - 140 | 0.76 | 1 |

| *Carrier* | *LCSD %Yield* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *110* | | *40 - 110* |
| *Y Carrier* | *90.3* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-5

## Client Sample ID: MW-08

**Date Collected: 11/18/15 09:58**
**Date Received: 11/20/15 14:45**

**Lab Sample ID: 500-104365-6**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 230274 | 12/31/15 14:35 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 234234 | 01/26/16 06:58 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 233545 | 01/21/16 14:08 | CMS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 234621 | 01/27/16 11:46 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 234953 | 01/28/16 13:10 | CAH | TAL SL |

## Client Sample ID: MW-09

**Date Collected: 11/18/15 11:25**
**Date Received: 11/20/15 14:45**

**Lab Sample ID: 500-104365-7**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 230274 | 12/31/15 14:35 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 234234 | 01/26/16 06:58 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 233545 | 01/21/16 14:08 | CMS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 234621 | 01/27/16 11:46 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 234953 | 01/28/16 13:10 | CAH | TAL SL |

## Client Sample ID: MW-11

**Date Collected: 11/18/15 16:30**
**Date Received: 11/20/15 14:45**

**Lab Sample ID: 500-104365-8**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 230274 | 12/31/15 14:35 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 234234 | 01/26/16 06:58 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 233545 | 01/21/16 14:08 | CMS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 234621 | 01/27/16 11:46 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 234953 | 01/28/16 13:10 | CAH | TAL SL |

## Client Sample ID: MW-12

**Date Collected: 11/19/15 13:45**
**Date Received: 11/20/15 14:45**

**Lab Sample ID: 500-104365-9**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 230274 | 12/31/15 14:35 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 234234 | 01/26/16 06:58 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 233545 | 01/21/16 14:08 | CMS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 234621 | 01/27/16 11:47 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 234953 | 01/28/16 13:10 | CAH | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-5

## Client Sample ID: MW-15

**Date Collected: 11/18/15 16:10**
**Date Received: 11/20/15 14:45**

**Lab Sample ID: 500-104365-10**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 230274 | 12/31/15 14:35 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 234234 | 01/26/16 06:59 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 233545 | 01/21/16 14:08 | CMS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 234621 | 01/27/16 11:47 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 234953 | 01/28/16 13:10 | CAH | TAL SL |

## Client Sample ID: MW-17

**Date Collected: 11/19/15 12:10**
**Date Received: 11/20/15 14:45**

**Lab Sample ID: 500-104365-11**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 230274 | 12/31/15 14:35 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 234234 | 01/26/16 06:59 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 233545 | 01/21/16 14:08 | CMS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 234621 | 01/27/16 11:47 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 234953 | 01/28/16 13:10 | CAH | TAL SL |

## Client Sample ID: MW-18

**Date Collected: 11/19/15 10:55**
**Date Received: 11/20/15 14:45**

**Lab Sample ID: 500-104365-12**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 230274 | 12/31/15 14:35 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 234236 | 01/26/16 07:02 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 233545 | 01/21/16 14:08 | CMS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 234621 | 01/27/16 11:47 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 234953 | 01/28/16 13:10 | CAH | TAL SL |

## Client Sample ID: Duplicate

**Date Collected: 11/17/15 00:00**
**Date Received: 11/20/15 14:45**

**Lab Sample ID: 500-104365-13**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 230274 | 12/31/15 14:35 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 234236 | 01/26/16 07:02 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 233545 | 01/21/16 14:08 | CMS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 234621 | 01/27/16 11:47 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 234953 | 01/28/16 13:10 | CAH | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-5

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-16 |

## Laboratory: TestAmerica St. Louis

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Alaska | State Program | 10 | MO00054 | 06-30-16 |
| California | ELAP | 9 | 2886 | 03-31-16 |
| Connecticut | State Program | 1 | PH-0241 | 03-31-17 |
| Florida | NELAP | 4 | E87689 | 06-30-16 |
| Illinois | NELAP | 5 | 003757 | 11-30-16 |
| Iowa | State Program | 7 | 373 | 12-01-16 |
| Kansas | NELAP | 7 | E-10236 | 01-31-16 * |
| Kentucky (DW) | State Program | 4 | 90125 | 12-31-16 |
| L-A-B | DoD ELAP | | L2305 | 04-10-16 * |
| Louisiana | NELAP | 6 | 04080 | 06-30-16 |
| Louisiana (DW) | NELAP | 6 | LA160008 | 12-31-16 |
| Maryland | State Program | 3 | 310 | 09-30-16 |
| Missouri | State Program | 7 | 780 | 06-30-16 |
| Nevada | State Program | 9 | MO000542016-1 | 07-31-16 |
| New Jersey | NELAP | 2 | MO002 | 06-30-16 |
| New York | NELAP | 2 | 11616 | 03-31-16 * |
| North Dakota | State Program | 8 | R207 | 06-30-16 |
| NRC | NRC | | 24-24817-01 | 12-31-22 |
| Oklahoma | State Program | 6 | 9997 | 08-31-16 |
| Pennsylvania | NELAP | 3 | 68-00540 | 02-28-16 * |
| South Carolina | State Program | 4 | 85002001 | 06-30-16 |
| Texas | NELAP | 6 | T104704193-15-9 | 07-31-16 |
| USDA | Federal | | P330-07-00122 | 01-09-17 |
| Utah | NELAP | 8 | MO000542015-7 | 07-31-16 |
| Virginia | NELAP | 3 | 460230 | 06-14-16 |
| Washington | State Program | 10 | C592 | 08-30-16 |
| West Virginia DEP | State Program | 3 | 381 | 08-31-16 |

* Certification renewal pending - certification considered valid.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chicag
2417 Bond St.
University Park, IL 60
708-534-5200
Fax. 708-534-5211

500-104365 COC

**Report To:**

| | |
|---|---|
| Contact: | Richard Gnat |
| Company: | KPRG and Associates, Inc |
| Address: | 14665 W. Lisbon Rd., Suite 2B |
| | Brookfield, WI 53005 |
| Phone: | 262-781-0475 |
| Email: | richardg@kprginc.com |

**Bill To:**

| | |
|---|---|
| Contact: | Accounts Payable |
| Company: | NRG Energy |
| Address: | 112 Telly St |
| | New Roads, LA 70760 |
| Phone: | 713 465-4113 |
| Email | invoices@nrg.com |
| PO #: | 4501569118 |

**Lab Lot #** 500-104365

| | |
|---|---|
| Package Sealed: Yes (No) | Samples Sealed: Yes (No) |
| Received on Ice: (Yes) No | Samples Intact: (Yes) No N/A |
| Temperature °C of Cooler: 3.1,2.7 | |
| Within Hold Time: (Yes) No | Preserv. Indicated: (Yes) No N/A |
| pH Check OK: (Yes) No | Res $CL_2$ Check OK: Yes No (N/A) |
| Sample Labels and COC Agree: (Yes) No | COC not present |

Sampler Name: Ian John Howieson

Signature:

Project Name: [redacted] POWERTON CCR QUARTERLY

TestAmerica Project Number: [redacted] 500116I2

Project Location: [redacted] PEKIN, IL

TAT: 15 Days

Lab PM: Bonnie Stadelmann

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # Cont. | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | [redacted] MW-01 | 11-16-15 | 14:45 | W | 3 | X | X | X | X | X | X | |
| 2 | | MW-02 | 11-17-15 | 09:00 | W | 3 | | | | | | | |
| 3 | | MW-03 | 11-17-15 | 11:25 | W | 3 | | | | | | | |
| 4 | | MW-04 | 11-17-15 | 12:50 | W | 3 | | | | | | | |
| 5 | | MW-05 | 11-17-15 | 14:45 | W | 3 | | | | | | | |
| 6 | | MW-08 | 11-18-15 | 08:58 | W | 3 | | | | | | | |
| 7 | | MW-09 | 11-18-15 | 14:25 | W | 3 | | | | | | | |
| 8 | | MW-10 | 11-18-15 | 18:30 | W | 3 | | | | | | | |
| 9 | | MW-12 | 11-19-15 | 13:45 | W | 3 | | | | | | | |
| 10 | | MW-15 | 11-18-15 | 16:10 | W | 3 | X | X | X | X | X | X | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| RELINQUISHED BY: ISH | COMPANY: KPRG | DATE: 11-20-15 | TIME: 14:45 | RECEIVED BY: Allen Leach | COMPANY: TA-CHI | DATE: 11/20/15 | TIME: 1445 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

_____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received ___/___/___

Courier:

Hand Delivered ☐

Bill of Lading:

1 of 2

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING


**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211


| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | Accounts Payable |
| Company: | KPRG and Associates, Inc | Company: | NRG Energy |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | 112 Telly St |
| | Brookfield, WI 53005 | | New Roads, LA 70760 |
| Phone: | 262-781-0475 | Phone: | 713 465-4113 |
| Email: | richardg@kprginc.com | Email | invoices@nrg.com |
| | | PO #: | 4501569118 |

**Lab Lot #** 500-104365

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No N/A |

Temperature °C of Cooler

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No N/A |
| **pH Check OK** | **Res $CL_2$ Check OK** |
| Yes No | Yes No N/A |

Sample Labels and COC Agree
Yes No COC not present

Sampler Name: Ian John Howieson
Signature:
Project Name: POWERTON CCR QUARTERLY
TestAmerica Project Number: [redacted] 500116I2
Project Location: [redacted] PEKIN, IL
TAT: 15 Days
Lab PM: Bonnie Stadelmann

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | Comp/Grab | # / Cont. | Volume | Preserv. | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C - TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | [redacted] MW-17 | 11-19-15 | 12:10 | W | G | 3 | | | X | X | X | X | X | X | |
| 2 | | MW-18 | 11-19-15 | 10:55 | W | G | 3 | | | X | X | X | X | X | X | |
| 3 | | DUPLICATE | 11-17-15 | — | W | G | 3 | | | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| ISH | KPRG | 11-20-15 | 14:45 | Andrew Scott | TA-CHI | 11/20/15 | 1445 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

_____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received ___/___/___
Courier:
Hand Delivered ☐
Bill of Lading:

2 of 2

STL-8208 (0600)

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-69013.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | | | Job #: 500-104365-5 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 1/19/2016 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: Powerston CCR | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2SO3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - ph 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Ra226_Ra228 | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-08 (500-104365-6) | 11/18/15 | 09:58 Central | | Water | | | X | X | X | 1 | |
| MW-09 (500-104365-7) | 11/18/15 | 11:25 Central | | Water | | | X | X | X | 1 | |
| MW-11 (500-104365-8) | 11/18/15 | 16:30 Central | | Water | | | X | X | X | 1 | |
| MW-12 (500-104365-9) | 11/19/15 | 13:45 Central | | Water | | | X | X | X | 1 | |
| MW-15 (500-104365-10) | 11/18/15 | 16:10 Central | | Water | | | X | X | X | 1 | |
| MW-17 (500-104365-11) | 11/19/15 | 12:10 Central | | Water | | | X | X | X | 1 | |
| MW-18 (500-104365-12) | 11/19/15 | 10:55 Central | | Water | | | X | X | X | 1 | |
| Duplicate (500-104365-13) | 11/17/15 | Central | | Water | | | X | X | X | 1 | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

***Possible Hazard Identification***
*Unconfirmed*

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Relinquished by: | Date/Time: 12/30/15 1700 | Company TAL | Received by: | Date/Time: 12/31/15 0830 | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

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1/28/2016

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-104365-5

**Login Number: 104365**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.1,2.7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-104365-5

**Login Number: 104365**
**List Number: 2**
**Creator: Clarke, Jill C**

**List Source: TestAmerica St. Louis**
**List Creation: 11/23/15 11:35 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-104365-5

**Login Number: 104365**
**List Number: 3**
**Creator: McKinney, Gerrod E**

**List Source: TestAmerica St. Louis**
**List Creation: 12/31/15 09:18 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | False | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-104365-5

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| | | Ba |
| Lab Sample ID | Client Sample ID | (40-110) |
| 500-104365-6 | MW-08 | 54.4 |
| 500-104365-7 | MW-09 | 42.3 |
| 500-104365-8 | MW-11 | 58.8 |
| 500-104365-9 | MW-12 | 44.8 |
| 500-104365-10 | MW-15 | 59.1 |
| 500-104365-11 | MW-17 | 66.9 |
| 500-104365-12 | MW-18 | 61.6 |
| 500-104365-13 | Duplicate | 45.9 |
| LCS 160-230274/2-A | Lab Control Sample | 66.6 |
| LCSD 160-230274/3-A | Lab Control Sample Dup | 50.3 |
| MB 160-230274/1-A | Method Blank | 88.7 |

**Tracer/Carrier Legend**

Ba = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| | | Ba | Y |
| Lab Sample ID | Client Sample ID | (40-110) | (40-110) |
| 500-104365-6 | MW-08 | 107 | 91.8 |
| 500-104365-7 | MW-09 | 94.6 | 89.9 |
| 500-104365-8 | MW-11 | 88.3 | 94.0 |
| 500-104365-9 | MW-12 | 94.0 | 89.9 |
| 500-104365-10 | MW-15 | 97.7 | 88.8 |
| 500-104365-11 | MW-17 | 93.7 | 81.3 |
| 500-104365-12 | MW-18 | 74.6 | 93.6 |
| 500-104365-13 | Duplicate | 84.6 | 92.1 |
| LCS 160-233545/2-A | Lab Control Sample | 106 | 93.3 |
| LCSD 160-233545/3-A | Lab Control Sample Dup | 110 | 90.3 |
| MB 160-233545/1-A | Method Blank | 105 | 88.4 |

**Tracer/Carrier Legend**

Ba = Ba Carrier

Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-108074-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*3/11/2016 9:43:03 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

## Job ID: 500-108074-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-108074-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 2/26/2016 5:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.7º C, 3.8º C and 4.6º C.

**Metals**
Method(s) 6020A: The %RSD in the initial calibration verification (ICV) for batch 326510 was above the 5% upper control limit for Boron (5.6%). All other QC were within acceptance limits. The samples were reported.

Method(s) 6020A: The method blank for preparation batch 324687 contained Pb above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-108074-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0025 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.053 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.20 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0019 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0029 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 460 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 42 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.16 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 54 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-108074-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0018 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.11 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.7 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00052 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 160 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00072 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.020 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1100 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.30 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 280 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-108074-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0042 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.036 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.3 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 77 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-09 (Continued) — Lab Sample ID: 500-108074-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.0011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.053 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 36 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.19 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 120 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-108074-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.023 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.23 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.5 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0023 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.013 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 850 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 120 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.55 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 220 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-108074-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.077 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.13 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.42 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.0016 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0014 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.015 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.40 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 530 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-108074-6

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

## Client Sample ID: MW-15 (Continued) — Lab Sample ID: 500-108074-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.041 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.025 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.083 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.0 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 240 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.035 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.045 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1700 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 110 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.61 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 640 | | 250 | | mg/L | 50 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-108074-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.038 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.021 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.051 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.8 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 290 | | 2.0 | | mg/L | 10 | | 6020A | Total Recoverable |
| Cobalt | 0.0012 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.093 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 2100 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 280 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.55 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 960 | | 250 | | mg/L | 50 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-108074-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.022 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0012 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.15 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.76 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 150 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

## Client Sample ID: MW-18 (Continued) — Lab Sample ID: 500-108074-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 0.0055 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 220 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.68 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 310 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicates — Lab Sample ID: 500-108074-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.040 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.065 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.9 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 200 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.034 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.036 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1700 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 110 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.62 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 680 | | 250 | | mg/L | 50 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-108074-1 | MW-01 | Water | 02/25/16 10:00 | 02/26/16 17:20 |
| 500-108074-2 | MW-08 | Water | 02/25/16 13:40 | 02/26/16 17:20 |
| 500-108074-3 | MW-09 | Water | 02/25/16 16:00 | 02/26/16 17:20 |
| 500-108074-4 | MW-11 | Water | 02/26/16 09:40 | 02/26/16 17:20 |
| 500-108074-5 | MW-12 | Water | 02/26/16 11:30 | 02/26/16 17:20 |
| 500-108074-6 | MW-15 | Water | 02/25/16 11:40 | 02/26/16 17:20 |
| 500-108074-7 | MW-17 | Water | 02/22/16 16:20 | 02/26/16 17:20 |
| 500-108074-8 | MW-18 | Water | 02/22/16 17:30 | 02/26/16 17:20 |
| 500-108074-9 | Duplicates | Water | 02/25/16 00:00 | 02/26/16 17:20 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

**Client Sample ID: MW-01**
**Date Collected: 02/25/16 10:00**
**Date Received: 02/26/16 17:20**

**Lab Sample ID: 500-108074-1**
**Matrix: Water**

## Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 03/01/16 08:30 | 03/01/16 14:37 | 1 |

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:19 | 1 |
| **Arsenic** | **0.0025** | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:19 | 1 |
| **Barium** | **0.053** | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:19 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 03/08/16 20:33 | 1 |
| **Boron** | **0.20** | | 0.050 | | mg/L | | 02/27/16 11:27 | 03/10/16 11:59 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:19 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:19 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:19 | 1 |
| **Cobalt** | **0.0014** | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:19 | 1 |
| **Lead** | **0.0019** | | 0.00050 | | mg/L | | 03/10/16 12:00 | 03/10/16 15:11 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 03/08/16 20:33 | 1 |
| **Selenium** | **0.0029** | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:19 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:19 | 1 |

## Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/29/16 17:00 | 03/01/16 11:11 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **460** | | 10 | | mg/L | | | 02/29/16 22:54 | 1 |
| **Chloride** | **42** | | 2.0 | | mg/L | | | 03/03/16 17:12 | 1 |
| **Fluoride** | **0.16** | | 0.10 | | mg/L | | | 02/27/16 13:54 | 1 |
| **Sulfate** | **54** | | 10 | | mg/L | | | 03/04/16 07:59 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

**Client Sample ID: MW-08**
**Date Collected: 02/25/16 13:40**
**Date Received: 02/26/16 17:20**

**Lab Sample ID: 500-108074-2**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | | 03/01/16 08:30 | 03/01/16 14:41 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:23 | 1 |
| Arsenic | 0.0018 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:23 | 1 |
| Barium | 0.11 | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:23 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 03/08/16 20:37 | 1 |
| Boron | 1.7 | | 0.050 | | mg/L | | 02/27/16 11:27 | 03/10/16 12:02 | 1 |
| Cadmium | 0.00052 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:23 | 1 |
| Calcium | 160 | | 0.20 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:23 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:23 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:23 | 1 |
| Lead | 0.00072 | | 0.00050 | | mg/L | | 03/10/16 12:00 | 03/10/16 15:15 | 1 |
| Molybdenum | 0.020 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 03/08/16 20:37 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:23 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:23 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/29/16 17:00 | 03/01/16 11:13 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1100 | | 10 | | mg/L | | | 02/29/16 22:58 | 1 |
| Chloride | 200 | | 10 | | mg/L | | | 03/03/16 18:00 | 5 |
| Fluoride | 0.30 | | 0.10 | | mg/L | | | 02/27/16 13:56 | 1 |
| Sulfate | 280 | | 50 | | mg/L | | | 03/04/16 08:00 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

**Client Sample ID: MW-09**
**Date Collected: 02/25/16 16:00**
**Date Received: 02/26/16 17:20**

**Lab Sample ID: 500-108074-3**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 03/01/16 08:30 | 03/01/16 14:45 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:27 | 1 |
| **Arsenic** | **0.0042** | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:27 | 1 |
| **Barium** | **0.036** | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:27 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 03/08/16 20:42 | 1 |
| **Boron** | **2.3** | | 0.050 | | mg/L | | 02/27/16 11:27 | 03/10/16 12:06 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:27 | 1 |
| **Calcium** | **77** | | 0.20 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:27 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:27 | 1 |
| **Cobalt** | **0.0011** | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:27 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:27 | 1 |
| **Molybdenum** | **0.053** | | 0.0050 | | mg/L | | 02/27/16 11:27 | 03/08/16 20:42 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:27 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:27 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/29/16 17:00 | 03/01/16 11:15 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **500** | | 10 | | mg/L | | | 02/29/16 23:02 | 1 |
| **Chloride** | **36** | | 2.0 | | mg/L | | | 03/03/16 17:14 | 1 |
| **Fluoride** | **0.19** | | 0.10 | | mg/L | | | 02/27/16 13:59 | 1 |
| **Sulfate** | **120** | | 25 | | mg/L | | | 03/04/16 08:05 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

**Client Sample ID: MW-11**
**Date Collected: 02/26/16 09:40**
**Date Received: 02/26/16 17:20**

**Lab Sample ID: 500-108074-4**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 03/01/16 08:30 | 03/01/16 14:49 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:31 | 1 |
| **Arsenic** | **0.023** | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:31 | 1 |
| **Barium** | **0.23** | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:31 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 03/08/16 20:47 | 1 |
| **Boron** | **1.5** | | 0.050 | | mg/L | | 02/27/16 11:27 | 03/10/16 12:10 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:31 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:31 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:31 | 1 |
| **Cobalt** | **0.0023** | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:31 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:31 | 1 |
| **Molybdenum** | **0.013** | | 0.0050 | | mg/L | | 02/27/16 11:27 | 03/08/16 20:47 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:31 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:31 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/29/16 17:00 | 03/01/16 11:21 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **850** | | 10 | | mg/L | | | 02/29/16 23:05 | 1 |
| **Chloride** | **120** | | 10 | | mg/L | | | 03/03/16 18:00 | 5 |
| **Fluoride** | **0.55** | | 0.10 | | mg/L | | | 02/27/16 14:01 | 1 |
| **Sulfate** | **220** | | 50 | | mg/L | | | 03/04/16 08:06 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

**Client Sample ID: MW-12**
**Date Collected: 02/26/16 11:30**
**Date Received: 02/26/16 17:20**

**Lab Sample ID: 500-108074-5**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.010 | | mg/L | | 03/01/16 08:30 | 03/01/16 14:53 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:34 | 1 |
| Arsenic | 0.077 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:34 | 1 |
| Barium | 0.13 | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:34 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 03/08/16 21:05 | 1 |
| Boron | 0.42 | | 0.050 | | mg/L | | 02/27/16 11:27 | 03/10/16 12:14 | 1 |
| Cadmium | 0.0016 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:34 | 1 |
| Calcium | 130 | | 0.20 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:34 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:34 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:34 | 1 |
| Lead | 0.0014 | | 0.00050 | | mg/L | | 03/10/16 12:00 | 03/10/16 15:19 | 1 |
| Molybdenum | 0.015 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 03/08/16 21:05 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:34 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:34 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/29/16 17:00 | 03/01/16 11:23 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1200 | | 10 | | mg/L | | | 02/29/16 23:09 | 1 |
| Chloride | 200 | | 10 | | mg/L | | | 03/03/16 18:01 | 5 |
| Fluoride | 0.40 | | 0.10 | | mg/L | | | 02/27/16 14:04 | 1 |
| Sulfate | 530 | | 100 | | mg/L | | | 03/04/16 08:07 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

**Client Sample ID: MW-15**
**Date Collected: 02/25/16 11:40**
**Date Received: 02/26/16 17:20**

**Lab Sample ID: 500-108074-6**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.041 | | 0.010 | | mg/L | | 03/01/16 08:30 | 03/01/16 14:57 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:38 | 1 |
| Arsenic | 0.025 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:38 | 1 |
| Barium | 0.083 | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:38 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 03/08/16 21:10 | 1 |
| Boron | 2.0 | | 0.050 | | mg/L | | 02/27/16 11:27 | 03/10/16 12:17 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:38 | 1 |
| Calcium | 240 | | 0.20 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:38 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:38 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:38 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:38 | 1 |
| Molybdenum | 0.035 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 03/08/16 21:10 | 1 |
| Selenium | 0.045 | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:38 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:38 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/29/16 17:00 | 03/01/16 11:25 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1700 | | 10 | | mg/L | | | 02/29/16 23:13 | 1 |
| Chloride | 110 | | 10 | | mg/L | | | 03/03/16 18:01 | 5 |
| Fluoride | 0.61 | | 0.10 | | mg/L | | | 02/27/16 14:06 | 1 |
| Sulfate | 640 | | 250 | | mg/L | | | 03/04/16 08:08 | 50 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

**Client Sample ID: MW-17**
**Date Collected: 02/22/16 16:20**
**Date Received: 02/26/16 17:20**

**Lab Sample ID: 500-108074-7**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.038 | | 0.010 | | mg/L | | 03/01/16 08:30 | 03/01/16 15:02 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:42 | 1 |
| Arsenic | 0.021 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:42 | 1 |
| Barium | 0.051 | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:42 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 03/08/16 21:15 | 1 |
| Boron | 1.8 | | 0.050 | | mg/L | | 02/27/16 11:27 | 03/10/16 12:21 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:42 | 1 |
| Calcium | 290 | | 2.0 | | mg/L | | 02/27/16 11:27 | 03/10/16 17:01 | 10 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:42 | 1 |
| Cobalt | 0.0012 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:42 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:42 | 1 |
| Molybdenum | 0.093 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 03/08/16 21:15 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:42 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:42 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/29/16 17:00 | 03/01/16 11:27 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 2100 | | 10 | | mg/L | | | 02/29/16 23:16 | 1 |
| Chloride | 280 | | 10 | | mg/L | | | 03/03/16 18:02 | 5 |
| Fluoride | 0.55 | | 0.10 | | mg/L | | | 03/05/16 13:57 | 1 |
| Sulfate | 960 | | 250 | | mg/L | | | 03/04/16 08:09 | 50 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

## Client Sample ID: MW-18

**Date Collected: 02/22/16 17:30**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-8

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.022** | | 0.010 | | mg/L | | 03/01/16 08:30 | 03/01/16 15:08 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:46 | 1 |
| **Arsenic** | **0.0012** | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:46 | 1 |
| **Barium** | **0.15** | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:46 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 03/08/16 21:19 | 1 |
| **Boron** | **0.76** | | 0.050 | | mg/L | | 02/27/16 11:27 | 03/10/16 12:25 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:46 | 1 |
| **Calcium** | **150** | | 0.20 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:46 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:46 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:46 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:46 | 1 |
| **Molybdenum** | **0.0055** | | 0.0050 | | mg/L | | 02/27/16 11:27 | 03/08/16 21:19 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:46 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:46 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/29/16 17:00 | 03/01/16 11:29 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1200** | | 10 | | mg/L | | | 02/29/16 23:20 | 1 |
| **Chloride** | **220** | | 10 | | mg/L | | | 03/03/16 18:02 | 5 |
| **Fluoride** | **0.68** | | 0.10 | | mg/L | | | 03/05/16 14:04 | 1 |
| **Sulfate** | **310** | | 50 | | mg/L | | | 03/04/16 08:10 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

## Client Sample ID: Duplicates

**Lab Sample ID: 500-108074-9**

**Date Collected: 02/25/16 00:00**

**Matrix: Water**

**Date Received: 02/26/16 17:20**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.040** | | 0.010 | | mg/L | | 03/01/16 08:30 | 03/01/16 15:12 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:57 | 1 |
| **Arsenic** | **0.014** | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:57 | 1 |
| **Barium** | **0.065** | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:57 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 03/08/16 21:24 | 1 |
| **Boron** | **1.9** | | 0.050 | | mg/L | | 02/27/16 11:27 | 03/10/16 12:38 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:57 | 1 |
| **Calcium** | **200** | | 0.20 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:57 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:57 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:57 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:57 | 1 |
| **Molybdenum** | **0.034** | | 0.0050 | | mg/L | | 02/27/16 11:27 | 03/08/16 21:24 | 1 |
| **Selenium** | **0.036** | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:57 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:57 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/29/16 17:00 | 03/01/16 11:31 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1700** | | 10 | | mg/L | | | 02/29/16 23:24 | 1 |
| **Chloride** | **110** | | 10 | | mg/L | | | 03/03/16 18:03 | 5 |
| **Fluoride** | **0.62** | | 0.10 | | mg/L | | | 03/05/16 14:07 | 1 |
| **Sulfate** | **680** | | 250 | | mg/L | | | 03/04/16 08:11 | 50 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 324697

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-108074-2 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-108074-3 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-108074-4 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-108074-5 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-108074-6 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-108074-7 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-108074-8 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-108074-9 | Duplicates | Total Recoverable | Water | 3005A | |
| 500-108074-9 DU | Duplicates | Total Recoverable | Water | 3005A | |
| 500-108074-9 MS | Duplicates | Total Recoverable | Water | 3005A | |
| 500-108074-9 MSD | Duplicates | Total Recoverable | Water | 3005A | |
| LCS 500-324697/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| MB 500-324697/1-A | Method Blank | Total Recoverable | Water | 3005A | |

### Prep Batch: 324905

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-108074-2 | MW-08 | Total/NA | Water | 7470A | |
| 500-108074-3 | MW-09 | Total/NA | Water | 7470A | |
| 500-108074-4 | MW-11 | Total/NA | Water | 7470A | |
| 500-108074-5 | MW-12 | Total/NA | Water | 7470A | |
| 500-108074-6 | MW-15 | Total/NA | Water | 7470A | |
| 500-108074-7 | MW-17 | Total/NA | Water | 7470A | |
| 500-108074-8 | MW-18 | Total/NA | Water | 7470A | |
| 500-108074-9 | Duplicates | Total/NA | Water | 7470A | |
| LCS 500-324905/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| MB 500-324905/12-A | Method Blank | Total/NA | Water | 7470A | |

### Prep Batch: 324975

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-108074-2 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-108074-3 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-108074-4 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-108074-5 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-108074-6 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-108074-7 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-108074-8 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-108074-9 | Duplicates | Total Recoverable | Water | 3005A | |
| LCS 500-324975/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| LCSD 500-324975/3-A | Lab Control Sample Dup | Total Recoverable | Water | 3005A | |
| MB 500-324975/1-A | Method Blank | Total Recoverable | Water | 3005A | |

### Analysis Batch: 324977

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-2 | MW-08 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-3 | MW-09 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-4 | MW-11 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-5 | MW-12 | Total Recoverable | Water | 6020A | 324697 |

## Metals (Continued)

### Analysis Batch: 324977 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-6 | MW-15 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-7 | MW-17 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-8 | MW-18 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-9 | Duplicates | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-9 DU | Duplicates | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-9 MS | Duplicates | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-9 MSD | Duplicates | Total Recoverable | Water | 6020A | 324697 |
| LCS 500-324697/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 324697 |
| MB 500-324697/1-A | Method Blank | Total Recoverable | Water | 6020A | 324697 |

### Analysis Batch: 325017

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total/NA | Water | 7470A | 324905 |
| 500-108074-2 | MW-08 | Total/NA | Water | 7470A | 324905 |
| 500-108074-3 | MW-09 | Total/NA | Water | 7470A | 324905 |
| 500-108074-4 | MW-11 | Total/NA | Water | 7470A | 324905 |
| 500-108074-5 | MW-12 | Total/NA | Water | 7470A | 324905 |
| 500-108074-6 | MW-15 | Total/NA | Water | 7470A | 324905 |
| 500-108074-7 | MW-17 | Total/NA | Water | 7470A | 324905 |
| 500-108074-8 | MW-18 | Total/NA | Water | 7470A | 324905 |
| 500-108074-9 | Duplicates | Total/NA | Water | 7470A | 324905 |
| LCS 500-324905/13-A | Lab Control Sample | Total/NA | Water | 7470A | 324905 |
| MB 500-324905/12-A | Method Blank | Total/NA | Water | 7470A | 324905 |

### Analysis Batch: 325137

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total Recoverable | Water | 6010C | 324975 |
| 500-108074-2 | MW-08 | Total Recoverable | Water | 6010C | 324975 |
| 500-108074-3 | MW-09 | Total Recoverable | Water | 6010C | 324975 |
| 500-108074-4 | MW-11 | Total Recoverable | Water | 6010C | 324975 |
| 500-108074-5 | MW-12 | Total Recoverable | Water | 6010C | 324975 |
| 500-108074-6 | MW-15 | Total Recoverable | Water | 6010C | 324975 |
| 500-108074-7 | MW-17 | Total Recoverable | Water | 6010C | 324975 |
| 500-108074-8 | MW-18 | Total Recoverable | Water | 6010C | 324975 |
| 500-108074-9 | Duplicates | Total Recoverable | Water | 6010C | 324975 |
| LCS 500-324975/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 324975 |
| LCSD 500-324975/3-A | Lab Control Sample Dup | Total Recoverable | Water | 6010C | 324975 |
| MB 500-324975/1-A | Method Blank | Total Recoverable | Water | 6010C | 324975 |

### Analysis Batch: 326216

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-2 | MW-08 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-3 | MW-09 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-4 | MW-11 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-5 | MW-12 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-6 | MW-15 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-7 | MW-17 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-8 | MW-18 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-9 | Duplicates | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-9 DU | Duplicates | Total Recoverable | Water | 6020A | 324697 |

## Metals (Continued)

### Analysis Batch: 326216 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-9 MS | Duplicates | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-9 MSD | Duplicates | Total Recoverable | Water | 6020A | 324697 |
| LCS 500-324697/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 324697 |
| MB 500-324697/1-A | Method Blank | Total Recoverable | Water | 6020A | 324697 |

### Prep Batch: 326441

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-108074-2 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-108074-5 | MW-12 | Total Recoverable | Water | 3005A | |
| LCS 500-326441/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| LCSD 500-326441/3-A | Lab Control Sample Dup | Total Recoverable | Water | 3005A | |
| MB 500-326441/1-A | Method Blank | Total Recoverable | Water | 3005A | |

### Analysis Batch: 326510

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-1 | MW-01 | Total Recoverable | Water | 6020A | 326441 |
| 500-108074-2 | MW-08 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-2 | MW-08 | Total Recoverable | Water | 6020A | 326441 |
| 500-108074-3 | MW-09 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-4 | MW-11 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-5 | MW-12 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-5 | MW-12 | Total Recoverable | Water | 6020A | 326441 |
| 500-108074-6 | MW-15 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-7 | MW-17 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-7 | MW-17 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-8 | MW-18 | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-9 | Duplicates | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-9 DU | Duplicates | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-9 MS | Duplicates | Total Recoverable | Water | 6020A | 324697 |
| 500-108074-9 MSD | Duplicates | Total Recoverable | Water | 6020A | 324697 |
| LCS 500-324697/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 324697 |
| LCS 500-326441/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 326441 |
| LCSD 500-326441/3-A | Lab Control Sample Dup | Total Recoverable | Water | 6020A | 326441 |
| MB 500-324697/1-A | Method Blank | Total Recoverable | Water | 6020A | 324697 |
| MB 500-326441/1-A | Method Blank | Total Recoverable | Water | 6020A | 326441 |

## General Chemistry

### Analysis Batch: 324709

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-108074-2 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-108074-3 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-108074-4 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-108074-5 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-108074-6 | MW-15 | Total/NA | Water | SM 4500 F C | |
| LCS 500-324709/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| MB 500-324709/31 | Method Blank | Total/NA | Water | SM 4500 F C | |

## General Chemistry (Continued)

### Analysis Batch: 324937

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-108074-2 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-108074-3 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-108074-4 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-108074-5 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-108074-6 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-108074-7 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-108074-8 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-108074-9 | Duplicates | Total/NA | Water | SM 2540C | |
| LCS 500-324937/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| MB 500-324937/1 | Method Blank | Total/NA | Water | SM 2540C | |

### Analysis Batch: 325483

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-108074-2 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-108074-3 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-108074-4 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-108074-5 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-108074-6 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-108074-7 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-108074-8 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-108074-9 | Duplicates | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-325483/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-325483/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 325522

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-108074-2 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-108074-2 MS | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-108074-2 MSD | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-108074-3 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-108074-4 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-108074-5 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-108074-6 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-108074-7 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-108074-8 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-108074-9 | Duplicates | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-325522/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-325522/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 325740

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-7 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-108074-7 MS | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-108074-7 MSD | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-108074-8 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-108074-9 | Duplicates | Total/NA | Water | SM 4500 F C | |
| LCS 500-325740/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| MB 500-325740/3 | Method Blank | Total/NA | Water | SM 4500 F C | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-324975/1-A**
**Matrix: Water**
**Analysis Batch: 325137**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 324975**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 03/01/16 08:30 | 03/01/16 13:41 | 1 |

**Lab Sample ID: LCS 500-324975/2-A**
**Matrix: Water**
**Analysis Batch: 325137**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 324975**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.538 | | mg/L | | 108 | 80 - 120 |

**Lab Sample ID: LCSD 500-324975/3-A**
**Matrix: Water**
**Analysis Batch: 325137**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total Recoverable**
**Prep Batch: 324975**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.531 | | mg/L | | 106 | 80 - 120 | 1 | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-324697/1-A**
**Matrix: Water**
**Analysis Batch: 324977**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:12 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:12 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:12 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:12 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:12 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:12 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:12 | 1 |
| Lead | 0.000674 | | 0.00050 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:12 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:12 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/27/16 11:27 | 02/29/16 18:12 | 1 |

**Lab Sample ID: MB 500-324697/1-A**
**Matrix: Water**
**Analysis Batch: 326216**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Barium | <0.0025 | | 0.0025 | | mg/L | | 02/27/16 11:27 | 03/08/16 20:23 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/27/16 11:27 | 03/08/16 20:23 | 1 |

**Lab Sample ID: MB 500-324697/1-A**
**Matrix: Water**
**Analysis Batch: 326510**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 02/27/16 11:27 | 03/10/16 11:51 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-324697/2-A**
**Matrix: Water**
**Analysis Batch: 324977**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.519 | | mg/L | | 104 | 80 - 120 |
| Arsenic | 0.100 | 0.102 | | mg/L | | 102 | 80 - 120 |
| Barium | 0.500 | 0.524 | | mg/L | | 105 | 80 - 120 |
| Cadmium | 0.0500 | 0.0528 | | mg/L | | 106 | 80 - 120 |
| Calcium | 10.0 | 11.5 | | mg/L | | 115 | 80 - 120 |
| Chromium | 0.200 | 0.208 | | mg/L | | 104 | 80 - 120 |
| Cobalt | 0.500 | 0.530 | | mg/L | | 106 | 80 - 120 |
| Lead | 0.100 | 0.106 | | mg/L | | 106 | 80 - 120 |
| Selenium | 0.100 | 0.102 | | mg/L | | 102 | 80 - 120 |
| Thallium | 0.100 | 0.105 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: LCS 500-324697/2-A**
**Matrix: Water**
**Analysis Batch: 326216**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Barium | 0.500 | 0.554 | | mg/L | | 111 | 80 - 120 |
| Molybdenum | 1.00 | 1.09 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: LCS 500-324697/2-A**
**Matrix: Water**
**Analysis Batch: 326510**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 0.970 | | mg/L | | 97 | 80 - 120 |

**Lab Sample ID: 500-108074-9 MS**
**Matrix: Water**
**Analysis Batch: 324977**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.534 | | mg/L | | 107 | 75 - 125 |
| Arsenic | 0.014 | | 0.100 | 0.126 | | mg/L | | 112 | 75 - 125 |
| Barium | 0.065 | | 0.500 | 0.594 | | mg/L | | 106 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0524 | | mg/L | | 104 | 75 - 125 |
| Calcium | 200 | | 10.0 | 219 | 4 | mg/L | | 215 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.199 | | mg/L | | 99 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.497 | | mg/L | | 99 | 75 - 125 |
| Lead | <0.00050 | | 0.100 | 0.105 | | mg/L | | 105 | 75 - 125 |
| Selenium | 0.036 | | 0.100 | 0.147 | | mg/L | | 111 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.105 | | mg/L | | 105 | 75 - 125 |

**Lab Sample ID: 500-108074-9 MS**
**Matrix: Water**
**Analysis Batch: 326216**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.065 | | 0.500 | 0.633 | | mg/L | | 113 | 75 - 125 |
| Molybdenum | 0.034 | | 1.00 | 1.14 | | mg/L | | 110 | 75 - 125 |

**Lab Sample ID: 500-108074-9 MS**
**Matrix: Water**
**Analysis Batch: 326510**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 1.9 | | 1.00 | 2.96 | | mg/L | | 101 | 75 - 125 |

**Lab Sample ID: 500-108074-9 MSD**
**Matrix: Water**
**Analysis Batch: 324977**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.530 | | mg/L | | 106 | 75 - 125 | 1 | 20 |
| Arsenic | 0.014 | | 0.100 | 0.126 | | mg/L | | 112 | 75 - 125 | 0 | 20 |
| Barium | 0.065 | | 0.500 | 0.588 | | mg/L | | 105 | 75 - 125 | 1 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0518 | | mg/L | | 103 | 75 - 125 | 1 | 20 |
| Calcium | 200 | | 10.0 | 218 | 4 | mg/L | | 212 | 75 - 125 | 0 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.196 | | mg/L | | 98 | 75 - 125 | 1 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.491 | | mg/L | | 98 | 75 - 125 | 1 | 20 |
| Lead | <0.00050 | | 0.100 | 0.105 | | mg/L | | 105 | 75 - 125 | 0 | 20 |
| Selenium | 0.036 | | 0.100 | 0.149 | | mg/L | | 113 | 75 - 125 | 1 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.104 | | mg/L | | 104 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-108074-9 MSD**
**Matrix: Water**
**Analysis Batch: 326216**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.065 | | 0.500 | 0.627 | | mg/L | | 112 | 75 - 125 | 1 | 20 |
| Molybdenum | 0.034 | | 1.00 | 1.11 | | mg/L | | 108 | 75 - 125 | 2 | 20 |

**Lab Sample ID: 500-108074-9 MSD**
**Matrix: Water**
**Analysis Batch: 326510**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 1.9 | | 1.00 | 3.18 | | mg/L | | 123 | 75 - 125 | 7 | 20 |

**Lab Sample ID: 500-108074-9 DU**
**Matrix: Water**
**Analysis Batch: 324977**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | <0.0030 | | mg/L | | NC | 20 |
| Arsenic | 0.014 | | 0.0155 | | mg/L | | 8 | 20 |
| Barium | 0.065 | | 0.0705 | | mg/L | | 9 | 20 |
| Cadmium | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Calcium | 200 | | 217 | | mg/L | | 10 | 20 |
| Chromium | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Cobalt | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Lead | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Selenium | 0.036 | | 0.0397 | | mg/L | | 8 | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-108074-9 DU**
**Matrix: Water**
**Analysis Batch: 326216**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Barium | 0.065 | | 0.0715 | | mg/L | | 9 | 20 |
| Molybdenum | 0.034 | | 0.0367 | | mg/L | | 8 | 20 |

**Lab Sample ID: 500-108074-9 DU**
**Matrix: Water**
**Analysis Batch: 326510**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 324697**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Boron | 1.9 | | 2.14 | | mg/L | | 9 | 20 |

**Lab Sample ID: MB 500-326441/1-A**
**Matrix: Water**
**Analysis Batch: 326510**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 326441**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lead | <0.00050 | | 0.00050 | | mg/L | | 03/10/16 12:00 | 03/10/16 15:00 | 1 |

**Lab Sample ID: LCS 500-326441/2-A**
**Matrix: Water**
**Analysis Batch: 326510**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 326441**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lead | 0.100 | 0.0955 | | mg/L | | 96 | 80 - 120 |

**Lab Sample ID: LCSD 500-326441/3-A**
**Matrix: Water**
**Analysis Batch: 326510**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total Recoverable**
**Prep Batch: 326441**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 0.100 | 0.100 | | mg/L | | 100 | 80 - 120 | 5 | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-324905/12-A**
**Matrix: Water**
**Analysis Batch: 325017**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 324905**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/29/16 17:00 | 03/01/16 10:42 | 1 |

**Lab Sample ID: LCS 500-324905/13-A**
**Matrix: Water**
**Analysis Batch: 325017**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 324905**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00177 | | mg/L | | 89 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-324937/1**
**Matrix: Water**
**Analysis Batch: 324937**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 02/29/16 22:25 | 1 |

**Lab Sample ID: LCS 500-324937/2**
**Matrix: Water**
**Analysis Batch: 324937**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 244 | | mg/L | | 98 | 80 - 120 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-325483/12**
**Matrix: Water**
**Analysis Batch: 325483**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 03/03/16 17:02 | 1 |

**Lab Sample ID: LCS 500-325483/13**
**Matrix: Water**
**Analysis Batch: 325483**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 50.0 | | mg/L | | 100 | 80 - 120 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-324709/31**
**Matrix: Water**
**Analysis Batch: 324709**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 02/27/16 13:23 | 1 |

**Lab Sample ID: LCS 500-324709/32**
**Matrix: Water**
**Analysis Batch: 324709**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.5 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: MB 500-325740/3**
**Matrix: Water**
**Analysis Batch: 325740**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 03/05/16 13:52 | 1 |

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: LCS 500-325740/4**
**Matrix: Water**
**Analysis Batch: 325740**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.3 | | mg/L | | 103 | 80 - 120 |

**Lab Sample ID: 500-108074-7 MS**
**Matrix: Water**
**Analysis Batch: 325740**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.55 | | 5.00 | 5.51 | | mg/L | | 99 | 75 - 125 |

**Lab Sample ID: 500-108074-7 MSD**
**Matrix: Water**
**Analysis Batch: 325740**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.55 | | 5.00 | 5.54 | | mg/L | | 100 | 75 - 125 | 1 | 20 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-325522/3**
**Matrix: Water**
**Analysis Batch: 325522**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 03/04/16 07:53 | 1 |

**Lab Sample ID: LCS 500-325522/4**
**Matrix: Water**
**Analysis Batch: 325522**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 18.5 | | mg/L | | 92 | 80 - 120 |

**Lab Sample ID: 500-108074-2 MS**
**Matrix: Water**
**Analysis Batch: 325522**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 280 | | 400 | 653 | | mg/L | | 94 | 75 - 125 |

**Lab Sample ID: 500-108074-2 MSD**
**Matrix: Water**
**Analysis Batch: 325522**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 280 | | 400 | 678 | | mg/L | | 100 | 75 - 125 | 4 | 20 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

## Client Sample ID: MW-01

**Date Collected: 02/25/16 10:00**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 324975 | 03/01/16 08:30 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 325137 | 03/01/16 14:37 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326216 | 03/08/16 20:33 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 324977 | 02/29/16 18:19 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326510 | 03/10/16 11:59 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 326441 | 03/10/16 12:00 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326510 | 03/10/16 15:11 | PFK | TAL CHI |
| Total/NA | Prep | 7470A | | | 324905 | 02/29/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 325017 | 03/01/16 11:11 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 324937 | 02/29/16 22:54 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 325483 | 03/03/16 17:12 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 324709 | 02/27/16 13:54 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 325522 | | CLB | TAL CHI |
| | | | | | (Start) | 03/04/16 07:59 | | |
| | | | | | (End) | 03/04/16 08:00 | | |

## Client Sample ID: MW-08

**Date Collected: 02/25/16 13:40**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 324975 | 03/01/16 08:30 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 325137 | 03/01/16 14:41 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326216 | 03/08/16 20:37 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 324977 | 02/29/16 18:23 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326510 | 03/10/16 12:02 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 326441 | 03/10/16 12:00 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326510 | 03/10/16 15:15 | PFK | TAL CHI |
| Total/NA | Prep | 7470A | | | 324905 | 02/29/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 325017 | 03/01/16 11:13 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 324937 | 02/29/16 22:58 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 325483 | 03/03/16 18:00 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 324709 | 02/27/16 13:56 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 325522 | | CLB | TAL CHI |
| | | | | | (Start) | 03/04/16 08:00 | | |
| | | | | | (End) | 03/04/16 08:01 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

## Client Sample ID: MW-09

**Date Collected: 02/25/16 16:00**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 324975 | 03/01/16 08:30 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 325137 | 03/01/16 14:45 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326216 | 03/08/16 20:42 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 324977 | 02/29/16 18:27 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326510 | 03/10/16 12:06 | PFK | TAL CHI |
| Total/NA | Prep | 7470A | | | 324905 | 02/29/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 325017 | 03/01/16 11:15 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 324937 | 02/29/16 23:02 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 325483 | 03/03/16 17:14 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 324709 | 02/27/16 13:59 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 325522 | | CLB | TAL CHI |
| | | | | | (Start) | 03/04/16 08:05 | | |
| | | | | | (End) | 03/04/16 08:06 | | |

## Client Sample ID: MW-11

**Date Collected: 02/26/16 09:40**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 324975 | 03/01/16 08:30 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 325137 | 03/01/16 14:49 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326216 | 03/08/16 20:47 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 324977 | 02/29/16 18:31 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326510 | 03/10/16 12:10 | PFK | TAL CHI |
| Total/NA | Prep | 7470A | | | 324905 | 02/29/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 325017 | 03/01/16 11:21 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 324937 | 02/29/16 23:05 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 325483 | 03/03/16 18:00 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 324709 | 02/27/16 14:01 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 325522 | | CLB | TAL CHI |
| | | | | | (Start) | 03/04/16 08:06 | | |
| | | | | | (End) | 03/04/16 08:07 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

## Client Sample ID: MW-12

**Date Collected: 02/26/16 11:30**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 324975 | 03/01/16 08:30 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 325137 | 03/01/16 14:53 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326216 | 03/08/16 21:05 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 324977 | 02/29/16 18:34 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326510 | 03/10/16 12:14 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 326441 | 03/10/16 12:00 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326510 | 03/10/16 15:19 | PFK | TAL CHI |
| Total/NA | Prep | 7470A | | | 324905 | 02/29/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 325017 | 03/01/16 11:23 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 324937 | 02/29/16 23:09 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 325483 | 03/03/16 18:01 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 324709 | 02/27/16 14:04 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 325522 | | CLB | TAL CHI |
| | | | | | (Start) | 03/04/16 08:07 | | |
| | | | | | (End) | 03/04/16 08:08 | | |

## Client Sample ID: MW-15

**Date Collected: 02/25/16 11:40**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 324975 | 03/01/16 08:30 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 325137 | 03/01/16 14:57 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326216 | 03/08/16 21:10 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 324977 | 02/29/16 18:38 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326510 | 03/10/16 12:17 | PFK | TAL CHI |
| Total/NA | Prep | 7470A | | | 324905 | 02/29/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 325017 | 03/01/16 11:25 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 324937 | 02/29/16 23:13 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 325483 | 03/03/16 18:01 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 324709 | 02/27/16 14:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 50 | 325522 | | CLB | TAL CHI |
| | | | | | (Start) | 03/04/16 08:08 | | |
| | | | | | (End) | 03/04/16 08:09 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

## Client Sample ID: MW-17

**Date Collected: 02/22/16 16:20**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 324975 | 03/01/16 08:30 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 325137 | 03/01/16 15:02 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326216 | 03/08/16 21:15 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 324977 | 02/29/16 18:42 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326510 | 03/10/16 12:21 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 326510 | 03/10/16 17:01 | PFK | TAL CHI |
| Total/NA | Prep | 7470A | | | 324905 | 02/29/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 325017 | 03/01/16 11:27 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 324937 | 02/29/16 23:16 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 325483 | 03/03/16 18:02 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 325740 | 03/05/16 13:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 50 | 325522 | | CLB | TAL CHI |
| | | | | | (Start) | 03/04/16 08:09 | | |
| | | | | | (End) | 03/04/16 08:10 | | |

## Client Sample ID: MW-18

**Date Collected: 02/22/16 17:30**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 324975 | 03/01/16 08:30 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 325137 | 03/01/16 15:08 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326216 | 03/08/16 21:19 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 324977 | 02/29/16 18:46 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326510 | 03/10/16 12:25 | PFK | TAL CHI |
| Total/NA | Prep | 7470A | | | 324905 | 02/29/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 325017 | 03/01/16 11:29 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 324937 | 02/29/16 23:20 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 325483 | 03/03/16 18:02 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 325740 | 03/05/16 14:04 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 325522 | | CLB | TAL CHI |
| | | | | | (Start) | 03/04/16 08:10 | | |
| | | | | | (End) | 03/04/16 08:11 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

## Client Sample ID: Duplicates

**Date Collected: 02/25/16 00:00**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 324975 | 03/01/16 08:30 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 325137 | 03/01/16 15:12 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326216 | 03/08/16 21:24 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 324977 | 02/29/16 18:57 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 324697 | 02/27/16 11:27 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 326510 | 03/10/16 12:38 | PFK | TAL CHI |
| Total/NA | Prep | 7470A | | | 324905 | 02/29/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 325017 | 03/01/16 11:31 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 324937 | 02/29/16 23:24 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 325483 | 03/03/16 18:03 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 325740 | 03/05/16 14:07 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 50 | 325522 | | CLB | TAL CHI |
| | | | | | (Start) | 03/04/16 08:11 | | |
| | | | | | (End) | 03/04/16 08:12 | | |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-1

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-16 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING


**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211


| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | Accounts Payable |
| Company: | KPRG and Associates, Inc | Company: | NRG Energy |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | 112 Telly St |
| | Brookfield, WI 53005 | | New Roads, LA 70760 |
| Phone: | 262-781-0475 | Phone: | 713 465-4113 |
| Email: | richardg@kprginc.com | Email | invoices@nrg.com |
| | | PO #: | 4501576732 |

**Lab Lot #** 500-108074

| Package Sealed | Samples Sealed |
|---|---|
| (Yes) No | (Yes) No |
| **Received on ice** | **Samples Intact** |
| (Yes) No | (Yes) No N/A |

**Temperature °C of Cooler**
2.7 3.8 4.6

| Within Hold Time | Preserv. Indicated |
|---|---|
| (Yes) No | (Yes) No N/A |
| pH Check OK | Res $Cl_2$ Check OK |
| (Yes) No | Yes No (N/A) |

**Sample Labels and COC Agree**
(Yes) No COC not present

| Sampler Name: | Signature: | # / Cont. |
|---|---|---|
| Ian John Howieson | | Volume |
| **Project Name:** | **TestAmerica Project Number:** | Preserv. |
| Quarterly Powerton CCR | 50011612 | |
| **Project Location:** | **TAT** | |
| Pekin, IL | 15 Days | |
| **Lab PM:** | Eric Lang | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 2-25-16 | 10:00 | W | 5 | X | X | X | X | X | X | |
| | | ~~MW-05~~ | | | W | | X | X | X | X | X | X | |
| 2 | | MW-08 | 2-25-16 | 13:40 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-09 | 2-25-16 | 16:00 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-11 | 2-26-16 | 09:40 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-12 | 2-26-16 | 11:30 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-15 | 2-25-16 | 11:40 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-17 | 2-25-16 | 15:20 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-18 | 2-25-16 | 17:30 | W | 5 | X | X | X | X | X | X | |
| 9 | | Duplicates | 2-25-16 | | W | 5 | X | X | X | X | X | X | |

500-108074 COC

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| | KPRG | 2-26-16 | 17:20 | | TAL | 02/26/16 | 17:20 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**
WW = Wastewater, SE = Sediment, W = Water, SO = Solid, S = Soil, DL = Drum Liquid, SL = Sludge, DS = Drum Solid, MS = Miscellaneous, L = Leachate, OL = Oil, W = Wipe, A = Air, O = _____

**Container Key**
1. Plastic, 2. VOA Vial, 3. Sterile Plastic, 4. Amber Glass, 5. Widemouth Glass, 6. Other, _____

**Preservative Key**
1. HCl, Cool to 4°, 2. $H_2SO_4$, Cool to 4°, 3. $HNO_3$, Cool to 4°, 4. NaOH, Cool to 4°, 5. NaOH/Zn, Cool to 4°, 6. Cool to 4°, 7. None

COMMENTS:

Date Received 02/26/16
Courier:
Hand Delivered X
Bill of Lading:

1 of 1

STL-8208 (0600)

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-108074-1

**Login Number: 108074**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.7,3.8,4.6 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |



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# ANALYTICAL REPORT


TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200


TestAmerica Job ID: 500-108074-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*3/30/2016 4:58:56 PM*


Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com



LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-2

## Job ID: 500-108074-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-108074-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 2/26/2016 5:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.7º C, 3.8º C and 4.6º C.

**RAD**
Method(s) 904.0: Radium-228 Prep Batch 160-238887:
The sample duplicate precision for the following samples associated with the batch is outside control limits: MW-01 (500-108074-1), MW-08 (500-108074-2), MW-09 (500-108074-3), MW-11 (500-108074-4), MW-12 (500-108074-5), MW-15 (500-108074-6), MW-17 (500-108074-7), MW-18 (500-108074-8), (LCS 160-238887/2-A), (MB 160-238887/1-A) and (500-108074-C-4-B DU). Non-homogeneity of the sample matrix is suspected (see prep NCM 80852). The data have been qualified and reported.

Method(s) PrecSep-21: Radium-226 Prep Batch 160-238885:
The following samples could not be thoroughly homogenized before sub-sampling was performed due to sample matrix: MW-11 (500-108074-4) and (500-108074-C-4 DU). The samples, although used for batch duplicity, came from two separate bottles and had sediment and white particles floating in the matrix. This attributes to inconsistency between the samples as the samples could not be homogenized between the two bottles.

Method(s) PrecSep_0: Radium-228 Prep Batch 160-238887:
The following samples were prepared at a reduced aliquot: MW-01 (500-108074-1), MW-08 (500-108074-2), MW-09 (500-108074-3), MW-11 (500-108074-4), MW-12 (500-108074-5), MW-15 (500-108074-6), MW-17 (500-108074-7), MW-18 (500-108074-8) and (500-108074-C-4 DU). The samples contained sediment.

Method(s) PrecSep-21: Radium-226 Prep Batch 160-238885:
The following samples were prepared at a reduced aliquot: MW-01 (500-108074-1), MW-08 (500-108074-2), MW-09 (500-108074-3), MW-11 (500-108074-4), MW-12 (500-108074-5), MW-15 (500-108074-6), MW-17 (500-108074-7), MW-18 (500-108074-8) and (500-108074-C-4 DU). The samples contained sediment.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-2

## Client Sample ID: MW-01 — Lab Sample ID: 500-108074-1

No Detections.

## Client Sample ID: MW-08 — Lab Sample ID: 500-108074-2

No Detections.

## Client Sample ID: MW-09 — Lab Sample ID: 500-108074-3

No Detections.

## Client Sample ID: MW-11 — Lab Sample ID: 500-108074-4

No Detections.

## Client Sample ID: MW-12 — Lab Sample ID: 500-108074-5

No Detections.

## Client Sample ID: MW-15 — Lab Sample ID: 500-108074-6

No Detections.

## Client Sample ID: MW-17 — Lab Sample ID: 500-108074-7

No Detections.

## Client Sample ID: MW-18 — Lab Sample ID: 500-108074-8

No Detections.

## Client Sample ID: Duplicates — Lab Sample ID: 500-108074-9

No Detections.

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-108074-1 | MW-01 | Water | 02/25/16 10:00 | 02/26/16 17:20 |
| 500-108074-2 | MW-08 | Water | 02/25/16 13:40 | 02/26/16 17:20 |
| 500-108074-3 | MW-09 | Water | 02/25/16 16:00 | 02/26/16 17:20 |
| 500-108074-4 | MW-11 | Water | 02/26/16 09:40 | 02/26/16 17:20 |
| 500-108074-5 | MW-12 | Water | 02/26/16 11:30 | 02/26/16 17:20 |
| 500-108074-6 | MW-15 | Water | 02/25/16 11:40 | 02/26/16 17:20 |
| 500-108074-7 | MW-17 | Water | 02/22/16 16:20 | 02/26/16 17:20 |
| 500-108074-8 | MW-18 | Water | 02/22/16 17:30 | 02/26/16 17:20 |
| 500-108074-9 | Duplicates | Water | 02/25/16 00:00 | 02/26/16 17:20 |

## Client Sample ID: MW-01

**Date Collected: 02/25/16 10:00**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0662 | U | 0.0744 | 0.0747 | 1.00 | 0.120 | pCi/L | 03/02/16 16:12 | 03/26/16 18:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.0* | | *40 - 110* | *03/02/16 16:12* | *03/26/16 18:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.623 | U | 0.461 | 0.465 | 1.00 | 0.722 | pCi/L | 03/02/16 16:46 | 03/16/16 12:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.0* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:18* | *1* |
| *Y Carrier* | *88.6* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.689 | U | 0.467 | 0.471 | 5.00 | 0.722 | pCi/L | | 03/29/16 12:11 | 1 |

## Client Sample ID: MW-08

**Date Collected: 02/25/16 13:40**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.204** | | 0.0724 | 0.0747 | 1.00 | 0.0742 | pCi/L | 03/02/16 16:12 | 03/26/16 18:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.3* | | *40 - 110* | *03/02/16 16:12* | *03/26/16 18:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.332 | U | 0.270 | 0.271 | 1.00 | 0.428 | pCi/L | 03/02/16 16:46 | 03/16/16 12:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.3* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:18* | *1* |
| *Y Carrier* | *92.0* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.535** | | 0.279 | 0.282 | 5.00 | 0.428 | pCi/L | | 03/29/16 12:11 | 1 |

## Client Sample ID: MW-09

**Date Collected: 02/25/16 16:00**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0434 | U | 0.0449 | 0.0451 | 1.00 | 0.0716 | pCi/L | 03/02/16 16:12 | 03/26/16 18:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *98.0* | | *40 - 110* | *03/02/16 16:12* | *03/26/16 18:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.168 | U | 0.217 | 0.218 | 1.00 | 0.361 | pCi/L | 03/02/16 16:46 | 03/16/16 12:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *98.0* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:18* | *1* |
| *Y Carrier* | *89.7* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.211 | U | 0.222 | 0.222 | 5.00 | 0.361 | pCi/L | | 03/29/16 12:11 | 1 |

## Client Sample ID: MW-11

**Date Collected: 02/26/16 09:40**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.321** | | 0.0873 | 0.0919 | 1.00 | 0.0809 | pCi/L | 03/02/16 16:12 | 03/26/16 18:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.4* | | *40 - 110* | *03/02/16 16:12* | *03/26/16 18:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.241 | U | 0.266 | 0.267 | 1.00 | 0.436 | pCi/L | 03/02/16 16:46 | 03/16/16 12:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.4* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:18* | *1* |
| *Y Carrier* | *87.5* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.562** | | 0.280 | 0.282 | 5.00 | 0.436 | pCi/L | | 03/29/16 12:11 | 1 |

## Client Sample ID: MW-12

**Date Collected: 02/26/16 11:30**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.185 | | 0.0755 | 0.0773 | 1.00 | 0.0854 | pCi/L | 03/02/16 16:12 | 03/26/16 18:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *77.5* | | *40 - 110* | *03/02/16 16:12* | *03/26/16 18:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.923 | | 0.294 | 0.306 | 1.00 | 0.344 | pCi/L | 03/02/16 16:46 | 03/16/16 12:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *77.5* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:18* | *1* |
| *Y Carrier* | *87.5* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.11 | | 0.304 | 0.316 | 5.00 | 0.344 | pCi/L | | 03/29/16 12:11 | 1 |

## Client Sample ID: MW-15

**Date Collected: 02/25/16 11:40**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.177 | | 0.0670 | 0.0689 | 1.00 | 0.0680 | pCi/L | 03/02/16 16:12 | 03/26/16 18:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.3* | | *40 - 110* | *03/02/16 16:12* | *03/26/16 18:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.693 | | 0.357 | 0.363 | 1.00 | 0.538 | pCi/L | 03/02/16 16:46 | 03/16/16 12:23 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.3* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:23* | *1* |
| *Y Carrier* | *90.8* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:23* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.870 | | 0.363 | 0.369 | 5.00 | 0.538 | pCi/L | | 03/29/16 12:11 | 1 |

## Client Sample ID: MW-17

**Date Collected: 02/22/16 16:20**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.202 | | 0.0679 | 0.0703 | 1.00 | 0.0606 | pCi/L | 03/02/16 16:12 | 03/26/16 18:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.6* | | *40 - 110* | *03/02/16 16:12* | *03/26/16 18:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.864 | | 0.341 | 0.350 | 1.00 | 0.482 | pCi/L | 03/02/16 16:46 | 03/16/16 12:23 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.6* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:23* | *1* |
| *Y Carrier* | *86.4* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:23* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.07 | | 0.348 | 0.357 | 5.00 | 0.482 | pCi/L | | 03/29/16 12:11 | 1 |

## Client Sample ID: MW-18

**Date Collected: 02/22/16 17:30**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.382 | | 0.148 | 0.152 | 1.00 | 0.180 | pCi/L | 03/02/16 16:12 | 03/26/16 18:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.3* | | *40 - 110* | *03/02/16 16:12* | *03/26/16 18:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.50 | | 0.645 | 0.660 | 1.00 | 0.934 | pCi/L | 03/02/16 16:46 | 03/16/16 12:23 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.3* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:23* | *1* |
| *Y Carrier* | *83.7* | | *40 - 110* | *03/02/16 16:46* | *03/16/16 12:23* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.88 | | 0.662 | 0.677 | 5.00 | 0.934 | pCi/L | | 03/29/16 12:11 | 1 |

## Client Sample ID: Duplicates

**Date Collected: 02/25/16 00:00**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.165 | | 0.0768 | 0.0782 | 1.00 | 0.102 | pCi/L | 03/03/16 13:33 | 03/26/16 18:44 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *84.9* | | *40 - 110* | *03/03/16 13:33* | *03/26/16 18:44* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.229 | U | 0.284 | 0.285 | 1.00 | 0.471 | pCi/L | 03/07/16 10:18 | 03/18/16 09:45 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *84.9* | | *40 - 110* | *03/07/16 10:18* | *03/18/16 09:45* | *1* |
| *Y Carrier* | *92.0* | | *40 - 110* | *03/07/16 10:18* | *03/18/16 09:45* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.394 | U | 0.295 | 0.296 | 5.00 | 0.471 | pCi/L | | 03/29/16 12:11 | 1 |

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |
| F | Duplicate RPD exceeds the control limit |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Rad

### Prep Batch: 238885

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-108074-2 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-108074-3 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-108074-4 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-108074-4 DU | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-108074-5 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-108074-6 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-108074-7 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-108074-8 | MW-18 | Total/NA | Water | PrecSep-21 | |
| LCS 160-238885/2-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| MB 160-238885/1-A | Method Blank | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 238887

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-108074-2 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-108074-3 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-108074-4 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-108074-4 DU | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-108074-5 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-108074-6 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-108074-7 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-108074-8 | MW-18 | Total/NA | Water | PrecSep_0 | |
| LCS 160-238887/2-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| MB 160-238887/1-A | Method Blank | Total/NA | Water | PrecSep_0 | |

### Prep Batch: 239033

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-9 | Duplicates | Total/NA | Water | PrecSep-21 | |
| LCS 160-239033/2-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| MB 160-239033/1-A | Method Blank | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 239366

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-108074-9 | Duplicates | Total/NA | Water | PrecSep_0 | |
| LCS 160-239366/2-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| MB 160-239366/1-A | Method Blank | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-238885/1-A**
**Matrix: Water**
**Analysis Batch: 242284**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 238885**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.02666 | U | 0.0342 | 0.0343 | 1.00 | 0.0569 | pCi/L | 03/02/16 16:12 | 03/25/16 10:31 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.4* | | *40 - 110* | *03/02/16 16:12* | *03/25/16 10:31* | *1* |

**Lab Sample ID: LCS 160-238885/2-A**
**Matrix: Water**
**Analysis Batch: 242284**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 238885**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.2 | 13.71 | | 1.32 | 1.00 | 0.0585 | pCi/L | 123 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *95.2* | | *40 - 110* |

**Lab Sample ID: 500-108074-4 DU**
**Matrix: Water**
**Analysis Batch: 242288**

**Client Sample ID: MW-11**
**Prep Type: Total/NA**
**Prep Batch: 238885**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.321 | | | 0.2271 | | 0.0853 | 1.00 | 0.0927 | pCi/L | | | 0.53 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *90.3* | | *40 - 110* |

**Lab Sample ID: MB 160-239033/1-A**
**Matrix: Water**
**Analysis Batch: 242288**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 239033**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.02140 | U | 0.0431 | 0.0432 | 1.00 | 0.0897 | pCi/L | 03/03/16 13:33 | 03/26/16 18:43 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *105* | | *40 - 110* | *03/03/16 13:33* | *03/26/16 18:43* | *1* |

**Lab Sample ID: LCS 160-239033/2-A**
**Matrix: Water**
**Analysis Batch: 242288**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 239033**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.2 | 11.60 | | 1.13 | 1.00 | 0.0592 | pCi/L | 104 | 68 - 137 | | |

## Method: 903.0 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: LCS 160-239033/2-A**
**Matrix: Water**
**Analysis Batch: 242288**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 239033**

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 104 | | 40 - 110 |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-238887/1-A**
**Matrix: Water**
**Analysis Batch: 240788**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 238887**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.1518 | U | 0.220 | 0.221 | 1.00 | 0.369 | pCi/L | 03/02/16 16:46 | 03/16/16 12:16 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 99.4 | | 40 - 110 | 03/02/16 16:46 | 03/16/16 12:16 | 1 |
| Y Carrier | 90.1 | | 40 - 110 | 03/02/16 16:46 | 03/16/16 12:16 | 1 |

**Lab Sample ID: LCS 160-238887/2-A**
**Matrix: Water**
**Analysis Batch: 240788**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 238887**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.28 | 11.26 | | 1.25 | 1.00 | 0.378 | pCi/L | 121 | 56 - 140 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 95.2 | | 40 - 110 |
| Y Carrier | 90.1 | | 40 - 110 |

**Lab Sample ID: 500-108074-4 DU**
**Matrix: Water**
**Analysis Batch: 240788**

**Client Sample ID: MW-11**
**Prep Type: Total/NA**
**Prep Batch: 238887**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.241 | U | | 0.8654 | F | 0.301 | 1.00 | 0.358 | pCi/L | | | 1.10 | 1 |

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 90.3 | | 40 - 110 |
| Y Carrier | 83.0 | | 40 - 110 |

**Lab Sample ID: MB 160-239366/1-A**
**Matrix: Water**
**Analysis Batch: 241274**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 239366**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.1202 | U | 0.214 | 0.214 | 1.00 | 0.401 | pCi/L | 03/07/16 10:18 | 03/18/16 09:44 | 1 |

# QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-2

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 105 | | 40 - 110 | 03/07/16 10:18 | 03/18/16 09:44 | 1 |
| Y Carrier | 83.4 | | 40 - 110 | 03/07/16 10:18 | 03/18/16 09:44 | 1 |

**Lab Sample ID: LCS 160-239366/2-A**
**Matrix: Water**
**Analysis Batch: 241274**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 239366**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.27 | 10.02 | | 1.20 | 1.00 | 0.489 | pCi/L | 108 | 56 - 140 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 104 | | 40 - 110 |
| Y Carrier | 67.3 | | 40 - 110 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-2

## Client Sample ID: MW-01
**Date Collected: 02/25/16 10:00**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 238885 | 03/02/16 16:12 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 242288 | 03/26/16 18:42 | ALS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 238887 | 03/02/16 16:46 | CMC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 240788 | 03/16/16 12:18 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 242734 | 03/29/16 12:11 | RTM | TAL SL |

## Client Sample ID: MW-08
**Date Collected: 02/25/16 13:40**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 238885 | 03/02/16 16:12 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 242288 | 03/26/16 18:42 | ALS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 238887 | 03/02/16 16:46 | CMC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 240788 | 03/16/16 12:18 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 242734 | 03/29/16 12:11 | RTM | TAL SL |

## Client Sample ID: MW-09
**Date Collected: 02/25/16 16:00**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 238885 | 03/02/16 16:12 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 242288 | 03/26/16 18:42 | ALS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 238887 | 03/02/16 16:46 | CMC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 240788 | 03/16/16 12:18 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 242734 | 03/29/16 12:11 | RTM | TAL SL |

## Client Sample ID: MW-11
**Date Collected: 02/26/16 09:40**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 238885 | 03/02/16 16:12 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 242288 | 03/26/16 18:42 | ALS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 238887 | 03/02/16 16:46 | CMC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 240788 | 03/16/16 12:18 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 242734 | 03/29/16 12:11 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-2

## Client Sample ID: MW-12

**Lab Sample ID: 500-108074-5**

**Date Collected: 02/26/16 11:30**

**Matrix: Water**

**Date Received: 02/26/16 17:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 238885 | 03/02/16 16:12 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 242288 | 03/26/16 18:42 | ALS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 238887 | 03/02/16 16:46 | CMC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 240788 | 03/16/16 12:18 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 242734 | 03/29/16 12:11 | RTM | TAL SL |

## Client Sample ID: MW-15

**Lab Sample ID: 500-108074-6**

**Date Collected: 02/25/16 11:40**

**Matrix: Water**

**Date Received: 02/26/16 17:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 238885 | 03/02/16 16:12 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 242288 | 03/26/16 18:42 | ALS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 238887 | 03/02/16 16:46 | CMC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 240785 | 03/16/16 12:23 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 242734 | 03/29/16 12:11 | RTM | TAL SL |

## Client Sample ID: MW-17

**Lab Sample ID: 500-108074-7**

**Date Collected: 02/22/16 16:20**

**Matrix: Water**

**Date Received: 02/26/16 17:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 238885 | 03/02/16 16:12 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 242288 | 03/26/16 18:42 | ALS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 238887 | 03/02/16 16:46 | CMC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 240785 | 03/16/16 12:23 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 242734 | 03/29/16 12:11 | RTM | TAL SL |

## Client Sample ID: MW-18

**Lab Sample ID: 500-108074-8**

**Date Collected: 02/22/16 17:30**

**Matrix: Water**

**Date Received: 02/26/16 17:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 238885 | 03/02/16 16:12 | CMC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 242288 | 03/26/16 18:43 | ALS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 238887 | 03/02/16 16:46 | CMC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 240785 | 03/16/16 12:23 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 242734 | 03/29/16 12:11 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-2

## Client Sample ID: Duplicates

**Date Collected: 02/25/16 00:00**
**Date Received: 02/26/16 17:20**

## Lab Sample ID: 500-108074-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 239033 | 03/03/16 13:33 | MRB | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 242288 | 03/26/16 18:44 | ALS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 239366 | 03/07/16 10:18 | CMC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 241274 | 03/18/16 09:45 | ALS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 242734 | 03/29/16 12:11 | RTM | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-2

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-17 |

## Laboratory: TestAmerica St. Louis

The certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 003757 | 11-30-16 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | Accounts Payable |
| Company: | KPRG and Associates, Inc | Company: | NRG Energy |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | 112 Telly St |
| | Brookfield, WI 53005 | | New Roads, LA 70760 |
| Phone: | 262-781-0475 | Phone: | 713 465-4113 |
| Email: | richardg@kprginc.com | Email | invoices@nrg.com |
| | | PO #: | 4501576732 |

**Lab Lot #** 500-108074

| Package Sealed | Samples Sealed |
|---|---|
| (Yes) No | (Yes) No |
| **Received on ice** | **Samples Intact** |
| (Yes) No | (Yes) No N/A |

**Temperature °C of Cooler**
2.7 3.8 4.6

| Within Hold Time | Preserv. Indicated |
|---|---|
| (Yes) No | (Yes) No N/A |
| pH Check OK | Res $Cl_2$ Check OK |
| (Yes) No | Yes No (N/A) |

**Sample Labels and COC Agree**
(Yes) No COC not present

| Sampler Name: | Signature: | # / Cont. |
|---|---|---|
| Ian John Howieson | | Volume |
| **Project Name:** | **TestAmerica Project Number:** | Preserv. |
| Quarterly Powerton CCR | 50011612 | |
| **Project Location:** | **TAT** | |
| Pekin, IL | 15 Days | |
| **Lab PM:** | Eric Lang | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 2-25-16 | 10:00 | W | 5 | X | X | X | X | X | X | |
| | | ~~MW-05~~ | | | W | | X | X | X | X | X | X | |
| 2 | | MW-08 | 2-25-16 | 13:40 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-09 | 2-25-16 | 16:00 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-11 | 2-26-16 | 09:40 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-12 | 2-26-16 | 11:30 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-15 | 2-25-16 | 11:40 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-17 | 2-25-16 | 15:20 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-18 | 2-25-16 | 17:30 | W | 5 | X | X | X | X | X | X | |
| 9 | | Duplicates | 2-25-16 | | W | 5 | X | X | X | X | X | X | |

500-108074 COC

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 2-26-16 | 17:20 | [signature] | TA CHI | 02/26/16 | 17:20 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**
WW = Wastewater, SE = Sediment, W = Water, SO = Solid, S = Soil, DL = Drum Liquid, SL = Sludge, DS = Drum Solid, MS = Miscellaneous, L = Leachate, OL = Oil, W = Wipe, A = Air, O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
_____

**Preservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 02/26/16
Courier:
Hand Delivered [X]
Bill of Lading:

1 of 1

STL-8208 (0600)

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-70849.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | | | Job #: 500-108074-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 3/24/2016 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: Powerston CCR | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2SO3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - ph 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Ra226Ra228_GFPC | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-108074-1) | 2/25/16 | 10:00 Central | | Water | | | X | X | X | 3 | , Full QC needed (dups, etc), Full QC needed (dups, etc.) |
| MW-08 (500-108074-2) | 2/25/16 | 13:40 Central | | Water | | | X | X | X | 3 | , Full QC needed (dups, etc.), Full QC needed (dups, etc) |
| MW-09 (500-108074-3) | 2/25/16 | 16:00 Central | | Water | | | X | X | X | 3 | , Full QC needed (dups, etc), Full QC needed (dups, etc.) |
| MW-11 (500-108074-4) | 2/26/16 | 09:40 Central | | Water | | | X | X | X | 3 | , Full QC needed (dups, etc.), Full QC needed (dups, etc) |
| MW-12 (500-108074-5) | 2/26/16 | 11:30 Central | | Water | | | X | X | X | 3 | , Full QC needed (dups, etc), Full QC needed (dups, etc.) |
| MW-15 (500-108074-6) | 2/25/16 | 11:40 Central | | Water | | | X | X | X | 3 | , Full QC needed (dups, etc.), Full QC needed (dups, etc) |
| MW-17 (500-108074-7) | 2/22/16 | 16:20 Central | | Water | | | X | X | X | 3 | , Full QC needed (dups, etc), Full QC needed (dups, etc.) |
| MW-18 (500-108074-8) | 2/22/16 | 17:30 Central | | Water | | | X | X | X | 3 | , Full QC needed (dups, etc.), Full QC needed (dups, etc) |
| Duplicates (500-108074-9) | 2/25/16 | Central | | Water | | | X | X | X | 3 | , Full QC needed (dups, etc), Full QC needed (dups, etc.) |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

***Possible Hazard Identification***
*Unconfirmed*

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| | | | | | | |
|---|---|---|---|---|---|---|
| Empty Kit Relinquished by: | | Date: | Time: | Method of Shipment: 3.1.16 0925 | | |
| Relinquished by: | Date/Time: 02/29/16 1400 | Company TAL | Received by: Jill Clark | Date/Time: Jill Clark | Company TASR | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: 3.1.16 | Company | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company | |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

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3/30/2016

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-108074-2

**Login Number: 108074**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.7,3.8,4.6 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-108074-2

**Login Number: 108074**
**List Number: 2**
**Creator: Clarke, Jill C**

**List Source: TestAmerica St. Louis**
**List Creation: 03/01/16 01:16 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 22.0, 22.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-108074-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) |
| 500-108074-1 | MW-01 | 92.0 |
| 500-108074-2 | MW-08 | 92.3 |
| 500-108074-3 | MW-09 | 98.0 |
| 500-108074-4 | MW-11 | 93.4 |
| 500-108074-4 DU | MW-11 | 90.3 |
| 500-108074-5 | MW-12 | 77.5 |
| 500-108074-6 | MW-15 | 90.3 |
| 500-108074-7 | MW-17 | 90.6 |
| 500-108074-8 | MW-18 | 88.3 |
| 500-108074-9 | Duplicates | 84.9 |
| LCS 160-238885/2-A | Lab Control Sample | 95.2 |
| LCS 160-239033/2-A | Lab Control Sample | 104 |
| MB 160-238885/1-A | Method Blank | 99.4 |
| MB 160-239033/1-A | Method Blank | 105 |

**Tracer/Carrier Legend**

Ba = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) | Y (40-110) |
| 500-108074-1 | MW-01 | 92.0 | 88.6 |
| 500-108074-2 | MW-08 | 92.3 | 92.0 |
| 500-108074-3 | MW-09 | 98.0 | 89.7 |
| 500-108074-4 | MW-11 | 93.4 | 87.5 |
| 500-108074-4 DU | MW-11 | 90.3 | 83.0 |
| 500-108074-5 | MW-12 | 77.5 | 87.5 |
| 500-108074-6 | MW-15 | 90.3 | 90.8 |
| 500-108074-7 | MW-17 | 90.6 | 86.4 |
| 500-108074-8 | MW-18 | 88.3 | 83.7 |
| 500-108074-9 | Duplicates | 84.9 | 92.0 |
| LCS 160-238887/2-A | Lab Control Sample | 95.2 | 90.1 |
| LCS 160-239366/2-A | Lab Control Sample | 104 | 67.3 |
| MB 160-238887/1-A | Method Blank | 99.4 | 90.1 |
| MB 160-239366/1-A | Method Blank | 105 | 83.4 |

**Tracer/Carrier Legend**

Ba = Ba Carrier
Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-111942-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*6/14/2016 5:17:22 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

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*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-111942-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-111942-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/20/2016 8:22 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4º C, 2.9º C and 3.3º C.

**Metals**
Method(s) 6020A: The ICB at line 7 in batch 500-339137 was above the reporting limit (RL) for Antimony (Sb). All the samples were bracketed by CCB that were within control limits. Also, all samples were below the RL and, therefore, reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-111942-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0081 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.062 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.34 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Chromium | 0.0070 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0053 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.011 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 430 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 44 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 65 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-111942-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.051 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.70 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 660 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 85 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.35 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 120 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-111942-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.036 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0029 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.16 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.7 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 160 | | 1.0 | | mg/L | 5 | | 6020A | Total Recoverable |
| Molybdenum | 0.0069 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 140 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.34 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 300 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-111942-4

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

## Client Sample ID: MW-09 (Continued) — Lab Sample ID: 500-111942-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.029 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.0 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 73 | | 1.0 | | mg/L | 5 | | 6020A | Total Recoverable |
| Molybdenum | 0.042 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0032 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 520 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 38 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 100 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-111942-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.027 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.26 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.6 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 140 | | 1.0 | | mg/L | 5 | | 6020A | Total Recoverable |
| Cobalt | 0.0024 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00076 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.014 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 920 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 120 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.56 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 210 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-111942-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.065 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.16 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.65 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00077 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 150 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0016 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-111942-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 0.028 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1400 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.49 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 550 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-111942-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.044 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.040 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.097 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.7 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Cadmium | 0.00098 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 320 | | 1.0 | | mg/L | 5 | | 6020A | Total Recoverable |
| Molybdenum | 0.041 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0067 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 2800 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 240 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.53 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 1200 | | 500 | | mg/L | 100 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-111942-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.026 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.32 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.4 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Cadmium | 0.0011 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 200 | | 1.0 | | mg/L | 5 | | 6020A | Total Recoverable |
| Cobalt | 0.0015 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.12 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Thallium | 0.0028 | | 0.0020 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1800 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 230 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.64 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

## Client Sample ID: MW-17 (Continued) — Lab Sample ID: 500-111942-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 700 | | 250 | | mg/L | 50 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-111942-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.13 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.72 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0052 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 230 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.71 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 230 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-111942-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.14 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.77 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0054 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1100 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 220 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.72 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 240 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-111942-1 | MW-01 | Water | 05/20/16 12:59 | 05/20/16 20:22 |
| 500-111942-2 | MW-05 | Water | 05/17/16 13:42 | 05/20/16 20:22 |
| 500-111942-3 | MW-08 | Water | 05/18/16 13:23 | 05/20/16 20:22 |
| 500-111942-4 | MW-09 | Water | 05/19/16 15:43 | 05/20/16 20:22 |
| 500-111942-5 | MW-11 | Water | 05/20/16 08:59 | 05/20/16 20:22 |
| 500-111942-6 | MW-12 | Water | 05/20/16 10:56 | 05/20/16 20:22 |
| 500-111942-7 | MW-15 | Water | 05/19/16 12:58 | 05/20/16 20:22 |
| 500-111942-8 | MW-17 | Water | 05/18/16 11:58 | 05/20/16 20:22 |
| 500-111942-9 | MW-18 | Water | 05/18/16 14:33 | 05/20/16 20:22 |
| 500-111942-10 | Duplicate | Water | 05/18/16 00:00 | 05/20/16 20:22 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

**Client Sample ID: MW-01**
**Date Collected: 05/20/16 12:59**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-1**
**Matrix: Water**

## Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/24/16 08:51 | 05/24/16 14:48 | 1 |

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:12 | 1 |
| **Arsenic** | **0.0081** | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:12 | 1 |
| **Barium** | **0.062** | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:12 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/14/16 13:44 | 1 |
| **Boron** | **0.34** | | 0.050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:25 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:25 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:25 | 1 |
| **Chromium** | **0.0070** | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:12 | 1 |
| **Cobalt** | **0.0053** | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:12 | 1 |
| **Lead** | **0.011** | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:25 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:25 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:12 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:25 | 1 |

## Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 06/02/16 17:00 | 06/05/16 17:37 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **430** | | 10 | | mg/L | | | 05/23/16 04:12 | 1 |
| **Chloride** | **44** | | 2.0 | | mg/L | | | 06/02/16 20:54 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 06/12/16 22:25 | 1 |
| **Sulfate** | **65** | | 10 | | mg/L | | | 06/06/16 07:35 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

**Client Sample ID: MW-05**
**Date Collected: 05/17/16 13:42**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-2**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/24/16 08:51 | 05/24/16 14:53 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:15 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:15 | 1 |
| **Barium** | **0.051** | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:15 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/14/16 13:48 | 1 |
| **Boron** | **0.70** | | 0.050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:28 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:28 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:28 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:15 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:15 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:28 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:28 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:15 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:28 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 06/02/16 17:00 | 06/05/16 17:47 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **660** | | 10 | | mg/L | | | 05/23/16 04:31 | 1 |
| **Chloride** | **85** | | 10 | | mg/L | | | 06/02/16 21:29 | 5 |
| **Fluoride** | **0.35** | | 0.10 | | mg/L | | | 06/12/16 22:28 | 1 |
| **Sulfate** | **120** | | 25 | | mg/L | | | 06/08/16 05:52 | 5 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

**Client Sample ID: MW-08**
**Date Collected: 05/18/16 13:23**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-3**
**Matrix: Water**

## Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.036** | | 0.010 | | mg/L | | 05/24/16 08:51 | 05/24/16 14:57 | 1 |

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:18 | 1 |
| **Arsenic** | **0.0029** | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:18 | 1 |
| **Barium** | **0.16** | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:18 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/14/16 13:51 | 1 |
| **Boron** | **1.7** | | 0.25 | | mg/L | | 05/24/16 08:51 | 06/13/16 19:54 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 22:59 | 1 |
| **Calcium** | **160** | | 1.0 | | mg/L | | 05/24/16 08:51 | 06/13/16 19:54 | 5 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:18 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:18 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 22:59 | 1 |
| **Molybdenum** | **0.0069** | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/13/16 22:59 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:18 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/24/16 08:51 | 06/13/16 22:59 | 1 |

## Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 06/02/16 17:00 | 06/05/16 17:49 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1200** | | 10 | | mg/L | | | 05/23/16 04:40 | 1 |
| **Chloride** | **140** | | 10 | | mg/L | | | 06/02/16 20:56 | 5 |
| **Fluoride** | **0.34** | | 0.10 | | mg/L | | | 06/12/16 22:30 | 1 |
| **Sulfate** | **300** | | 50 | | mg/L | | | 06/08/16 05:53 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

**Client Sample ID: MW-09**
**Date Collected: 05/19/16 15:43**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-4**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/24/16 08:51 | 05/24/16 15:01 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:20 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:20 | 1 |
| **Barium** | **0.029** | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:20 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/14/16 13:55 | 1 |
| **Boron** | **2.0** | | 0.25 | | mg/L | | 05/24/16 08:51 | 06/13/16 19:58 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:03 | 1 |
| **Calcium** | **73** | | 1.0 | | mg/L | | 05/24/16 08:51 | 06/13/16 19:58 | 5 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:20 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:20 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:03 | 1 |
| **Molybdenum** | **0.042** | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:03 | 1 |
| **Selenium** | **0.0032** | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:20 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:03 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 06/02/16 17:00 | 06/05/16 17:52 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **520** | | 10 | | mg/L | | | 05/23/16 04:43 | 1 |
| **Chloride** | **38** | | 2.0 | | mg/L | | | 06/02/16 20:57 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 06/12/16 22:32 | 1 |
| **Sulfate** | **100** | | 25 | | mg/L | | | 06/08/16 05:56 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

**Client Sample ID: MW-11**
**Date Collected: 05/20/16 08:59**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-5**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/24/16 08:51 | 05/24/16 15:05 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:23 | 1 |
| **Arsenic** | **0.027** | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:23 | 1 |
| **Barium** | **0.26** | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:23 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/14/16 13:59 | 1 |
| **Boron** | **1.6** | | 0.25 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:02 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:07 | 1 |
| **Calcium** | **140** | | 1.0 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:02 | 5 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:23 | 1 |
| **Cobalt** | **0.0024** | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:23 | 1 |
| **Lead** | **0.00076** | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:07 | 1 |
| **Molybdenum** | **0.014** | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:07 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:23 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:07 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 06/02/16 17:00 | 06/05/16 17:54 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **920** | | 10 | | mg/L | | | 05/23/16 04:46 | 1 |
| **Chloride** | **120** | | 10 | | mg/L | | | 06/02/16 21:29 | 5 |
| **Fluoride** | **0.56** | | 0.10 | | mg/L | | | 06/12/16 22:35 | 1 |
| **Sulfate** | **210** | | 50 | | mg/L | | | 06/08/16 05:57 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

**Client Sample ID: MW-12**
**Date Collected: 05/20/16 10:56**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-6**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.013** | | 0.010 | | mg/L | | 05/24/16 08:51 | 05/24/16 15:10 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:25 | 1 |
| **Arsenic** | **0.065** | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:25 | 1 |
| **Barium** | **0.16** | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:25 | 1 |
| Beryllium | <0.0010 | F1 | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/14/16 14:02 | 1 |
| **Boron** | **0.65** | | 0.050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:32 | 1 |
| **Cadmium** | **0.00077** | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:32 | 1 |
| **Calcium** | **150** | | 0.20 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:32 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:25 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:25 | 1 |
| **Lead** | **0.0016** | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:32 | 1 |
| **Molybdenum** | **0.028** | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:32 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:25 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:32 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 06/02/16 17:00 | 06/05/16 17:56 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1400** | | 10 | | mg/L | | | 05/23/16 04:49 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 06/02/16 20:58 | 5 |
| **Fluoride** | **0.49** | | 0.10 | | mg/L | | | 06/12/16 22:37 | 1 |
| **Sulfate** | **550** | | 100 | | mg/L | | | 06/08/16 06:00 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

**Client Sample ID: MW-15**
**Date Collected: 05/19/16 12:58**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-7**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.044 | | 0.010 | | mg/L | | 05/24/16 08:51 | 05/24/16 15:57 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:44 | 1 |
| Arsenic | 0.040 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:44 | 1 |
| Barium | 0.097 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:44 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/14/16 14:28 | 1 |
| Boron | 2.7 | | 0.25 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:05 | 5 |
| Cadmium | 0.00098 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:10 | 1 |
| Calcium | 320 | | 1.0 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:05 | 5 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:44 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:44 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:10 | 1 |
| Molybdenum | 0.041 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:10 | 1 |
| Selenium | 0.0067 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:44 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:10 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 06/02/16 17:00 | 06/05/16 17:59 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 2800 | | 10 | | mg/L | | | 05/23/16 04:52 | 1 |
| Chloride | 240 | | 10 | | mg/L | | | 06/02/16 21:02 | 5 |
| Fluoride | 0.53 | | 0.10 | | mg/L | | | 06/12/16 22:49 | 1 |
| Sulfate | 1200 | | 500 | | mg/L | | | 06/08/16 06:01 | 100 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

**Client Sample ID: MW-17**
**Date Collected: 05/18/16 11:58**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-8**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.026 | | 0.010 | | mg/L | | 05/24/16 08:51 | 05/24/16 16:02 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:47 | 1 |
| Arsenic | 0.32 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:47 | 1 |
| Barium | 0.12 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:47 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/14/16 14:32 | 1 |
| Boron | 1.4 | | 0.25 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:09 | 5 |
| Cadmium | 0.0011 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:14 | 1 |
| Calcium | 200 | | 1.0 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:09 | 5 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:47 | 1 |
| Cobalt | 0.0015 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:47 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:14 | 1 |
| Molybdenum | 0.12 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:14 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:47 | 1 |
| Thallium | 0.0028 | | 0.0020 | | mg/L | | 05/24/16 08:51 | 06/13/16 23:14 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 06/02/16 17:00 | 06/05/16 18:06 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1800 | | 10 | | mg/L | | | 05/23/16 04:55 | 1 |
| Chloride | 230 | | 10 | | mg/L | | | 06/02/16 21:03 | 5 |
| Fluoride | 0.64 | | 0.10 | | mg/L | | | 06/12/16 22:51 | 1 |
| Sulfate | 700 | | 250 | | mg/L | | | 06/08/16 06:02 | 50 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

**Client Sample ID: MW-18**
**Date Collected: 05/18/16 14:33**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-9**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.010 | | mg/L | | 05/24/16 08:51 | 05/24/16 16:07 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:49 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:49 | 1 |
| Barium | 0.13 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:49 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/14/16 14:36 | 1 |
| Boron | 0.72 | | 0.050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:51 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:51 | 1 |
| Calcium | 120 | | 0.20 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:51 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:49 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:49 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:51 | 1 |
| Molybdenum | 0.0052 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:51 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:49 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:51 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 06/02/16 17:00 | 06/05/16 18:08 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1200 | | 10 | | mg/L | | | 05/23/16 04:58 | 1 |
| Chloride | 230 | | 10 | | mg/L | | | 06/02/16 21:04 | 5 |
| Fluoride | 0.71 | | 0.10 | | mg/L | | | 06/12/16 22:54 | 1 |
| Sulfate | 230 | | 50 | | mg/L | | | 06/08/16 06:03 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

**Client Sample ID: Duplicate**
**Date Collected: 05/18/16 00:00**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-10**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | | 05/24/16 08:51 | 05/24/16 16:13 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:52 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:52 | 1 |
| Barium | 0.14 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:52 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/14/16 14:39 | 1 |
| Boron | 0.77 | | 0.050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:55 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:55 | 1 |
| Calcium | 130 | | 0.20 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:55 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:52 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:52 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:55 | 1 |
| Molybdenum | 0.0054 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:55 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 20:52 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/24/16 08:51 | 06/13/16 20:55 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 06/02/16 17:00 | 06/05/16 18:10 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1100 | | 10 | | mg/L | | | 05/23/16 05:01 | 1 |
| Chloride | 220 | | 10 | | mg/L | | | 06/02/16 21:30 | 5 |
| Fluoride | 0.72 | | 0.10 | | mg/L | | | 06/12/16 22:56 | 1 |
| Sulfate | 240 | | 50 | | mg/L | | | 06/08/16 06:04 | 10 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| F1 | MS and/or MSD Recovery is outside acceptance limits. |
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 336833

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-111942-2 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-111942-3 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-111942-4 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-111942-5 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-111942-6 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-111942-6 DU | MW-12 | Total Recoverable | Water | 3005A | |
| 500-111942-6 MS | MW-12 | Total Recoverable | Water | 3005A | |
| 500-111942-6 MSD | MW-12 | Total Recoverable | Water | 3005A | |
| 500-111942-7 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-111942-8 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-111942-9 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-111942-10 | Duplicate | Total Recoverable | Water | 3005A | |
| LCS 500-336833/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| MB 500-336833/1-A | Method Blank | Total Recoverable | Water | 3005A | |

### Analysis Batch: 336953

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-1 | MW-01 | Total Recoverable | Water | 6010C | 336833 |
| 500-111942-2 | MW-05 | Total Recoverable | Water | 6010C | 336833 |
| 500-111942-3 | MW-08 | Total Recoverable | Water | 6010C | 336833 |
| 500-111942-4 | MW-09 | Total Recoverable | Water | 6010C | 336833 |
| 500-111942-5 | MW-11 | Total Recoverable | Water | 6010C | 336833 |
| 500-111942-6 | MW-12 | Total Recoverable | Water | 6010C | 336833 |
| 500-111942-6 DU | MW-12 | Total Recoverable | Water | 6010C | 336833 |
| 500-111942-6 MS | MW-12 | Total Recoverable | Water | 6010C | 336833 |
| 500-111942-6 MSD | MW-12 | Total Recoverable | Water | 6010C | 336833 |
| 500-111942-7 | MW-15 | Total Recoverable | Water | 6010C | 336833 |
| 500-111942-8 | MW-17 | Total Recoverable | Water | 6010C | 336833 |
| 500-111942-9 | MW-18 | Total Recoverable | Water | 6010C | 336833 |
| 500-111942-10 | Duplicate | Total Recoverable | Water | 6010C | 336833 |
| LCS 500-336833/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 336833 |
| MB 500-336833/1-A | Method Blank | Total Recoverable | Water | 6010C | 336833 |

### Prep Batch: 338186

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-111942-1 DU | MW-01 | Total/NA | Water | 7470A | |
| 500-111942-1 MS | MW-01 | Total/NA | Water | 7470A | |
| 500-111942-1 MSD | MW-01 | Total/NA | Water | 7470A | |
| 500-111942-2 | MW-05 | Total/NA | Water | 7470A | |
| 500-111942-3 | MW-08 | Total/NA | Water | 7470A | |
| 500-111942-4 | MW-09 | Total/NA | Water | 7470A | |
| 500-111942-5 | MW-11 | Total/NA | Water | 7470A | |
| 500-111942-6 | MW-12 | Total/NA | Water | 7470A | |
| 500-111942-7 | MW-15 | Total/NA | Water | 7470A | |
| 500-111942-8 | MW-17 | Total/NA | Water | 7470A | |
| 500-111942-9 | MW-18 | Total/NA | Water | 7470A | |
| 500-111942-10 | Duplicate | Total/NA | Water | 7470A | |
| LCS 500-338186/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| MB 500-338186/12-A | Method Blank | Total/NA | Water | 7470A | |

## Analysis Batch: 338501

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-1 | MW-01 | Total/NA | Water | 7470A | 338186 |
| 500-111942-1 DU | MW-01 | Total/NA | Water | 7470A | 338186 |
| 500-111942-1 MS | MW-01 | Total/NA | Water | 7470A | 338186 |
| 500-111942-1 MSD | MW-01 | Total/NA | Water | 7470A | 338186 |
| 500-111942-2 | MW-05 | Total/NA | Water | 7470A | 338186 |
| 500-111942-3 | MW-08 | Total/NA | Water | 7470A | 338186 |
| 500-111942-4 | MW-09 | Total/NA | Water | 7470A | 338186 |
| 500-111942-5 | MW-11 | Total/NA | Water | 7470A | 338186 |
| 500-111942-6 | MW-12 | Total/NA | Water | 7470A | 338186 |
| 500-111942-7 | MW-15 | Total/NA | Water | 7470A | 338186 |
| 500-111942-8 | MW-17 | Total/NA | Water | 7470A | 338186 |
| 500-111942-9 | MW-18 | Total/NA | Water | 7470A | 338186 |
| 500-111942-10 | Duplicate | Total/NA | Water | 7470A | 338186 |
| LCS 500-338186/13-A | Lab Control Sample | Total/NA | Water | 7470A | 338186 |
| MB 500-338186/12-A | Method Blank | Total/NA | Water | 7470A | 338186 |

## Analysis Batch: 339137

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-1 | MW-01 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-2 | MW-05 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-3 | MW-08 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-4 | MW-09 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-5 | MW-11 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-6 | MW-12 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-6 DU | MW-12 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-6 MS | MW-12 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-6 MSD | MW-12 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-7 | MW-15 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-8 | MW-17 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-9 | MW-18 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-10 | Duplicate | Total Recoverable | Water | 6020A | 336833 |
| LCS 500-336833/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 336833 |
| MB 500-336833/1-A | Method Blank | Total Recoverable | Water | 6020A | 336833 |

## Analysis Batch: 339735

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-1 | MW-01 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-2 | MW-05 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-3 | MW-08 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-3 | MW-08 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-4 | MW-09 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-4 | MW-09 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-5 | MW-11 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-5 | MW-11 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-6 | MW-12 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-6 DU | MW-12 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-6 MS | MW-12 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-6 MSD | MW-12 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-7 | MW-15 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-7 | MW-15 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-8 | MW-17 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-8 | MW-17 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-9 | MW-18 | Total Recoverable | Water | 6020A | 336833 |

## Metals (Continued)

### Analysis Batch: 339735 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-10 | Duplicate | Total Recoverable | Water | 6020A | 336833 |
| LCS 500-336833/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 336833 |
| MB 500-336833/1-A | Method Blank | Total Recoverable | Water | 6020A | 336833 |

### Analysis Batch: 339792

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-1 | MW-01 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-2 | MW-05 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-3 | MW-08 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-4 | MW-09 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-5 | MW-11 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-6 | MW-12 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-6 DU | MW-12 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-6 MS | MW-12 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-6 MSD | MW-12 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-7 | MW-15 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-8 | MW-17 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-9 | MW-18 | Total Recoverable | Water | 6020A | 336833 |
| 500-111942-10 | Duplicate | Total Recoverable | Water | 6020A | 336833 |
| LCS 500-336833/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 336833 |
| MB 500-336833/1-A | Method Blank | Total Recoverable | Water | 6020A | 336833 |

## General Chemistry

### Analysis Batch: 336566

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-111942-1 DU | MW-01 | Total/NA | Water | SM 2540C | |
| LCS 500-336566/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| MB 500-336566/1 | Method Blank | Total/NA | Water | SM 2540C | |

### Analysis Batch: 336568

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-2 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-111942-2 DU | MW-05 | Total/NA | Water | SM 2540C | |
| 500-111942-2 MS | MW-05 | Total/NA | Water | SM 2540C | |
| 500-111942-3 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-111942-4 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-111942-5 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-111942-6 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-111942-7 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-111942-8 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-111942-9 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-111942-10 | Duplicate | Total/NA | Water | SM 2540C | |
| LCS 500-336568/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| MB 500-336568/1 | Method Blank | Total/NA | Water | SM 2540C | |

### Analysis Batch: 338217

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |

## General Chemistry (Continued)

### Analysis Batch: 338217 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-2 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-111942-3 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-111942-4 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-111942-5 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-111942-6 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-111942-7 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-111942-8 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-111942-9 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-111942-10 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-338217/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-338217/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 338529

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-338529/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-338529/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 338896

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-2 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-111942-3 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-111942-4 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-111942-5 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-111942-5 MS | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-111942-5 MSD | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-111942-6 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-111942-7 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-111942-8 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-111942-9 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-111942-10 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-338896/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-338896/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 339574

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-111942-2 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-111942-3 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-111942-4 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-111942-5 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-111942-6 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-111942-7 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-111942-8 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-111942-9 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-111942-10 | Duplicate | Total/NA | Water | SM 4500 F C | |
| LCS 500-339574/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| MB 500-339574/3 | Method Blank | Total/NA | Water | SM 4500 F C | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-336833/1-A**
**Matrix: Water**
**Analysis Batch: 336953**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/24/16 08:51 | 05/24/16 14:40 | 1 |

**Lab Sample ID: LCS 500-336833/2-A**
**Matrix: Water**
**Analysis Batch: 336953**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.537 | | mg/L | | 107 | 80 - 120 |

**Lab Sample ID: 500-111942-6 MS**
**Matrix: Water**
**Analysis Batch: 336953**

**Client Sample ID: MW-12**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.500 | 0.559 | | mg/L | | 109 | 75 - 125 |

**Lab Sample ID: 500-111942-6 MSD**
**Matrix: Water**
**Analysis Batch: 336953**

**Client Sample ID: MW-12**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.500 | 0.532 | | mg/L | | 104 | 75 - 125 | 5 | 20 |

**Lab Sample ID: 500-111942-6 DU**
**Matrix: Water**
**Analysis Batch: 336953**

**Client Sample ID: MW-12**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.0118 | | mg/L | | 13 | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-336833/1-A**
**Matrix: Water**
**Analysis Batch: 339137**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/24/16 08:51 | 06/08/16 19:59 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 19:59 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 19:59 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/08/16 19:59 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/08/16 19:59 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/24/16 08:51 | 06/08/16 19:59 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-336833/1-A**
**Matrix: Water**
**Analysis Batch: 339735**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 05/24/16 08:51 | 06/13/16 19:46 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 19:46 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 05/24/16 08:51 | 06/13/16 19:46 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/24/16 08:51 | 06/13/16 19:46 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/24/16 08:51 | 06/13/16 19:46 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/24/16 08:51 | 06/13/16 19:46 | 1 |

**Lab Sample ID: MB 500-336833/1-A**
**Matrix: Water**
**Analysis Batch: 339792**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/24/16 08:51 | 06/14/16 13:36 | 1 |

**Lab Sample ID: LCS 500-336833/2-A**
**Matrix: Water**
**Analysis Batch: 339137**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.497 | | mg/L | | 99 | 80 - 120 |
| Arsenic | 0.100 | 0.101 | | mg/L | | 101 | 80 - 120 |
| Barium | 2.00 | 1.92 | | mg/L | | 96 | 80 - 120 |
| Chromium | 0.200 | 0.191 | | mg/L | | 96 | 80 - 120 |
| Cobalt | 0.500 | 0.502 | | mg/L | | 100 | 80 - 120 |
| Selenium | 0.100 | 0.109 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: LCS 500-336833/2-A**
**Matrix: Water**
**Analysis Batch: 339735**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 1.07 | | mg/L | | 107 | 80 - 120 |
| Cadmium | 0.0500 | 0.0483 | | mg/L | | 97 | 80 - 120 |
| Calcium | 10.0 | 11.1 | | mg/L | | 111 | 80 - 120 |
| Lead | 0.100 | 0.108 | | mg/L | | 108 | 80 - 120 |
| Molybdenum | 1.00 | 0.991 | | mg/L | | 99 | 80 - 120 |
| Thallium | 0.100 | 0.110 | | mg/L | | 110 | 80 - 120 |

**Lab Sample ID: LCS 500-336833/2-A**
**Matrix: Water**
**Analysis Batch: 339792**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Beryllium | 0.0500 | 0.0460 | | mg/L | | 92 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-111942-6 MS**
**Matrix: Water**
**Analysis Batch: 339137**

**Client Sample ID: MW-12**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.501 | | mg/L | | 100 | 75 - 125 |
| Arsenic | 0.065 | | 0.100 | 0.175 | | mg/L | | 110 | 75 - 125 |
| Barium | 0.16 | | 2.00 | 2.15 | | mg/L | | 100 | 75 - 125 |
| Calcium | 150 | * | 10.0 | 157 | 4 | mg/L | | 63 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.183 | | mg/L | | 91 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.451 | | mg/L | | 90 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.115 | | mg/L | | 115 | 75 - 125 |

**Lab Sample ID: 500-111942-6 MS**
**Matrix: Water**
**Analysis Batch: 339735**

**Client Sample ID: MW-12**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.65 | | 1.00 | 1.57 | | mg/L | | 92 | 75 - 125 |
| Cadmium | 0.00077 | | 0.0500 | 0.0498 | | mg/L | | 98 | 75 - 125 |
| Calcium | 150 | | 10.0 | 154 | 4 | mg/L | | 75 | 75 - 125 |
| Lead | 0.0016 | | 0.100 | 0.103 | | mg/L | | 102 | 75 - 125 |
| Molybdenum | 0.028 | | 1.00 | 1.06 | | mg/L | | 104 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.103 | | mg/L | | 103 | 75 - 125 |

**Lab Sample ID: 500-111942-6 MS**
**Matrix: Water**
**Analysis Batch: 339792**

**Client Sample ID: MW-12**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | F1 | 0.0500 | 0.0365 | F1 | mg/L | | 72 | 75 - 125 |

**Lab Sample ID: 500-111942-6 MSD**
**Matrix: Water**
**Analysis Batch: 339137**

**Client Sample ID: MW-12**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.490 | | mg/L | | 98 | 75 - 125 | 2 | 20 |
| Arsenic | 0.065 | | 0.100 | 0.165 | | mg/L | | 100 | 75 - 125 | 6 | 20 |
| Barium | 0.16 | | 2.00 | 2.01 | | mg/L | | 92 | 75 - 125 | 7 | 20 |
| Calcium | 150 | * | 10.0 | 142 | 4 | mg/L | | -91 | 75 - 125 | 10 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.171 | | mg/L | | 85 | 75 - 125 | 7 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.425 | | mg/L | | 85 | 75 - 125 | 6 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.109 | | mg/L | | 109 | 75 - 125 | 5 | 20 |

**Lab Sample ID: 500-111942-6 MSD**
**Matrix: Water**
**Analysis Batch: 339735**

**Client Sample ID: MW-12**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.65 | | 1.00 | 1.50 | | mg/L | | 85 | 75 - 125 | 5 | 20 |
| Cadmium | 0.00077 | | 0.0500 | 0.0465 | | mg/L | | 92 | 75 - 125 | 7 | 20 |
| Calcium | 150 | | 10.0 | 141 | 4 | mg/L | | -59 | 75 - 125 | 9 | 20 |
| Lead | 0.0016 | | 0.100 | 0.0980 | | mg/L | | 96 | 75 - 125 | 5 | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-111942-6 MSD**
**Matrix: Water**
**Analysis Batch: 339735**

**Client Sample ID: MW-12**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 0.028 | | 1.00 | 0.992 | | mg/L | | 96 | 75 - 125 | 7 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.0975 | | mg/L | | 97 | 75 - 125 | 6 | 20 |

**Lab Sample ID: 500-111942-6 MSD**
**Matrix: Water**
**Analysis Batch: 339792**

**Client Sample ID: MW-12**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | F1 | 0.0500 | 0.0346 | F1 | mg/L | | 69 | 75 - 125 | 5 | 20 |

**Lab Sample ID: 500-111942-6 DU**
**Matrix: Water**
**Analysis Batch: 339137**

**Client Sample ID: MW-12**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | <0.0030 | | mg/L | | NC | 20 |
| Arsenic | 0.065 | | 0.0590 | | mg/L | | 9 | 20 |
| Barium | 0.16 | | 0.142 | | mg/L | | 10 | 20 |
| Chromium | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Cobalt | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Selenium | <0.0025 | | <0.0025 | | mg/L | | NC | 20 |

**Lab Sample ID: 500-111942-6 DU**
**Matrix: Water**
**Analysis Batch: 339735**

**Client Sample ID: MW-12**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Boron | 0.65 | | 0.571 | | mg/L | | 14 | 20 |
| Cadmium | 0.00077 | | 0.000800 | | mg/L | | 4 | 20 |
| Calcium | 150 | | 127 | | mg/L | | 14 | 20 |
| Lead | 0.0016 | | 0.00148 | | mg/L | | 10 | 20 |
| Molybdenum | 0.028 | | 0.0247 | | mg/L | | 11 | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | NC | 20 |

**Lab Sample ID: 500-111942-6 DU**
**Matrix: Water**
**Analysis Batch: 339792**

**Client Sample ID: MW-12**
**Prep Type: Total Recoverable**
**Prep Batch: 336833**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | F1 | <0.0010 | | mg/L | | NC | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-338186/12-A**
**Matrix: Water**
**Analysis Batch: 338501**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 338186**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 06/02/16 17:00 | 06/05/16 17:03 | 1 |

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: LCS 500-338186/13-A**
**Matrix: Water**
**Analysis Batch: 338501**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 338186**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | | | 0.00200 | 0.00221 | | mg/L | | 111 | 80 - 120 | | |

**Lab Sample ID: 500-111942-1 MS**
**Matrix: Water**
**Analysis Batch: 338501**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 338186**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00105 | | mg/L | | 105 | 75 - 125 | | |

**Lab Sample ID: 500-111942-1 MSD**
**Matrix: Water**
**Analysis Batch: 338501**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 338186**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00112 | | mg/L | | 112 | 75 - 125 | 6 | 20 |

**Lab Sample ID: 500-111942-1 DU**
**Matrix: Water**
**Analysis Batch: 338501**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 338186**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | | <0.00020 | | mg/L | | | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-336566/1**
**Matrix: Water**
**Analysis Batch: 336566**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 05/23/16 03:05 | 1 |

**Lab Sample ID: LCS 500-336566/2**
**Matrix: Water**
**Analysis Batch: 336566**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | | | 250 | 296 | | mg/L | | 118 | 80 - 120 | | |

**Lab Sample ID: 500-111942-1 DU**
**Matrix: Water**
**Analysis Batch: 336566**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 430 | | | 448 | | mg/L | | | | 4 | 5 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: MB 500-336568/1**
**Matrix: Water**
**Analysis Batch: 336568**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 05/23/16 04:25 | 1 |

**Lab Sample ID: LCS 500-336568/2**
**Matrix: Water**
**Analysis Batch: 336568**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 264 | | mg/L | | 106 | 80 - 120 |

**Lab Sample ID: 500-111942-2 MS**
**Matrix: Water**
**Analysis Batch: 336568**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 660 | | 250 | 956 | | mg/L | | 117 | 75 - 125 |

**Lab Sample ID: 500-111942-2 DU**
**Matrix: Water**
**Analysis Batch: 336568**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 660 | | 682 | | mg/L | | 3 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-338217/4**
**Matrix: Water**
**Analysis Batch: 338217**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 06/02/16 20:52 | 1 |

**Lab Sample ID: LCS 500-338217/5**
**Matrix: Water**
**Analysis Batch: 338217**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 47.0 | | mg/L | | 94 | 80 - 120 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-339574/3**
**Matrix: Water**
**Analysis Batch: 339574**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 06/12/16 21:42 | 1 |

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: LCS 500-339574/4**
**Matrix: Water**
**Analysis Batch: 339574**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.7 | | mg/L | | 107 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-338529/3**
**Matrix: Water**
**Analysis Batch: 338529**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 06/06/16 07:14 | 1 |

**Lab Sample ID: LCS 500-338529/4**
**Matrix: Water**
**Analysis Batch: 338529**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 20.9 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: MB 500-338896/3**
**Matrix: Water**
**Analysis Batch: 338896**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 06/08/16 05:44 | 1 |

**Lab Sample ID: LCS 500-338896/4**
**Matrix: Water**
**Analysis Batch: 338896**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 18.3 | | mg/L | | 91 | 80 - 120 |

**Lab Sample ID: 500-111942-5 MS**
**Matrix: Water**
**Analysis Batch: 338896**

**Client Sample ID: MW-11**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 210 | | 400 | 655 | | mg/L | | 110 | 75 - 125 |

**Lab Sample ID: 500-111942-5 MSD**
**Matrix: Water**
**Analysis Batch: 338896**

**Client Sample ID: MW-11**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 210 | | 400 | 647 | | mg/L | | 108 | 75 - 125 | 1 | 20 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

## Client Sample ID: MW-01

**Date Collected: 05/20/16 12:59**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 336953 | 05/24/16 14:48 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339137 | 06/08/16 20:12 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339735 | 06/13/16 20:25 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339792 | 06/14/16 13:44 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 338186 | 06/02/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 338501 | 06/05/16 17:37 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 336566 | 05/23/16 04:12 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 338217 | 06/02/16 20:54 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 339574 | 06/12/16 22:25 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 338529 | | CLB | TAL CHI |
| | | | | | (Start) | 06/06/16 07:35 | | |
| | | | | | (End) | 06/06/16 07:36 | | |

## Client Sample ID: MW-05

**Date Collected: 05/17/16 13:42**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 336953 | 05/24/16 14:53 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339137 | 06/08/16 20:15 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339735 | 06/13/16 20:28 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339792 | 06/14/16 13:48 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 338186 | 06/02/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 338501 | 06/05/16 17:47 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 336568 | 05/23/16 04:31 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 338217 | 06/02/16 21:29 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 339574 | 06/12/16 22:28 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 338896 | | CLB | TAL CHI |
| | | | | | (Start) | 06/08/16 05:52 | | |
| | | | | | (End) | 06/08/16 05:53 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

## Client Sample ID: MW-08

**Date Collected: 05/18/16 13:23**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 336953 | 05/24/16 14:57 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339137 | 06/08/16 20:18 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 339735 | 06/13/16 19:54 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339735 | 06/13/16 22:59 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339792 | 06/14/16 13:51 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 338186 | 06/02/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 338501 | 06/05/16 17:49 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 336568 | 05/23/16 04:40 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 338217 | 06/02/16 20:56 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 339574 | 06/12/16 22:30 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 338896 | | CLB | TAL CHI |
| | | | | | (Start) | 06/08/16 05:53 | | |
| | | | | | (End) | 06/08/16 05:54 | | |

## Client Sample ID: MW-09

**Date Collected: 05/19/16 15:43**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 336953 | 05/24/16 15:01 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339137 | 06/08/16 20:20 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 339735 | 06/13/16 19:58 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339735 | 06/13/16 23:03 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339792 | 06/14/16 13:55 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 338186 | 06/02/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 338501 | 06/05/16 17:52 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 336568 | 05/23/16 04:43 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 338217 | 06/02/16 20:57 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 339574 | 06/12/16 22:32 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 338896 | | CLB | TAL CHI |
| | | | | | (Start) | 06/08/16 05:56 | | |
| | | | | | (End) | 06/08/16 05:57 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

## Client Sample ID: MW-11

**Date Collected: 05/20/16 08:59**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 336953 | 05/24/16 15:05 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339137 | 06/08/16 20:23 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 339735 | 06/13/16 20:02 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339735 | 06/13/16 23:07 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339792 | 06/14/16 13:59 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 338186 | 06/02/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 338501 | 06/05/16 17:54 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 336568 | 05/23/16 04:46 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 338217 | 06/02/16 21:29 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 339574 | 06/12/16 22:35 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 338896 | | CLB | TAL CHI |
| | | | | | (Start) | 06/08/16 05:57 | | |
| | | | | | (End) | 06/08/16 05:58 | | |

## Client Sample ID: MW-12

**Date Collected: 05/20/16 10:56**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 336953 | 05/24/16 15:10 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339137 | 06/08/16 20:25 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339735 | 06/13/16 20:32 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339792 | 06/14/16 14:02 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 338186 | 06/02/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 338501 | 06/05/16 17:56 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 336568 | 05/23/16 04:49 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 338217 | 06/02/16 20:58 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 339574 | 06/12/16 22:37 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 338896 | | CLB | TAL CHI |
| | | | | | (Start) | 06/08/16 06:00 | | |
| | | | | | (End) | 06/08/16 06:01 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

## Client Sample ID: MW-15

**Date Collected: 05/19/16 12:58**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 336953 | 05/24/16 15:57 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339137 | 06/08/16 20:44 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 339735 | 06/13/16 20:05 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339735 | 06/13/16 23:10 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339792 | 06/14/16 14:28 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 338186 | 06/02/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 338501 | 06/05/16 17:59 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 336568 | 05/23/16 04:52 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 338217 | 06/02/16 21:02 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 339574 | 06/12/16 22:49 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 100 | 338896 | | CLB | TAL CHI |
| | | | | | | (Start) 06/08/16 06:01 | | |
| | | | | | | (End) 06/08/16 06:02 | | |

## Client Sample ID: MW-17

**Date Collected: 05/18/16 11:58**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 336953 | 05/24/16 16:02 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339137 | 06/08/16 20:47 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 339735 | 06/13/16 20:09 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339735 | 06/13/16 23:14 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339792 | 06/14/16 14:32 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 338186 | 06/02/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 338501 | 06/05/16 18:06 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 336568 | 05/23/16 04:55 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 338217 | 06/02/16 21:03 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 339574 | 06/12/16 22:51 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 50 | 338896 | | CLB | TAL CHI |
| | | | | | | (Start) 06/08/16 06:02 | | |
| | | | | | | (End) 06/08/16 06:03 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

## Client Sample ID: MW-18

**Lab Sample ID: 500-111942-9**

**Date Collected: 05/18/16 14:33**
**Date Received: 05/20/16 20:22**

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 336953 | 05/24/16 16:07 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339137 | 06/08/16 20:49 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339735 | 06/13/16 20:51 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339792 | 06/14/16 14:36 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 338186 | 06/02/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 338501 | 06/05/16 18:08 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 336568 | 05/23/16 04:58 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 338217 | 06/02/16 21:04 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 339574 | 06/12/16 22:54 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 338896 | | CLB | TAL CHI |
| | | | | | (Start) | 06/08/16 06:03 | | |
| | | | | | (End) | 06/08/16 06:04 | | |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-111942-10**

**Date Collected: 05/18/16 00:00**
**Date Received: 05/20/16 20:22**

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 336953 | 05/24/16 16:13 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339137 | 06/08/16 20:52 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339735 | 06/13/16 20:55 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 336833 | 05/24/16 08:51 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 339792 | 06/14/16 14:39 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 338186 | 06/02/16 17:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 338501 | 06/05/16 18:10 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 336568 | 05/23/16 05:01 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 338217 | 06/02/16 21:30 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 339574 | 06/12/16 22:56 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 338896 | | CLB | TAL CHI |
| | | | | | (Start) | 06/08/16 06:04 | | |
| | | | | | (End) | 06/08/16 06:05 | | |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-1

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-17 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chicag
2417 Bond St.
University Park, IL 60
708-534-5200
Fax. 708-534-5211

500-111942 COC

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | Accounts Payable |
| Company: | KPRG and Associates, Inc | Company: | NRG Energy |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | 112 Telly St |
| | Brookfield, WI 53005 | | New Roads, LA 70760 |
| Phone: | 262-781-0475 | Phone: | 713 465-4113 |
| Email: | richardg@kprginc.com | Email | invoices@nrg.com |
| | | PO #: | 4501576732 |

Lab Lot # 500-111942

Package Sealed: Yes / No — Samples Sealed: Yes / No
Received on Ice: Yes / No — Samples Intact: Yes / No / N/A
Temperature °C of Cooler: 3.3, 2.9, 2.4
Within Hold Time: Yes / No — Preserv. Indicated: Yes / No / N/A
pH Check OK: Yes / No — Res $CL_2$ Check OK: Yes / No / N/A
Sample Labels and COC Agree: Yes / No / COC not present

| Sampler Name: | Signature: |
|---|---|
| Ian John Howieson | |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** | Eric Lang |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # / Cont. | Volume | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Preserv. | | | | | | | | |
| 1 | | MW-01 CCR | 5-20-16 | 12:59 | W | 5 | | X | X | X | X | X | X | |
| 2 | | MW-05 CCR | 5-17-16 | 13:42 | W | 5 | | X | X | X | X | X | X | |
| 3 | | MW-08 CCR | 5-18-16 | 13:23 | W | 5 | | X | X | X | X | X | X | |
| 4 | | MW-09 CCR | 5-19-16 | 15:43 | W | 5 | | X | X | X | X | X | X | |
| 5 | | MW-11 CCR | 5-20-16 | 08:59 | W | 5 | | X | X | X | X | X | X | |
| 6 | | MW-12 CCR | 5-20-16 | 10:56 | W | 5 | | X | X | X | X | X | X | |
| 7 | | MW-15 CCR | 5-19-16 | 12:58 | W | 5 | | X | X | X | X | X | X | |
| 8 | | MW-17 CCR | 5-18-16 | 11:58 | W | 5 | | X | X | X | X | X | X | |
| 9 | | MW-18 CCR | 5-18-16 | 14:33 | W | 5 | | X | X | X | X | X | X | |
| 10 | | DUPLICATE | 5-18-16 | — | W | 5 | | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| | KPRG | 5-20-16 | 20:22 | | TA-CHI | 5/20/16 | 2022 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**
WW = Wastewater, SE = Sediment, W = Water, SO = Solid, S = Soil, DL = Drum Liquid, SL = Sludge, DS = Drum Solid, MS = Miscellaneous, L = Leachate, OL = Oil, W = Wipe, A = Air, O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received ___/___/___
Courier:
Hand Delivered ☐
Bill of Lading:

1 of 1

STL-8208 (0600)

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-111942-1

**Login Number: 111942**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.3,2.9,2.4 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica

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# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-111942-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*6/24/2016 9:57:55 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-111942-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-111942-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/20/2016 8:22 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.4º C, 2.9º C and 3.3º C.

**RAD**
Method(s) 904.0: Radium-228 Prep Batch: 160-253853

The following sample did not meet the Radium-228 detection goal (1.00 pCi/L) due to the reduced sample volume attributed to matrix interferences (see Prep NCM 160-85490). The data have been qualified and reported. MW-17 (500-111942-8)

Method(s) PrecSep_0: Radium-228 Batch 160-253853:
Sample MW-17 (500-111942-8) was prepared at a reduced aliquot due to sediment and discoloration. The sample was not used to demonstrate batch duplicity to avoid matrix interference with homogeneity.

Method(s) PrecSep-21: Radium-226 Batch 160-253846:
Sample MW-17 (500-111942-8) was prepared at a reduced aliquot due to sediment and discoloration. The sample was not used to demonstrate batch duplicity to avoid matrix interference with homogeneity.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-111942-1 | MW-01 | Water | 05/20/16 12:59 | 05/20/16 20:22 |
| 500-111942-2 | MW-05 | Water | 05/17/16 13:42 | 05/20/16 20:22 |
| 500-111942-3 | MW-08 | Water | 05/18/16 13:23 | 05/20/16 20:22 |
| 500-111942-4 | MW-09 | Water | 05/19/16 15:43 | 05/20/16 20:22 |
| 500-111942-5 | MW-11 | Water | 05/20/16 08:59 | 05/20/16 20:22 |
| 500-111942-6 | MW-12 | Water | 05/20/16 10:56 | 05/20/16 20:22 |
| 500-111942-7 | MW-15 | Water | 05/19/16 12:58 | 05/20/16 20:22 |
| 500-111942-8 | MW-17 | Water | 05/18/16 11:58 | 05/20/16 20:22 |
| 500-111942-9 | MW-18 | Water | 05/18/16 14:33 | 05/20/16 20:22 |
| 500-111942-10 | Duplicate | Water | 05/18/16 00:00 | 05/20/16 20:22 |

## Client Sample ID: MW-01

**Date Collected: 05/20/16 12:59**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.385** | | 0.146 | 0.150 | 1.00 | 0.171 | pCi/L | 05/27/16 12:06 | 06/21/16 08:08 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.0* | | *40 - 110* | *05/27/16 12:06* | *06/21/16 08:08* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.296 | U | 0.562 | 0.563 | 1.00 | 0.953 | pCi/L | 05/27/16 13:29 | 06/14/16 17:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.0* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:53* | *1* |
| *Y Carrier* | *82.6* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.682 | U | 0.581 | 0.582 | 5.00 | 0.953 | pCi/L | | 06/23/16 18:34 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-2

## Client Sample ID: MW-05

**Date Collected: 05/17/16 13:42**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.147** | | 0.0700 | 0.0713 | 1.00 | 0.0927 | pCi/L | 05/27/16 12:06 | 06/21/16 08:08 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.3* | | *40 - 110* | *05/27/16 12:06* | *06/21/16 08:08* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0865 | U | 0.215 | 0.216 | 1.00 | 0.373 | pCi/L | 05/27/16 13:29 | 06/14/16 17:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.3* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:53* | *1* |
| *Y Carrier* | *84.1* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.234 | U | 0.227 | 0.227 | 5.00 | 0.373 | pCi/L | | 06/23/16 18:34 | 1 |

## Client Sample ID: MW-08

**Date Collected: 05/18/16 13:23**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.223** | | 0.0766 | 0.0792 | 1.00 | 0.0838 | pCi/L | 05/27/16 12:06 | 06/21/16 08:08 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.7* | | *40 - 110* | *05/27/16 12:06* | *06/21/16 08:08* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.194 | U | 0.237 | 0.238 | 1.00 | 0.393 | pCi/L | 05/27/16 13:29 | 06/14/16 17:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.7* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:53* | *1* |
| *Y Carrier* | *82.2* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.417** | | 0.249 | 0.251 | 5.00 | 0.393 | pCi/L | | 06/23/16 18:34 | 1 |

## Client Sample ID: MW-09

**Date Collected: 05/19/16 15:43**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0675 | U | 0.0510 | 0.0514 | 1.00 | 0.0749 | pCi/L | 05/27/16 12:06 | 06/21/16 08:08 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.6* | | *40 - 110* | *05/27/16 12:06* | *06/21/16 08:08* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0154 | U | 0.221 | 0.221 | 1.00 | 0.394 | pCi/L | 05/27/16 13:29 | 06/14/16 17:54 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.6* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:54* | *1* |
| *Y Carrier* | *82.2* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:54* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.0830 | U | 0.227 | 0.227 | 5.00 | 0.394 | pCi/L | | 06/23/16 18:34 | 1 |

## Client Sample ID: MW-11

**Date Collected: 05/20/16 08:59**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.327** | | 0.0836 | 0.0886 | 1.00 | 0.0719 | pCi/L | 05/27/16 12:06 | 06/21/16 08:09 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.5* | | *40 - 110* | *05/27/16 12:06* | *06/21/16 08:09* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.196 | U | 0.220 | 0.221 | 1.00 | 0.362 | pCi/L | 05/27/16 13:29 | 06/14/16 17:54 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.5* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:54* | *1* |
| *Y Carrier* | *87.5* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:54* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.524** | | 0.236 | 0.238 | 5.00 | 0.362 | pCi/L | | 06/23/16 18:34 | 1 |

## Client Sample ID: MW-12

**Date Collected: 05/20/16 10:56**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.281** | | 0.0786 | 0.0826 | 1.00 | 0.0662 | pCi/L | 05/27/16 12:06 | 06/21/16 08:09 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *86.0* | | *40 - 110* | *05/27/16 12:06* | *06/21/16 08:09* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.295 | U | 0.248 | 0.249 | 1.00 | 0.393 | pCi/L | 05/27/16 13:29 | 06/14/16 17:54 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *86.0* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:54* | *1* |
| *Y Carrier* | *83.4* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:54* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.576** | | 0.260 | 0.263 | 5.00 | 0.393 | pCi/L | | 06/23/16 18:34 | 1 |

## Client Sample ID: MW-15

**Date Collected: 05/19/16 12:58**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.213 | | 0.0724 | 0.0749 | 1.00 | 0.0747 | pCi/L | 05/27/16 12:06 | 06/21/16 08:09 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.7* | | *40 - 110* | *05/27/16 12:06* | *06/21/16 08:09* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0617 | U | 0.240 | 0.240 | 1.00 | 0.420 | pCi/L | 05/27/16 13:29 | 06/14/16 17:55 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.7* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:55* | *1* |
| *Y Carrier* | *82.6* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:55* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.275 | U | 0.251 | 0.251 | 5.00 | 0.420 | pCi/L | | 06/23/16 18:34 | 1 |

## Client Sample ID: MW-17

**Date Collected: 05/18/16 11:58**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 4.01 | | 0.580 | 0.683 | 1.00 | 0.273 | pCi/L | 05/31/16 15:25 | 06/22/16 08:15 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.6* | | *40 - 110* | *05/31/16 15:25* | *06/22/16 08:15* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 4.27 | G | 1.40 | 1.45 | 1.00 | 1.87 | pCi/L | 05/31/16 15:22 | 06/15/16 12:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.6* | | *40 - 110* | *05/31/16 15:22* | *06/15/16 12:42* | *1* |
| *Y Carrier* | *84.5* | | *40 - 110* | *05/31/16 15:22* | *06/15/16 12:42* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 8.27 | | 1.51 | 1.60 | 5.00 | 1.87 | pCi/L | | 06/23/16 18:34 | 1 |

## Client Sample ID: MW-18

**Date Collected: 05/18/16 14:33**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.193 | | 0.0807 | 0.0825 | 1.00 | 0.103 | pCi/L | 05/27/16 12:06 | 06/21/16 08:09 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.0* | | *40 - 110* | *05/27/16 12:06* | *06/21/16 08:09* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.0943 | U | 0.268 | 0.268 | 1.00 | 0.493 | pCi/L | 05/27/16 13:29 | 06/14/16 17:55 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.0* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:55* | *1* |
| *Y Carrier* | *81.5* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:55* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.0986 | U | 0.280 | 0.281 | 5.00 | 0.493 | pCi/L | | 06/23/16 18:34 | 1 |

## Client Sample ID: Duplicate

**Date Collected: 05/18/16 00:00**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-10

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.244** | | 0.0774 | 0.0804 | 1.00 | 0.0757 | pCi/L | 05/27/16 12:06 | 06/21/16 08:10 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *84.3* | | *40 - 110* | *05/27/16 12:06* | *06/21/16 08:10* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.221 | U | 0.292 | 0.293 | 1.00 | 0.486 | pCi/L | 05/27/16 13:29 | 06/14/16 17:55 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *84.3* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:55* | *1* |
| *Y Carrier* | *81.1* | | *40 - 110* | *05/27/16 13:29* | *06/14/16 17:55* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.464 | U | 0.302 | 0.304 | 5.00 | 0.486 | pCi/L | | 06/23/16 18:34 | 1 |

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |
| G | The Sample MDC is greater than the requested RL. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Rad

### Prep Batch: 253605

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-111942-2 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-111942-2 DU | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-111942-3 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-111942-4 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-111942-5 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-111942-6 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-111942-7 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-111942-9 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-111942-10 | Duplicate | Total/NA | Water | PrecSep-21 | |
| LCS 160-253605/2-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| MB 160-253605/1-A | Method Blank | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 253625

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-111942-2 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-111942-2 DU | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-111942-3 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-111942-4 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-111942-5 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-111942-6 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-111942-7 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-111942-9 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-111942-10 | Duplicate | Total/NA | Water | PrecSep_0 | |
| LCS 160-253625/2-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| MB 160-253625/1-A | Method Blank | Total/NA | Water | PrecSep_0 | |

### Prep Batch: 253846

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-8 | MW-17 | Total/NA | Water | PrecSep-21 | |
| LCS 160-253846/2-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| MB 160-253846/1-A | Method Blank | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 253853

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-111942-8 | MW-17 | Total/NA | Water | PrecSep_0 | |
| LCS 160-253853/2-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| MB 160-253853/1-A | Method Blank | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-253605/1-A**
**Matrix: Water**
**Analysis Batch: 257291**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 253605**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.08427 | U | 0.0580 | 0.0585 | 1.00 | 0.0850 | pCi/L | 05/27/16 12:06 | 06/21/16 08:07 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.3* | | *40 - 110* | *05/27/16 12:06* | *06/21/16 08:07* | *1* |

**Lab Sample ID: LCS 160-253605/2-A**
**Matrix: Water**
**Analysis Batch: 257291**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 253605**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.2 | 14.45 | | 1.39 | 1.00 | 0.0841 | pCi/L | 130 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *94.0* | | *40 - 110* |

**Lab Sample ID: 500-111942-2 DU**
**Matrix: Water**
**Analysis Batch: 257291**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**
**Prep Batch: 253605**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.147 | | | 0.1324 | | 0.0625 | 1.00 | 0.0761 | pCi/L | | | 0.11 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *96.9* | | *40 - 110* |

**Lab Sample ID: MB 160-253846/1-A**
**Matrix: Water**
**Analysis Batch: 257505**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 253846**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.1186 | | 0.0630 | 0.0639 | 1.00 | 0.0853 | pCi/L | 05/31/16 13:54 | 06/22/16 08:11 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.2* | | *40 - 110* | *05/31/16 13:54* | *06/22/16 08:11* | *1* |

**Lab Sample ID: LCS 160-253846/2-A**
**Matrix: Water**
**Analysis Batch: 257505**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 253846**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.2 | 12.87 | | 1.25 | 1.00 | 0.0838 | pCi/L | 115 | 68 - 137 | | |

## Method: 903.0 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: LCS 160-253846/2-A**
**Matrix: Water**
**Analysis Batch: 257505**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 253846**

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 93.7 | | 40 - 110 |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-253625/1-A**
**Matrix: Water**
**Analysis Batch: 256310**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 253625**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.02475 | U | 0.216 | 0.216 | 1.00 | 0.384 | pCi/L | 05/27/16 13:29 | 06/14/16 17:53 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 92.3 | | 40 - 110 | 05/27/16 13:29 | 06/14/16 17:53 | 1 |
| Y Carrier | 85.2 | | 40 - 110 | 05/27/16 13:29 | 06/14/16 17:53 | 1 |

**Lab Sample ID: LCS 160-253625/2-A**
**Matrix: Water**
**Analysis Batch: 256310**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 253625**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 15.0 | 17.67 | | 1.86 | 1.00 | 0.357 | pCi/L | 118 | 56 - 140 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 94.0 | | 40 - 110 |
| Y Carrier | 86.4 | | 40 - 110 |

**Lab Sample ID: 500-111942-2 DU**
**Matrix: Water**
**Analysis Batch: 256310**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**
**Prep Batch: 253625**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0865 | U | | 0.1361 | U | 0.203 | 1.00 | 0.341 | pCi/L | | | 0.12 | 1 |

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 96.9 | | 40 - 110 |
| Y Carrier | 84.1 | | 40 - 110 |

**Lab Sample ID: MB 160-253853/1-A**
**Matrix: Water**
**Analysis Batch: 256473**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 253853**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.1951 | U | 0.225 | 0.226 | 1.00 | 0.371 | pCi/L | 05/31/16 14:23 | 06/15/16 12:47 | 1 |

# QC Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-2

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 91.2 | | 40 - 110 | 05/31/16 14:23 | 06/15/16 12:47 | 1 |
| Y Carrier | 80.4 | | 40 - 110 | 05/31/16 14:23 | 06/15/16 12:47 | 1 |

**Lab Sample ID: LCS 160-253853/2-A**
**Matrix: Water**
**Analysis Batch: 256473**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 253853**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 15.0 | 18.06 | | 1.88 | 1.00 | 0.410 | pCi/L | 120 | 56 - 140 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 93.7 | | 40 - 110 |
| Y Carrier | 89.0 | | 40 - 110 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-2

## Client Sample ID: MW-01
**Date Collected: 05/20/16 12:59**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 253605 | 05/27/16 12:06 | JAS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 257291 | 06/21/16 08:08 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 253625 | 05/27/16 13:29 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 256310 | 06/14/16 17:53 | ALS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 257758 | 06/23/16 18:34 | RTM | TAL SL |

## Client Sample ID: MW-05
**Date Collected: 05/17/16 13:42**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 253605 | 05/27/16 12:06 | JAS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 257291 | 06/21/16 08:08 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 253625 | 05/27/16 13:29 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 256310 | 06/14/16 17:53 | ALS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 257758 | 06/23/16 18:34 | RTM | TAL SL |

## Client Sample ID: MW-08
**Date Collected: 05/18/16 13:23**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 253605 | 05/27/16 12:06 | JAS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 257291 | 06/21/16 08:08 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 253625 | 05/27/16 13:29 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 256310 | 06/14/16 17:53 | ALS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 257758 | 06/23/16 18:34 | RTM | TAL SL |

## Client Sample ID: MW-09
**Date Collected: 05/19/16 15:43**
**Date Received: 05/20/16 20:22**

## Lab Sample ID: 500-111942-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 253605 | 05/27/16 12:06 | JAS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 257291 | 06/21/16 08:08 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 253625 | 05/27/16 13:29 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 256310 | 06/14/16 17:54 | ALS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 257758 | 06/23/16 18:34 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-2

## Client Sample ID: MW-11

**Date Collected: 05/20/16 08:59**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-5**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 253605 | 05/27/16 12:06 | JAS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 257291 | 06/21/16 08:09 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 253625 | 05/27/16 13:29 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 256310 | 06/14/16 17:54 | ALS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 257758 | 06/23/16 18:34 | RTM | TAL SL |

## Client Sample ID: MW-12

**Date Collected: 05/20/16 10:56**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-6**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 253605 | 05/27/16 12:06 | JAS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 257291 | 06/21/16 08:09 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 253625 | 05/27/16 13:29 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 256310 | 06/14/16 17:54 | ALS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 257758 | 06/23/16 18:34 | RTM | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 05/19/16 12:58**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-7**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 253605 | 05/27/16 12:06 | JAS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 257291 | 06/21/16 08:09 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 253625 | 05/27/16 13:29 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 256310 | 06/14/16 17:55 | ALS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 257758 | 06/23/16 18:34 | RTM | TAL SL |

## Client Sample ID: MW-17

**Date Collected: 05/18/16 11:58**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-8**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 253846 | 05/31/16 15:25 | MCJ | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 257505 | 06/22/16 08:15 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 253853 | 05/31/16 15:22 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 256590 | 06/15/16 12:42 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 257758 | 06/23/16 18:34 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-2

## Client Sample ID: MW-18

**Date Collected: 05/18/16 14:33**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-9**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 253605 | 05/27/16 12:06 | JAS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 257291 | 06/21/16 08:09 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 253625 | 05/27/16 13:29 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 256310 | 06/14/16 17:55 | ALS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 257758 | 06/23/16 18:34 | RTM | TAL SL |

## Client Sample ID: Duplicate

**Date Collected: 05/18/16 00:00**
**Date Received: 05/20/16 20:22**

**Lab Sample ID: 500-111942-10**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 253605 | 05/27/16 12:06 | JAS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 257291 | 06/21/16 08:10 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 253625 | 05/27/16 13:29 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 256310 | 06/14/16 17:55 | ALS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 257758 | 06/23/16 18:34 | RTM | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-2

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-17 |

## Laboratory: TestAmerica St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 003757 | 11-30-16 |

The following analytes are included in this report, but certification is not offered by the governing authority:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chicag
2417 Bond St.
University Park, IL 60
708-534-5200
Fax. 708-534-5211

500-111942 COC

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | Accounts Payable |
| Company: | KPRG and Associates, Inc | Company: | NRG Energy |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | 112 Telly St |
| | Brookfield, WI 53005 | | New Roads, LA 70760 |
| Phone: | 262-781-0475 | Phone: | 713 465-4113 |
| Email: | richardg@kprginc.com | Email | invoices@nrg.com |
| | | PO #: | 4501576732 |

Lab Lot # 500-111942

Package Sealed: Yes / No — Samples Sealed: Yes / No
Received on Ice: Yes / No — Samples Intact: Yes / No / N/A
Temperature °C of Cooler: 3.3, 2.9, 2.4
Within Hold Time: Yes / No — Preserv. Indicated: Yes / No / N/A
pH Check OK: Yes / No — Res $CL_2$ Check OK: Yes / No / N/A
Sample Labels and COC Agree: Yes / No / COC not present

| Sampler Name: | Signature: |
|---|---|
| Ian John Howieson | |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** | Eric Lang |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # / Cont. | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 CCR | 5-20-16 | 12:59 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-05 CCR | 5-17-16 | 13:42 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-08 CCR | 5-18-16 | 13:23 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-09 CCR | 5-19-16 | 15:43 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-11 CCR | 5-20-16 | 08:59 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-12 CCR | 5-20-16 | 10:56 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-15 CCR | 5-19-16 | 12:58 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-17 CCR | 5-18-16 | 11:58 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-18 CCR | 5-18-16 | 14:33 | W | 5 | X | X | X | X | X | X | |
| 10 | | DUPLICATE | 5-18-16 | — | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| | KPRG | 5-20-16 | 20:22 | | TA-CHI | 5/20/16 | 2022 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**
WW = Wastewater, SE = Sediment, W = Water, SO = Solid, S = Soil, DL = Drum Liquid, SL = Sludge, DS = Drum Solid, MS = Miscellaneous, L = Leachate, OL = Oil, W = Wipe, A = Air, O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received ___/___/___
Courier:
Hand Delivered ☐
Bill of Lading:

1 of 1

STL-8208 (0600)

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-73668.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | | | Job #: 500-111942-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 6/21/2016 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - ph 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Ra226Ra228_GFPC | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-111942-1) | 5/20/16 | 12:59 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-05 (500-111942-2) | 5/17/16 | 13:42 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-08 (500-111942-3) | 5/18/16 | 13:23 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-09 (500-111942-4) | 5/19/16 | 15:43 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-11 (500-111942-5) | 5/20/16 | 08:59 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-12 (500-111942-6) | 5/20/16 | 10:56 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-15 (500-111942-7) | 5/19/16 | 12:58 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-17 (500-111942-8) | 5/18/16 | 11:58 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-18 (500-111942-9) | 5/18/16 | 14:33 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| Duplicate (500-111942-10) | 5/18/16 | Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| | | | | | | | | | | | |

***Possible Hazard Identification***
*Unconfirmed*

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| | | | | | | |
|---|---|---|---|---|---|---|
| Empty Kit Relinquished by: | | Date: | Time: | Method of Shipment: | | |
| Relinquished by: | Date/Time: 05/23/16 1500 | Company TAL | Received by: | Date/Time: 5.24.16 0840 | Company TA STL | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company | |

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-111942-2

**Login Number: 111942**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.3,2.9,2.4 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-111942-2

**Login Number: 111942**
**List Number: 2**
**Creator: Clarke, Jill C**

**List Source: TestAmerica St. Louis**
**List Creation: 05/24/16 04:31 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 19.0, 19.0, 19.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-111942-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| | | Ba |
| Lab Sample ID | Client Sample ID | (40-110) |
| 500-111942-1 | MW-01 | 92.0 |
| 500-111942-2 | MW-05 | 94.3 |
| 500-111942-2 DU | MW-05 | 96.9 |
| 500-111942-3 | MW-08 | 91.7 |
| 500-111942-4 | MW-09 | 96.6 |
| 500-111942-5 | MW-11 | 91.5 |
| 500-111942-6 | MW-12 | 86.0 |
| 500-111942-7 | MW-15 | 89.7 |
| 500-111942-8 | MW-17 | 76.6 |
| 500-111942-9 | MW-18 | 88.0 |
| 500-111942-10 | Duplicate | 84.3 |
| LCS 160-253605/2-A | Lab Control Sample | 94.0 |
| LCS 160-253846/2-A | Lab Control Sample | 93.7 |
| MB 160-253605/1-A | Method Blank | 92.3 |
| MB 160-253846/1-A | Method Blank | 91.2 |

**Tracer/Carrier Legend**

Ba = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| | | Ba | Y |
| Lab Sample ID | Client Sample ID | (40-110) | (40-110) |
| 500-111942-1 | MW-01 | 92.0 | 82.6 |
| 500-111942-2 | MW-05 | 94.3 | 84.1 |
| 500-111942-2 DU | MW-05 | 96.9 | 84.1 |
| 500-111942-3 | MW-08 | 91.7 | 82.2 |
| 500-111942-4 | MW-09 | 96.6 | 82.2 |
| 500-111942-5 | MW-11 | 91.5 | 87.5 |
| 500-111942-6 | MW-12 | 86.0 | 83.4 |
| 500-111942-7 | MW-15 | 89.7 | 82.6 |
| 500-111942-8 | MW-17 | 76.6 | 84.5 |
| 500-111942-9 | MW-18 | 88.0 | 81.5 |
| 500-111942-10 | Duplicate | 84.3 | 81.1 |
| LCS 160-253625/2-A | Lab Control Sample | 94.0 | 86.4 |
| LCS 160-253853/2-A | Lab Control Sample | 93.7 | 89.0 |
| MB 160-253625/1-A | Method Blank | 92.3 | 85.2 |
| MB 160-253853/1-A | Method Blank | 91.2 | 80.4 |

**Tracer/Carrier Legend**

Ba = Ba Carrier

Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-115969-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*8/31/2016 3:50:24 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-115969-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-115969-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/19/2016 6:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.3º C, 3.7º C and 4.6º C.

**Metals**
Method(s) 6020A: The internal standard Terbium(Tb) was used to report the elements Lead(Pb) and Thallium (Tl). This is because the LCS was spiked with ICP spike which contains Bismuth (Bi).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
Method(s) SM 4500 Cl- E: The Chloride matrix spike (MS) recovery for sample MW-15 (500-115969-7) in analytical batch 500-348761 was outside control limits. The associated matrix spike duplicate (MSD) and the laboratory control sample (LCS) recoveries were within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-115969-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.048 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.27 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 78 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0014 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0057 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 530 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 39 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.25 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 50 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-115969-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.060 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.69 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 830 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 97 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.30 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 150 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-115969-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.023 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0032 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.15 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.96 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 150 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.013 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1400 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 230 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.35 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 360 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-115969-4

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

## Client Sample ID: MW-09 (Continued) — Lab Sample ID: 500-115969-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.031 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.7 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 74 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.036 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 750 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 39 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.15 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 120 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-115969-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.29 | F1 | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 1.4 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.0 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0034 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0010 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.011 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 910 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 93 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.67 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 180 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-115969-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.33 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.88 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Beryllium | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.69 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.0070 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 170 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0010 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-115969-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 0.0011 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.011 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1600 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.49 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 620 | | 130 | | mg/L | 25 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-115969-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.028 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.13 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.11 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.5 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.0041 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 200 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.027 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0061 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1900 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 170 | F1 | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.54 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 660 | | 250 | | mg/L | 50 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-115969-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.022 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.34 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.1 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.0010 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 220 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0016 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.10 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Thallium | 0.0031 | | 0.0020 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 2100 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

## Client Sample ID: MW-17 (Continued) — Lab Sample ID: 500-115969-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 220 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.60 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 860 | | 250 | | mg/L | 50 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-115969-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.012 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.14 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.67 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0059 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 210 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.64 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 330 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicates — Lab Sample ID: 500-115969-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.053 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.30 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 87 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0014 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 510 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 39 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.24 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 53 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-115969-1 | MW-01 | Water | 08/17/16 16:09 | 08/19/16 18:10 |
| 500-115969-2 | MW-05 | Water | 08/16/16 13:59 | 08/19/16 18:10 |
| 500-115969-3 | MW-08 | Water | 08/17/16 10:25 | 08/19/16 18:10 |
| 500-115969-4 | MW-09 | Water | 08/17/16 12:04 | 08/19/16 18:10 |
| 500-115969-5 | MW-11 | Water | 08/17/16 13:52 | 08/19/16 18:10 |
| 500-115969-6 | MW-12 | Water | 08/18/16 11:22 | 08/19/16 18:10 |
| 500-115969-7 | MW-15 | Water | 08/18/16 15:55 | 08/19/16 18:10 |
| 500-115969-8 | MW-17 | Water | 08/15/16 17:43 | 08/19/16 18:10 |
| 500-115969-9 | MW-18 | Water | 08/15/16 16:46 | 08/19/16 18:10 |
| 500-115969-10 | Duplicates | Water | 08/17/16 00:00 | 08/19/16 18:10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

**Client Sample ID: MW-01**
**Date Collected: 08/17/16 16:09**
**Date Received: 08/19/16 18:10**

**Lab Sample ID: 500-115969-1**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/20/16 10:56 | 08/23/16 14:40 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:18 | 1 |
| **Arsenic** | **0.0014** | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:18 | 1 |
| **Barium** | **0.048** | | 0.0025 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:18 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:18 | 1 |
| **Boron** | **0.27** | | 0.050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:18 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:18 | 1 |
| **Calcium** | **78** | | 0.20 | | mg/L | | 08/20/16 10:56 | 08/23/16 11:39 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:18 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:18 | 1 |
| **Lead** | **0.0014** | | 0.00050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:18 | 1 |
| **Molybdenum** | **0.0057** | | 0.0050 | | mg/L | | 08/20/16 10:56 | 08/23/16 11:39 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:18 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:18 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/21/16 12:30 | 08/22/16 10:17 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **530** | | 10 | | mg/L | | | 08/22/16 04:47 | 1 |
| **Chloride** | **39** | | 2.0 | | mg/L | | | 08/21/16 22:29 | 1 |
| **Fluoride** | **0.25** | | 0.10 | | mg/L | | | 08/26/16 13:49 | 1 |
| **Sulfate** | **50** | | 20 | | mg/L | | | 08/31/16 07:19 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

**Client Sample ID: MW-05**
**Date Collected: 08/16/16 13:59**
**Date Received: 08/19/16 18:10**

**Lab Sample ID: 500-115969-2**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/20/16 10:56 | 08/23/16 14:44 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:22 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:22 | 1 |
| **Barium** | **0.060** | | 0.0025 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:22 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:22 | 1 |
| **Boron** | **0.69** | | 0.050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:22 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:22 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 08/20/16 10:56 | 08/23/16 11:42 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:22 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:22 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:22 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/20/16 10:56 | 08/23/16 11:42 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:22 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:22 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/21/16 12:30 | 08/22/16 10:19 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **830** | | 10 | | mg/L | | | 08/22/16 04:50 | 1 |
| **Chloride** | **97** | | 10 | | mg/L | | | 08/21/16 22:30 | 5 |
| **Fluoride** | **0.30** | | 0.10 | | mg/L | | | 08/26/16 13:51 | 1 |
| **Sulfate** | **150** | | 50 | | mg/L | | | 08/31/16 07:20 | 10 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

## Client Sample ID: MW-08

**Date Collected: 08/17/16 10:25**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-3

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.023** | | 0.010 | | mg/L | | 08/20/16 10:56 | 08/23/16 14:48 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:25 | 1 |
| **Arsenic** | **0.0032** | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:25 | 1 |
| **Barium** | **0.15** | | 0.0025 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:25 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:25 | 1 |
| **Boron** | **0.96** | | 0.050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:25 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:25 | 1 |
| **Calcium** | **150** | | 0.20 | | mg/L | | 08/20/16 10:56 | 08/23/16 11:46 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:25 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:25 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:25 | 1 |
| **Molybdenum** | **0.013** | | 0.0050 | | mg/L | | 08/20/16 10:56 | 08/23/16 11:46 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:25 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:25 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/21/16 12:30 | 08/22/16 10:20 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1400** | | 10 | | mg/L | | | 08/22/16 04:53 | 1 |
| **Chloride** | **230** | | 10 | | mg/L | | | 08/21/16 22:30 | 5 |
| **Fluoride** | **0.35** | | 0.10 | | mg/L | | | 08/26/16 13:54 | 1 |
| **Sulfate** | **360** | | 100 | | mg/L | | | 08/31/16 07:21 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

**Client Sample ID: MW-09**
**Date Collected: 08/17/16 12:04**
**Date Received: 08/19/16 18:10**

**Lab Sample ID: 500-115969-4**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/20/16 10:56 | 08/23/16 14:53 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:29 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:29 | 1 |
| **Barium** | **0.031** | | 0.0025 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:29 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:29 | 1 |
| **Boron** | **2.7** | | 0.050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:29 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:29 | 1 |
| **Calcium** | **74** | | 0.20 | | mg/L | | 08/20/16 10:56 | 08/23/16 11:57 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:29 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:29 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:29 | 1 |
| **Molybdenum** | **0.036** | | 0.0050 | | mg/L | | 08/20/16 10:56 | 08/23/16 11:57 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:29 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:29 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/21/16 12:30 | 08/22/16 10:21 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **750** | | 10 | | mg/L | | | 08/22/16 04:56 | 1 |
| **Chloride** | **39** | | 2.0 | | mg/L | | | 08/21/16 22:31 | 1 |
| **Fluoride** | **0.15** | | 0.10 | | mg/L | | | 08/26/16 13:56 | 1 |
| **Sulfate** | **120** | | 50 | | mg/L | | | 08/31/16 07:22 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

**Client Sample ID: MW-11**
**Date Collected: 08/17/16 13:52**
**Date Received: 08/19/16 18:10**

**Lab Sample ID: 500-115969-5**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/20/16 10:56 | 08/23/16 14:58 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:33 | 1 |
| **Arsenic** | **0.29** | **F1** | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:33 | 1 |
| **Barium** | **1.4** | | 0.0025 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:33 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:33 | 1 |
| **Boron** | **1.0** | | 0.050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:33 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:33 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 08/20/16 10:56 | 08/23/16 12:01 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:33 | 1 |
| **Cobalt** | **0.0034** | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:33 | 1 |
| **Lead** | **0.0010** | | 0.00050 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:33 | 1 |
| **Molybdenum** | **0.011** | | 0.0050 | | mg/L | | 08/20/16 10:56 | 08/23/16 12:01 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:33 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/20/16 10:56 | 08/22/16 19:33 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/21/16 12:30 | 08/22/16 10:23 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **910** | | 10 | | mg/L | | | 08/22/16 05:00 | 1 |
| **Chloride** | **93** | | 10 | | mg/L | | | 08/21/16 22:31 | 5 |
| **Fluoride** | **0.67** | | 0.10 | | mg/L | | | 08/26/16 13:59 | 1 |
| **Sulfate** | **180** | | 50 | | mg/L | | | 08/31/16 07:25 | 10 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

## Client Sample ID: MW-12

**Date Collected: 08/18/16 11:22**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-6

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.015** | | 0.010 | | mg/L | | 08/21/16 10:18 | 08/23/16 15:37 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:40 | 1 |
| **Arsenic** | **0.33** | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:40 | 1 |
| **Barium** | **0.88** | | 0.0025 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:40 | 1 |
| **Beryllium** | **0.0013** | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:40 | 1 |
| **Boron** | **0.69** | | 0.050 | | mg/L | | 08/21/16 10:18 | 08/25/16 18:19 | 1 |
| **Cadmium** | **0.0070** | | 0.00050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:40 | 1 |
| **Calcium** | **170** | | 0.20 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:40 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:40 | 1 |
| **Cobalt** | **0.0010** | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:40 | 1 |
| **Lead** | **0.0011** | | 0.00050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:40 | 1 |
| **Molybdenum** | **0.011** | | 0.0050 | | mg/L | | 08/21/16 10:18 | 08/23/16 12:55 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:40 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:40 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/21/16 12:30 | 08/22/16 10:24 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1600** | | 10 | | mg/L | | | 08/22/16 05:03 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 08/21/16 22:34 | 5 |
| **Fluoride** | **0.49** | | 0.10 | | mg/L | | | 08/26/16 14:01 | 1 |
| **Sulfate** | **620** | | 130 | | mg/L | | | 08/31/16 07:26 | 25 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

**Client Sample ID: MW-15**
**Date Collected: 08/18/16 15:55**
**Date Received: 08/19/16 18:10**

**Lab Sample ID: 500-115969-7**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.028 | | 0.010 | | mg/L | | 08/21/16 10:18 | 08/23/16 15:42 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:44 | 1 |
| Arsenic | 0.13 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:44 | 1 |
| Barium | 0.11 | | 0.0025 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:44 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:44 | 1 |
| Boron | 1.5 | | 0.050 | | mg/L | | 08/21/16 10:18 | 08/25/16 18:23 | 1 |
| Cadmium | 0.0041 | | 0.00050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:44 | 1 |
| Calcium | 200 | | 0.20 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:44 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:44 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:44 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:44 | 1 |
| Molybdenum | 0.027 | | 0.0050 | | mg/L | | 08/21/16 10:18 | 08/23/16 12:59 | 1 |
| Selenium | 0.0061 | | 0.0025 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:44 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:44 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/21/16 12:30 | 08/22/16 10:26 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1900 | | 10 | | mg/L | | | 08/22/16 05:06 | 1 |
| Chloride | 170 | F1 | 10 | | mg/L | | | 08/21/16 22:34 | 5 |
| Fluoride | 0.54 | | 0.10 | | mg/L | | | 08/26/16 14:04 | 1 |
| Sulfate | 660 | | 250 | | mg/L | | | 08/31/16 07:27 | 50 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

**Client Sample ID: MW-17**
**Date Collected: 08/15/16 17:43**
**Date Received: 08/19/16 18:10**

**Lab Sample ID: 500-115969-8**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.022 | | 0.010 | | mg/L | | 08/21/16 10:18 | 08/23/16 15:48 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:48 | 1 |
| Arsenic | 0.34 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:48 | 1 |
| Barium | 0.12 | | 0.0025 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:48 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:48 | 1 |
| Boron | 1.1 | | 0.050 | | mg/L | | 08/21/16 10:18 | 08/25/16 18:27 | 1 |
| Cadmium | 0.0010 | | 0.00050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:48 | 1 |
| Calcium | 220 | | 0.20 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:48 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:48 | 1 |
| Cobalt | 0.0016 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:48 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:48 | 1 |
| Molybdenum | 0.10 | | 0.0050 | | mg/L | | 08/21/16 10:18 | 08/23/16 13:03 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:48 | 1 |
| Thallium | 0.0031 | | 0.0020 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:48 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/21/16 12:30 | 08/22/16 10:27 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 2100 | | 10 | | mg/L | | | 08/22/16 05:09 | 1 |
| Chloride | 220 | | 10 | | mg/L | | | 08/21/16 22:36 | 5 |
| Fluoride | 0.60 | | 0.10 | | mg/L | | | 08/26/16 14:15 | 1 |
| Sulfate | 860 | | 250 | | mg/L | | | 08/31/16 07:28 | 50 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

**Client Sample ID: MW-18**
**Date Collected: 08/15/16 16:46**
**Date Received: 08/19/16 18:10**

**Lab Sample ID: 500-115969-9**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.012** | | 0.010 | | mg/L | | 08/21/16 10:18 | 08/23/16 15:53 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:51 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:51 | 1 |
| **Barium** | **0.14** | | 0.0025 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:51 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:51 | 1 |
| **Boron** | **0.67** | | 0.050 | | mg/L | | 08/21/16 10:18 | 08/25/16 18:30 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:51 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:51 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:51 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:51 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:51 | 1 |
| **Molybdenum** | **0.0059** | | 0.0050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:51 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:51 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:51 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/21/16 12:30 | 08/22/16 10:29 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1300** | | 10 | | mg/L | | | 08/22/16 05:12 | 1 |
| **Chloride** | **210** | | 10 | | mg/L | | | 08/21/16 22:36 | 5 |
| **Fluoride** | **0.64** | | 0.10 | | mg/L | | | 08/26/16 14:18 | 1 |
| **Sulfate** | **330** | | 100 | | mg/L | | | 08/31/16 07:29 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

## Client Sample ID: Duplicates

**Lab Sample ID: 500-115969-10**

**Date Collected: 08/17/16 00:00**

**Matrix: Water**

**Date Received: 08/19/16 18:10**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/21/16 10:18 | 08/23/16 15:57 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/21/16 10:18 | 08/22/16 14:03 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 14:03 | 1 |
| **Barium** | **0.053** | | 0.0025 | | mg/L | | 08/21/16 10:18 | 08/22/16 14:03 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 14:03 | 1 |
| **Boron** | **0.30** | | 0.050 | | mg/L | | 08/21/16 10:18 | 08/25/16 18:34 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/21/16 10:18 | 08/22/16 14:03 | 1 |
| **Calcium** | **87** | | 0.20 | | mg/L | | 08/21/16 10:18 | 08/22/16 14:03 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/21/16 10:18 | 08/22/16 14:03 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 14:03 | 1 |
| **Lead** | **0.0014** | | 0.00050 | | mg/L | | 08/21/16 10:18 | 08/22/16 14:03 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/21/16 10:18 | 08/22/16 14:03 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/21/16 10:18 | 08/22/16 14:03 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/21/16 10:18 | 08/22/16 14:03 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/21/16 12:30 | 08/22/16 10:30 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **510** | | 10 | | mg/L | | | 08/22/16 05:15 | 1 |
| **Chloride** | **39** | | 2.0 | | mg/L | | | 08/21/16 22:59 | 1 |
| **Fluoride** | **0.24** | | 0.10 | | mg/L | | | 08/26/16 14:20 | 1 |
| **Sulfate** | **53** | | 10 | | mg/L | | | 08/31/16 07:30 | 2 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |
| F1 | MS and/or MSD Recovery is outside acceptance limits. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| F1 | MS and/or MSD Recovery is outside acceptance limits. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 348593

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-115969-2 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-115969-3 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-115969-4 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-115969-5 | MW-11 | Total Recoverable | Water | 3005A | |
| MB 500-348593/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-348593/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-115969-5 MS | MW-11 | Total Recoverable | Water | 3005A | |
| 500-115969-5 MSD | MW-11 | Total Recoverable | Water | 3005A | |
| 500-115969-5 DU | MW-11 | Total Recoverable | Water | 3005A | |

### Prep Batch: 348625

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-6 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-115969-7 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-115969-8 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-115969-9 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-115969-10 | Duplicates | Total Recoverable | Water | 3005A | |
| MB 500-348625/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-348625/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-115969-10 MS | Duplicates | Total Recoverable | Water | 3005A | |
| 500-115969-10 MSD | Duplicates | Total Recoverable | Water | 3005A | |
| 500-115969-10 DU | Duplicates | Total Recoverable | Water | 3005A | |

### Prep Batch: 348628

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-115969-2 | MW-05 | Total/NA | Water | 7470A | |
| 500-115969-3 | MW-08 | Total/NA | Water | 7470A | |
| 500-115969-4 | MW-09 | Total/NA | Water | 7470A | |
| 500-115969-5 | MW-11 | Total/NA | Water | 7470A | |
| 500-115969-6 | MW-12 | Total/NA | Water | 7470A | |
| 500-115969-7 | MW-15 | Total/NA | Water | 7470A | |
| 500-115969-8 | MW-17 | Total/NA | Water | 7470A | |
| 500-115969-9 | MW-18 | Total/NA | Water | 7470A | |
| 500-115969-10 | Duplicates | Total/NA | Water | 7470A | |
| MB 500-348628/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-348628/13-A | Lab Control Sample | Total/NA | Water | 7470A | |

### Analysis Batch: 348722

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-1 | MW-01 | Total/NA | Water | 7470A | 348628 |
| 500-115969-2 | MW-05 | Total/NA | Water | 7470A | 348628 |
| 500-115969-3 | MW-08 | Total/NA | Water | 7470A | 348628 |
| 500-115969-4 | MW-09 | Total/NA | Water | 7470A | 348628 |
| 500-115969-5 | MW-11 | Total/NA | Water | 7470A | 348628 |
| 500-115969-6 | MW-12 | Total/NA | Water | 7470A | 348628 |
| 500-115969-7 | MW-15 | Total/NA | Water | 7470A | 348628 |
| 500-115969-8 | MW-17 | Total/NA | Water | 7470A | 348628 |
| 500-115969-9 | MW-18 | Total/NA | Water | 7470A | 348628 |
| 500-115969-10 | Duplicates | Total/NA | Water | 7470A | 348628 |

## Metals (Continued)

### Analysis Batch: 348722 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 500-348628/12-A | Method Blank | Total/NA | Water | 7470A | 348628 |
| LCS 500-348628/13-A | Lab Control Sample | Total/NA | Water | 7470A | 348628 |

### Analysis Batch: 348758

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-6 | MW-12 | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-7 | MW-15 | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-8 | MW-17 | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-9 | MW-18 | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-10 | Duplicates | Total Recoverable | Water | 6020A | 348625 |
| MB 500-348625/1-A | Method Blank | Total Recoverable | Water | 6020A | 348625 |
| LCS 500-348625/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-10 MS | Duplicates | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-10 MSD | Duplicates | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-10 DU | Duplicates | Total Recoverable | Water | 6020A | 348625 |

### Analysis Batch: 348822

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-1 | MW-01 | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-2 | MW-05 | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-3 | MW-08 | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-4 | MW-09 | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-5 | MW-11 | Total Recoverable | Water | 6020A | 348593 |
| MB 500-348593/1-A | Method Blank | Total Recoverable | Water | 6020A | 348593 |
| LCS 500-348593/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-5 MS | MW-11 | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-5 MSD | MW-11 | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-5 DU | MW-11 | Total Recoverable | Water | 6020A | 348593 |

### Analysis Batch: 349005

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-1 | MW-01 | Total Recoverable | Water | 6010C | 348593 |
| 500-115969-2 | MW-05 | Total Recoverable | Water | 6010C | 348593 |
| 500-115969-3 | MW-08 | Total Recoverable | Water | 6010C | 348593 |
| 500-115969-4 | MW-09 | Total Recoverable | Water | 6010C | 348593 |
| 500-115969-5 | MW-11 | Total Recoverable | Water | 6010C | 348593 |
| 500-115969-6 | MW-12 | Total Recoverable | Water | 6010C | 348625 |
| 500-115969-7 | MW-15 | Total Recoverable | Water | 6010C | 348625 |
| 500-115969-8 | MW-17 | Total Recoverable | Water | 6010C | 348625 |
| 500-115969-9 | MW-18 | Total Recoverable | Water | 6010C | 348625 |
| 500-115969-10 | Duplicates | Total Recoverable | Water | 6010C | 348625 |
| MB 500-348593/1-A | Method Blank | Total Recoverable | Water | 6010C | 348593 |
| MB 500-348625/1-A | Method Blank | Total Recoverable | Water | 6010C | 348625 |
| LCS 500-348593/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 348593 |
| LCS 500-348625/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 348625 |
| 500-115969-5 MS | MW-11 | Total Recoverable | Water | 6010C | 348593 |
| 500-115969-5 MSD | MW-11 | Total Recoverable | Water | 6010C | 348593 |
| 500-115969-10 MS | Duplicates | Total Recoverable | Water | 6010C | 348625 |
| 500-115969-10 MSD | Duplicates | Total Recoverable | Water | 6010C | 348625 |
| 500-115969-5 DU | MW-11 | Total Recoverable | Water | 6010C | 348593 |
| 500-115969-10 DU | Duplicates | Total Recoverable | Water | 6010C | 348625 |

### Analysis Batch: 349037

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-1 | MW-01 | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-2 | MW-05 | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-3 | MW-08 | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-4 | MW-09 | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-5 | MW-11 | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-6 | MW-12 | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-7 | MW-15 | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-8 | MW-17 | Total Recoverable | Water | 6020A | 348625 |
| MB 500-348593/1-A | Method Blank | Total Recoverable | Water | 6020A | 348593 |
| LCS 500-348593/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-5 MS | MW-11 | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-5 MSD | MW-11 | Total Recoverable | Water | 6020A | 348593 |
| 500-115969-5 DU | MW-11 | Total Recoverable | Water | 6020A | 348593 |

### Analysis Batch: 349382

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-6 | MW-12 | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-7 | MW-15 | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-8 | MW-17 | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-9 | MW-18 | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-10 | Duplicates | Total Recoverable | Water | 6020A | 348625 |
| MB 500-348625/1-A | Method Blank | Total Recoverable | Water | 6020A | 348625 |
| LCS 500-348625/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-10 MS | Duplicates | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-10 MSD | Duplicates | Total Recoverable | Water | 6020A | 348625 |
| 500-115969-10 DU | Duplicates | Total Recoverable | Water | 6020A | 348625 |

## General Chemistry

### Analysis Batch: 348652

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-115969-2 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-115969-3 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-115969-4 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-115969-5 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-115969-6 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-115969-7 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-115969-8 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-115969-9 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-115969-10 | Duplicates | Total/NA | Water | SM 2540C | |
| MB 500-348652/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-348652/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 348761

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-115969-2 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-115969-3 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-115969-4 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-115969-5 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-115969-6 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-115969-7 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |

## General Chemistry (Continued)

### Analysis Batch: 348761 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-8 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-115969-9 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-115969-10 | Duplicates | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-348761/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-348761/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-115969-7 MS | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-115969-7 MSD | MW-15 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 349459

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-115969-2 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-115969-3 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-115969-4 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-115969-5 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-115969-6 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-115969-7 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-115969-8 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-115969-9 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-115969-10 | Duplicates | Total/NA | Water | SM 4500 F C | |
| MB 500-349459/31 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-349459/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 350017

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-115969-2 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-115969-3 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-115969-4 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-115969-5 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-115969-6 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-115969-7 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-115969-8 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-115969-9 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-115969-10 | Duplicates | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-350017/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-350017/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-348593/1-A**
**Matrix: Water**
**Analysis Batch: 349005**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/20/16 10:56 | 08/23/16 14:31 | 1 |

**Lab Sample ID: LCS 500-348593/2-A**
**Matrix: Water**
**Analysis Batch: 349005**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.504 | | mg/L | | 101 | 80 - 120 |

**Lab Sample ID: 500-115969-5 MS**
**Matrix: Water**
**Analysis Batch: 349005**

**Client Sample ID: MW-11**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.507 | | mg/L | | 101 | 75 - 125 |

**Lab Sample ID: 500-115969-5 MSD**
**Matrix: Water**
**Analysis Batch: 349005**

**Client Sample ID: MW-11**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.540 | | mg/L | | 107 | 75 - 125 | 6 | 20 |

**Lab Sample ID: 500-115969-5 DU**
**Matrix: Water**
**Analysis Batch: 349005**

**Client Sample ID: MW-11**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | <0.010 | | mg/L | | NC | 20 |

**Lab Sample ID: MB 500-348625/1-A**
**Matrix: Water**
**Analysis Batch: 349005**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/21/16 10:18 | 08/23/16 15:28 | 1 |

**Lab Sample ID: LCS 500-348625/2-A**
**Matrix: Water**
**Analysis Batch: 349005**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.510 | | mg/L | | 102 | 80 - 120 |

**Lab Sample ID: 500-115969-10 MS**
**Matrix: Water**
**Analysis Batch: 349005**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.516 | | mg/L | | 103 | 75 - 125 |

**Lab Sample ID: 500-115969-10 MSD**
**Matrix: Water**
**Analysis Batch: 349005**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.492 | | mg/L | | 98 | 75 - 125 | 5 | 20 |

**Lab Sample ID: 500-115969-10 DU**
**Matrix: Water**
**Analysis Batch: 349005**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | <0.010 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-348593/1-A**
**Matrix: Water**
**Analysis Batch: 348822**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/20/16 10:56 | 08/22/16 18:33 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 18:33 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 08/20/16 10:56 | 08/22/16 18:33 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 18:33 | 1 |
| Boron | <0.050 | | 0.050 | | mg/L | | 08/20/16 10:56 | 08/22/16 18:33 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/20/16 10:56 | 08/22/16 18:33 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/20/16 10:56 | 08/22/16 18:33 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/20/16 10:56 | 08/22/16 18:33 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/20/16 10:56 | 08/22/16 18:33 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/20/16 10:56 | 08/22/16 18:33 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/20/16 10:56 | 08/22/16 18:33 | 1 |

**Lab Sample ID: MB 500-348593/1-A**
**Matrix: Water**
**Analysis Batch: 349037**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | <0.20 | | 0.20 | | mg/L | | 08/20/16 10:56 | 08/23/16 11:31 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/20/16 10:56 | 08/23/16 11:31 | 1 |

**Lab Sample ID: LCS 500-348593/2-A**
**Matrix: Water**
**Analysis Batch: 348822**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.467 | | mg/L | | 93 | 80 - 120 |
| Arsenic | 0.100 | 0.0965 | | mg/L | | 96 | 80 - 120 |
| Barium | 2.00 | 1.98 | | mg/L | | 99 | 80 - 120 |
| Beryllium | 0.0500 | 0.0497 | | mg/L | | 99 | 80 - 120 |
| Boron | 1.00 | 0.938 | | mg/L | | 94 | 80 - 120 |
| Cadmium | 0.0500 | 0.0477 | | mg/L | | 95 | 80 - 120 |
| Chromium | 0.200 | 0.202 | | mg/L | | 101 | 80 - 120 |
| Cobalt | 0.500 | 0.500 | | mg/L | | 100 | 80 - 120 |
| Lead | 0.100 | 0.0991 | | mg/L | | 99 | 80 - 120 |
| Selenium | 0.100 | 0.0934 | | mg/L | | 93 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-348593/2-A**
**Matrix: Water**
**Analysis Batch: 348822**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Thallium | 0.100 | 0.0981 | | mg/L | | 98 | 80 - 120 |

**Lab Sample ID: LCS 500-348593/2-A**
**Matrix: Water**
**Analysis Batch: 349037**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Calcium | 10.0 | 10.0 | | mg/L | | 100 | 80 - 120 |
| Molybdenum | 1.00 | 0.953 | | mg/L | | 95 | 80 - 120 |

**Lab Sample ID: 500-115969-5 MS**
**Matrix: Water**
**Analysis Batch: 348822**

**Client Sample ID: MW-11**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.483 | | mg/L | | 97 | 75 - 125 |
| Arsenic | 0.29 | F1 | 0.100 | 0.406 | | mg/L | | 113 | 75 - 125 |
| Barium | 1.4 | | 2.00 | 3.44 | | mg/L | | 100 | 75 - 125 |
| Beryllium | <0.0010 | | 0.0500 | 0.0462 | | mg/L | | 92 | 75 - 125 |
| Boron | 1.0 | | 1.00 | 1.88 | | mg/L | | 87 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0481 | | mg/L | | 96 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.200 | | mg/L | | 100 | 75 - 125 |
| Cobalt | 0.0034 | | 0.500 | 0.488 | | mg/L | | 97 | 75 - 125 |
| Lead | 0.0010 | | 0.100 | 0.0966 | | mg/L | | 96 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.100 | | mg/L | | 100 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.0949 | | mg/L | | 95 | 75 - 125 |

**Lab Sample ID: 500-115969-5 MS**
**Matrix: Water**
**Analysis Batch: 349037**

**Client Sample ID: MW-11**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 130 | | 10.0 | 146 | 4 | mg/L | | 113 | 75 - 125 |
| Molybdenum | 0.011 | | 1.00 | 1.01 | | mg/L | | 100 | 75 - 125 |

**Lab Sample ID: 500-115969-5 MSD**
**Matrix: Water**
**Analysis Batch: 348822**

**Client Sample ID: MW-11**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.517 | | mg/L | | 103 | 75 - 125 | 7 | 20 |
| Arsenic | 0.29 | F1 | 0.100 | 0.452 | F1 | mg/L | | 158 | 75 - 125 | 11 | 20 |
| Barium | 1.4 | | 2.00 | 3.74 | | mg/L | | 115 | 75 - 125 | 8 | 20 |
| Beryllium | <0.0010 | | 0.0500 | 0.0472 | | mg/L | | 94 | 75 - 125 | 2 | 20 |
| Boron | 1.0 | | 1.00 | 1.95 | | mg/L | | 94 | 75 - 125 | 4 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0519 | | mg/L | | 103 | 75 - 125 | 8 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.209 | | mg/L | | 104 | 75 - 125 | 4 | 20 |
| Cobalt | 0.0034 | | 0.500 | 0.507 | | mg/L | | 101 | 75 - 125 | 4 | 20 |
| Lead | 0.0010 | | 0.100 | 0.103 | | mg/L | | 102 | 75 - 125 | 7 | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-115969-5 MSD**
**Matrix: Water**
**Analysis Batch: 348822**

**Client Sample ID: MW-11**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | <0.0025 | | 0.100 | 0.105 | | mg/L | | 105 | 75 - 125 | 5 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.101 | | mg/L | | 101 | 75 - 125 | 6 | 20 |

**Lab Sample ID: 500-115969-5 MSD**
**Matrix: Water**
**Analysis Batch: 349037**

**Client Sample ID: MW-11**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 130 | | 10.0 | 155 | 4 | mg/L | | 206 | 75 - 125 | 6 | 20 |
| Molybdenum | 0.011 | | 1.00 | 1.07 | | mg/L | | 106 | 75 - 125 | 6 | 20 |

**Lab Sample ID: 500-115969-5 DU**
**Matrix: Water**
**Analysis Batch: 348822**

**Client Sample ID: MW-11**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | <0.0030 | | mg/L | | NC | 20 |
| Arsenic | 0.29 | F1 | 0.327 | | mg/L | | 11 | 20 |
| Barium | 1.4 | | 1.58 | | mg/L | | 10 | 20 |
| Beryllium | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Boron | 1.0 | | 1.04 | | mg/L | | 3 | 20 |
| Cadmium | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Chromium | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Cobalt | 0.0034 | | 0.00363 | | mg/L | | 8 | 20 |
| Lead | 0.0010 | | 0.00111 | | mg/L | | 8 | 20 |
| Selenium | <0.0025 | | <0.0025 | | mg/L | | NC | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | NC | 20 |

**Lab Sample ID: 500-115969-5 DU**
**Matrix: Water**
**Analysis Batch: 349037**

**Client Sample ID: MW-11**
**Prep Type: Total Recoverable**
**Prep Batch: 348593**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Calcium | 130 | | 142 | | mg/L | | 5 | 20 |
| Molybdenum | 0.011 | | 0.0120 | | mg/L | | 9 | 20 |

**Lab Sample ID: MB 500-348625/1-A**
**Matrix: Water**
**Analysis Batch: 348758**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:33 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:33 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:33 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:33 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:33 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:33 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:33 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:33 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-348625/1-A**
**Matrix: Water**
**Analysis Batch: 348758**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:33 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:33 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:33 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/21/16 10:18 | 08/22/16 13:33 | 1 |

**Lab Sample ID: MB 500-348625/1-A**
**Matrix: Water**
**Analysis Batch: 349382**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 08/21/16 10:18 | 08/25/16 18:04 | 1 |

**Lab Sample ID: LCS 500-348625/2-A**
**Matrix: Water**
**Analysis Batch: 348758**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.483 | | mg/L | | 97 | 80 - 120 |
| Arsenic | 0.100 | 0.0967 | | mg/L | | 97 | 80 - 120 |
| Barium | 2.00 | 1.99 | | mg/L | | 99 | 80 - 120 |
| Beryllium | 0.0500 | 0.0499 | | mg/L | | 100 | 80 - 120 |
| Cadmium | 0.0500 | 0.0497 | | mg/L | | 99 | 80 - 120 |
| Calcium | 10.0 | 11.5 | | mg/L | | 115 | 80 - 120 |
| Chromium | 0.200 | 0.206 | | mg/L | | 103 | 80 - 120 |
| Cobalt | 0.500 | 0.514 | | mg/L | | 103 | 80 - 120 |
| Lead | 0.100 | 0.102 | | mg/L | | 102 | 80 - 120 |
| Molybdenum | 1.00 | 1.02 | | mg/L | | 102 | 80 - 120 |
| Selenium | 0.100 | 0.0954 | | mg/L | | 95 | 80 - 120 |
| Thallium | 0.100 | 0.102 | | mg/L | | 102 | 80 - 120 |

**Lab Sample ID: LCS 500-348625/2-A**
**Matrix: Water**
**Analysis Batch: 349382**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 0.955 | | mg/L | | 95 | 80 - 120 |

**Lab Sample ID: 500-115969-10 MS**
**Matrix: Water**
**Analysis Batch: 348758**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.508 | | mg/L | | 102 | 75 - 125 |
| Arsenic | <0.0010 | | 0.100 | 0.103 | | mg/L | | 102 | 75 - 125 |
| Barium | 0.053 | | 2.00 | 2.11 | | mg/L | | 103 | 75 - 125 |
| Beryllium | <0.0010 | | 0.0500 | 0.0488 | | mg/L | | 98 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0513 | | mg/L | | 103 | 75 - 125 |
| Calcium | 87 | | 10.0 | 95.8 | 4 | mg/L | | 90 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.209 | | mg/L | | 104 | 75 - 125 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-115969-10 MS**
**Matrix: Water**
**Analysis Batch: 348758**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | <0.0010 | | 0.500 | 0.510 | | mg/L | | 102 | 75 - 125 |
| Lead | 0.0014 | | 0.100 | 0.105 | | mg/L | | 103 | 75 - 125 |
| Molybdenum | <0.0050 | | 1.00 | 0.925 | | mg/L | | 92 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.101 | | mg/L | | 99 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.103 | | mg/L | | 103 | 75 - 125 |

**Lab Sample ID: 500-115969-10 MS**
**Matrix: Water**
**Analysis Batch: 349382**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.30 | | 1.00 | 1.21 | | mg/L | | 91 | 75 - 125 |

**Lab Sample ID: 500-115969-10 MSD**
**Matrix: Water**
**Analysis Batch: 348758**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.481 | | mg/L | | 96 | 75 - 125 | 5 | 20 |
| Arsenic | <0.0010 | | 0.100 | 0.0986 | | mg/L | | 98 | 75 - 125 | 5 | 20 |
| Barium | 0.053 | | 2.00 | 1.95 | | mg/L | | 95 | 75 - 125 | 8 | 20 |
| Beryllium | <0.0010 | | 0.0500 | 0.0429 | | mg/L | | 86 | 75 - 125 | 13 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0480 | | mg/L | | 96 | 75 - 125 | 7 | 20 |
| Calcium | 87 | | 10.0 | 91.0 | 4 | mg/L | | 43 | 75 - 125 | 5 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.196 | | mg/L | | 97 | 75 - 125 | 7 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.473 | | mg/L | | 94 | 75 - 125 | 8 | 20 |
| Lead | 0.0014 | | 0.100 | 0.0975 | | mg/L | | 96 | 75 - 125 | 7 | 20 |
| Molybdenum | <0.0050 | | 1.00 | 0.857 | | mg/L | | 85 | 75 - 125 | 8 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.0961 | | mg/L | | 95 | 75 - 125 | 5 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.0952 | | mg/L | | 95 | 75 - 125 | 7 | 20 |

**Lab Sample ID: 500-115969-10 MSD**
**Matrix: Water**
**Analysis Batch: 349382**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.30 | | 1.00 | 1.21 | | mg/L | | 91 | 75 - 125 | 0 | 20 |

**Lab Sample ID: 500-115969-10 DU**
**Matrix: Water**
**Analysis Batch: 348758**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | <0.0030 | | mg/L | | NC | 20 |
| Arsenic | <0.0010 | | 0.00108 | | mg/L | | NC | 20 |
| Barium | 0.053 | | 0.0504 | | mg/L | | 5 | 20 |
| Beryllium | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Cadmium | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Calcium | 87 | | 82.7 | | mg/L | | 5 | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-115969-10 DU**
**Matrix: Water**
**Analysis Batch: 348758**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Chromium | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Cobalt | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Lead | 0.0014 | | 0.00153 | | mg/L | | 6 | 20 |
| Molybdenum | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Selenium | <0.0025 | | <0.0025 | | mg/L | | NC | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | NC | 20 |

**Lab Sample ID: 500-115969-10 DU**
**Matrix: Water**
**Analysis Batch: 349382**

**Client Sample ID: Duplicates**
**Prep Type: Total Recoverable**
**Prep Batch: 348625**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Boron | 0.30 | | 0.285 | | mg/L | | 5 | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-348628/12-A**
**Matrix: Water**
**Analysis Batch: 348722**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 348628**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/21/16 12:30 | 08/22/16 09:42 | 1 |

**Lab Sample ID: LCS 500-348628/13-A**
**Matrix: Water**
**Analysis Batch: 348722**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 348628**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00165 | | mg/L | | 83 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-348652/1**
**Matrix: Water**
**Analysis Batch: 348652**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 08/22/16 04:03 | 1 |

**Lab Sample ID: LCS 500-348652/2**
**Matrix: Water**
**Analysis Batch: 348652**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 280 | | mg/L | | 112 | 80 - 120 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-348761/4**
**Matrix: Water**
**Analysis Batch: 348761**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 08/21/16 22:16 | 1 |

**Lab Sample ID: LCS 500-348761/5**
**Matrix: Water**
**Analysis Batch: 348761**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 49.4 | | mg/L | | 99 | 80 - 120 |

**Lab Sample ID: 500-115969-7 MS**
**Matrix: Water**
**Analysis Batch: 348761**

**Client Sample ID: MW-15**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 170 | F1 | 50.0 | 204 | F1 | mg/L | | 74 | 75 - 125 |

**Lab Sample ID: 500-115969-7 MSD**
**Matrix: Water**
**Analysis Batch: 348761**

**Client Sample ID: MW-15**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 170 | F1 | 50.0 | 204 | | mg/L | | 75 | 75 - 125 | 0 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-349459/31**
**Matrix: Water**
**Analysis Batch: 349459**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 08/26/16 13:15 | 1 |

**Lab Sample ID: LCS 500-349459/32**
**Matrix: Water**
**Analysis Batch: 349459**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.4 | | mg/L | | 104 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-350017/3**
**Matrix: Water**
**Analysis Batch: 350017**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 08/31/16 07:12 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: LCS 500-350017/4**
**Matrix: Water**
**Analysis Batch: 350017**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 19.3 | | mg/L | | 96 | 80 - 120 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

## Client Sample ID: MW-01

**Date Collected: 08/17/16 16:09**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 349005 | 08/23/16 14:40 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 348822 | 08/22/16 19:18 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 349037 | 08/23/16 11:39 | PFK | TAL CHI |
| Total/NA | Prep | 7470A | | | 348628 | 08/21/16 12:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 348722 | 08/22/16 10:17 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 348652 | 08/22/16 04:47 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 348761 | 08/21/16 22:29 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 349459 | 08/26/16 13:49 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 350017 | | CLB | TAL CHI |
| | | | | | (Start) | 08/31/16 07:19 | | |
| | | | | | (End) | 08/31/16 07:20 | | |

## Client Sample ID: MW-05

**Date Collected: 08/16/16 13:59**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 349005 | 08/23/16 14:44 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 348822 | 08/22/16 19:22 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 349037 | 08/23/16 11:42 | PFK | TAL CHI |
| Total/NA | Prep | 7470A | | | 348628 | 08/21/16 12:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 348722 | 08/22/16 10:19 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 348652 | 08/22/16 04:50 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 348761 | 08/21/16 22:30 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 349459 | 08/26/16 13:51 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 350017 | | CLB | TAL CHI |
| | | | | | (Start) | 08/31/16 07:20 | | |
| | | | | | (End) | 08/31/16 07:21 | | |

## Client Sample ID: MW-08

**Date Collected: 08/17/16 10:25**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 349005 | 08/23/16 14:48 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

## Client Sample ID: MW-08

**Date Collected: 08/17/16 10:25**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 348822 | 08/22/16 19:25 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 349037 | 08/23/16 11:46 | PFK | TAL CHI |
| Total/NA | Prep | 7470A | | | 348628 | 08/21/16 12:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 348722 | 08/22/16 10:20 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 348652 | 08/22/16 04:53 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 348761 | 08/21/16 22:30 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 349459 | 08/26/16 13:54 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 350017 | | CLB | TAL CHI |
| | | | | | (Start) | 08/31/16 07:21 | | |
| | | | | | (End) | 08/31/16 07:22 | | |

## Client Sample ID: MW-09

**Date Collected: 08/17/16 12:04**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 349005 | 08/23/16 14:53 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 348822 | 08/22/16 19:29 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 349037 | 08/23/16 11:57 | PFK | TAL CHI |
| Total/NA | Prep | 7470A | | | 348628 | 08/21/16 12:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 348722 | 08/22/16 10:21 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 348652 | 08/22/16 04:56 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 348761 | 08/21/16 22:31 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 349459 | 08/26/16 13:56 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 350017 | | CLB | TAL CHI |
| | | | | | (Start) | 08/31/16 07:22 | | |
| | | | | | (End) | 08/31/16 07:23 | | |

## Client Sample ID: MW-11

**Date Collected: 08/17/16 13:52**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 349005 | 08/23/16 14:58 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 348822 | 08/22/16 19:33 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348593 | 08/20/16 10:56 | JNH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 349037 | 08/23/16 12:01 | PFK | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

## Client Sample ID: MW-11

**Date Collected: 08/17/16 13:52**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 348628 | 08/21/16 12:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 348722 | 08/22/16 10:23 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 348652 | 08/22/16 05:00 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 348761 | 08/21/16 22:31 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 349459 | 08/26/16 13:59 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 350017 | | CLB | TAL CHI |
| | | | | | (Start) | 08/31/16 07:25 | | |
| | | | | | (End) | 08/31/16 07:26 | | |

## Client Sample ID: MW-12

**Date Collected: 08/18/16 11:22**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 349005 | 08/23/16 15:37 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 348758 | 08/22/16 13:40 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 349037 | 08/23/16 12:55 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 349382 | 08/25/16 18:19 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 348628 | 08/21/16 12:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 348722 | 08/22/16 10:24 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 348652 | 08/22/16 05:03 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 348761 | 08/21/16 22:34 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 349459 | 08/26/16 14:01 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 25 | 350017 | | CLB | TAL CHI |
| | | | | | (Start) | 08/31/16 07:26 | | |
| | | | | | (End) | 08/31/16 07:27 | | |

## Client Sample ID: MW-15

**Date Collected: 08/18/16 15:55**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 349005 | 08/23/16 15:42 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 348758 | 08/22/16 13:44 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 349037 | 08/23/16 12:59 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

## Client Sample ID: MW-15

**Date Collected: 08/18/16 15:55**
**Date Received: 08/19/16 18:10**

**Lab Sample ID: 500-115969-7**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 349382 | 08/25/16 18:23 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 348628 | 08/21/16 12:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 348722 | 08/22/16 10:26 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 348652 | 08/22/16 05:06 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 348761 | 08/21/16 22:34 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 349459 | 08/26/16 14:04 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 50 | 350017 | | CLB | TAL CHI |
| | | | | | (Start) | 08/31/16 07:27 | | |
| | | | | | (End) | 08/31/16 07:28 | | |

## Client Sample ID: MW-17

**Date Collected: 08/15/16 17:43**
**Date Received: 08/19/16 18:10**

**Lab Sample ID: 500-115969-8**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 349005 | 08/23/16 15:48 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 348758 | 08/22/16 13:48 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 349037 | 08/23/16 13:03 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 349382 | 08/25/16 18:27 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 348628 | 08/21/16 12:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 348722 | 08/22/16 10:27 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 348652 | 08/22/16 05:09 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 348761 | 08/21/16 22:36 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 349459 | 08/26/16 14:15 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 50 | 350017 | | CLB | TAL CHI |
| | | | | | (Start) | 08/31/16 07:28 | | |
| | | | | | (End) | 08/31/16 07:29 | | |

## Client Sample ID: MW-18

**Date Collected: 08/15/16 16:46**
**Date Received: 08/19/16 18:10**

**Lab Sample ID: 500-115969-9**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 349005 | 08/23/16 15:53 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 348758 | 08/22/16 13:51 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 349382 | 08/25/16 18:30 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

## Client Sample ID: MW-18

**Lab Sample ID: 500-115969-9**

**Date Collected: 08/15/16 16:46**

**Matrix: Water**

**Date Received: 08/19/16 18:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 348628 | 08/21/16 12:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 348722 | 08/22/16 10:29 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 348652 | 08/22/16 05:12 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 348761 | 08/21/16 22:36 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 349459 | 08/26/16 14:18 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 350017 | | CLB | TAL CHI |
| | | | | | (Start) | 08/31/16 07:29 | | |
| | | | | | (End) | 08/31/16 07:30 | | |

## Client Sample ID: Duplicates

**Lab Sample ID: 500-115969-10**

**Date Collected: 08/17/16 00:00**

**Matrix: Water**

**Date Received: 08/19/16 18:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 349005 | 08/23/16 15:57 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 348758 | 08/22/16 14:03 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 348625 | 08/21/16 10:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 349382 | 08/25/16 18:34 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 348628 | 08/21/16 12:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 348722 | 08/22/16 10:30 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 348652 | 08/22/16 05:15 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 348761 | 08/21/16 22:59 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 349459 | 08/26/16 14:20 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 350017 | | CLB | TAL CHI |
| | | | | | (Start) | 08/31/16 07:30 | | |
| | | | | | (End) | 08/31/16 07:31 | | |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-1

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-17 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | Accounts Payable |
| Company: | KPRG and Associates, Inc | Company: | NRG Energy |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | 112 Telly St |
| | Brookfield, WI 53005 | | New Roads, LA 70760 |
| Phone: | 262-781-0475 | Phone: | 713 465-4113 |
| Email: | richardg@kprginc.com | Email | invoices@nrg.com |
| | | PO #: | 4501576732 |

**Lab Lot #** 500-115969

| | |
|---|---|
| Package Sealed (Yes) No | Samples Sealed (Yes) No |
| Received on Ice (Yes) No | Samples Intact (Yes) No N/A |
| Temperature °C of Cooler 1.3, 3.7, 4.6 | |
| Within Hold Time (Yes) No | Preserv. Indicated (Yes) No N/A |
| pH Check OK (Yes) No | Res $Cl_2$ Check OK Yes No (N/A) |
| Sample Labels and COC Agree (Yes) No | COC not present |

| | |
|---|---|
| **Sampler Name:** Ian John Howieson | **Signature:** |
| **Project Name:** Quarterly Powerton CCR | **TestAmerica Project Number:** 50011612 |
| **Project Location:** Pekin, IL | **TAT** 15 Days |
| **Lab PM:** Eric Lang | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 8-17-16 | 16:09 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-05 | 8-16-16 | 13:59 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-08 | 8-17-16 | 10:25 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-09 | 8-17-16 | 12:04 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-11 | 8-17-16 | 13:52 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-12 | 8-18-16 | 11:27 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-15 | 8-18-16 | 15:55 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-17 | 8-15-16 | 17:43 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-18 | 8-15-16 | 16:46 | W | 5 | X | X | X | X | X | X | |
| 10 | | Duplicates | 8-17-16 | — | W | 5 | X | X | X | X | X | X | |

500-115969 COC

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| RELINQUISHED BY: | ISH | COMPANY: | KPRG | DATE: | 8-19-16 | TIME: | 18:10 | RECEIVED BY: | COMPANY: | TA | DATE: | 8-19-16 | TIME: | 18:10 |
| RELINQUISHED BY: | | COMPANY: | | DATE: | | TIME: | | RECEIVED BY: | COMPANY: | | DATE: | | TIME: | |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received ___/___/___
Courier:
Hand Delivered ☐
Bill of Lading:

__1__of__1__

STL-8208 (0600)

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-115969-1

**Login Number: 115969**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.3, 3.7, 4.6 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

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# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-115969-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*9/21/2016 8:59:09 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-2

## Job ID: 500-115969-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-115969-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/19/2016 6:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.3º C, 3.7º C and 4.6º C.

**RAD**
Method(s) 904.0: Radium-228 Prep Batch 160-266726:
The radium-228 detection goal was not met for the following sample due to the reduced sample volume attributed to the presence of matrix interferences: MW-12 (500-115969-6). Analytical results are reported with the detection limit achieved.

Method(s) PrecSep_0: Radium 228 Prep Batch: 160-266726:
The following samples MW-12 (500-115969-6) were prepared at a reduced aliquot due to sediment.

Method(s) PrecSep-21: Radium 226 Prep Batch: 160-266724:
The following samples MW-12 (500-115969-6) were prepared at a reduced aliquot due to sediment.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-115969-1 | MW-01 | Water | 08/17/16 16:09 | 08/19/16 18:10 |
| 500-115969-2 | MW-05 | Water | 08/16/16 13:59 | 08/19/16 18:10 |
| 500-115969-3 | MW-08 | Water | 08/17/16 10:25 | 08/19/16 18:10 |
| 500-115969-4 | MW-09 | Water | 08/17/16 12:04 | 08/19/16 18:10 |
| 500-115969-5 | MW-11 | Water | 08/17/16 13:52 | 08/19/16 18:10 |
| 500-115969-6 | MW-12 | Water | 08/18/16 11:22 | 08/19/16 18:10 |
| 500-115969-7 | MW-15 | Water | 08/18/16 15:55 | 08/19/16 18:10 |
| 500-115969-8 | MW-17 | Water | 08/15/16 17:43 | 08/19/16 18:10 |
| 500-115969-9 | MW-18 | Water | 08/15/16 16:46 | 08/19/16 18:10 |
| 500-115969-10 | Duplicates | Water | 08/17/16 00:00 | 08/19/16 18:10 |

## Client Sample ID: MW-01

**Date Collected: 08/17/16 16:09**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.183** | | 0.0964 | 0.0978 | 1.00 | 0.135 | pCi/L | 08/25/16 19:33 | 09/16/16 07:41 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.8* | | *40 - 110* | *08/25/16 19:33* | *09/16/16 07:41* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.198 | U | 0.292 | 0.293 | 1.00 | 0.491 | pCi/L | 08/25/16 20:27 | 09/10/16 16:44 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.8* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:44* | *1* |
| *Y Carrier* | *81.5* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:44* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.382 | U | 0.308 | 0.309 | 5.00 | 0.491 | pCi/L | | 09/20/16 19:36 | 1 |

## Client Sample ID: MW-05

**Date Collected: 08/16/16 13:59**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.121 | | 0.0822 | 0.0829 | 1.00 | 0.121 | pCi/L | 08/25/16 19:33 | 09/16/16 07:41 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.8* | | *40 - 110* | *08/25/16 19:33* | *09/16/16 07:41* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.268 | U | 0.278 | 0.279 | 1.00 | 0.452 | pCi/L | 08/25/16 20:27 | 09/10/16 16:45 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.8* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:45* | *1* |
| *Y Carrier* | *87.5* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:45* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.389 | U | 0.290 | 0.291 | 5.00 | 0.452 | pCi/L | | 09/20/16 19:36 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-2

## Client Sample ID: MW-08

**Date Collected: 08/17/16 10:25**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.308 | | 0.0934 | 0.0974 | 1.00 | 0.0888 | pCi/L | 08/25/16 19:33 | 09/16/16 07:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.8* | | *40 - 110* | *08/25/16 19:33* | *09/16/16 07:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.190 | U | 0.307 | 0.307 | 1.00 | 0.519 | pCi/L | 08/25/16 20:27 | 09/10/16 16:45 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.8* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:45* | *1* |
| *Y Carrier* | *75.1* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:45* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.498 | U | 0.321 | 0.322 | 5.00 | 0.519 | pCi/L | | 09/20/16 19:36 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-2

## Client Sample ID: MW-09

**Date Collected: 08/17/16 12:04**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0445 | U | 0.0617 | 0.0619 | 1.00 | 0.104 | pCi/L | 08/25/16 19:33 | 09/16/16 07:44 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.1* | | *40 - 110* | *08/25/16 19:33* | *09/16/16 07:44* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.208 | U | 0.298 | 0.298 | 1.00 | 0.498 | pCi/L | 08/25/16 20:27 | 09/10/16 16:45 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.1* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:45* | *1* |
| *Y Carrier* | *84.9* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:45* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.253 | U | 0.304 | 0.304 | 5.00 | 0.498 | pCi/L | | 09/20/16 19:36 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-2

**Client Sample ID: MW-11**
**Date Collected: 08/17/16 13:52**
**Date Received: 08/19/16 18:10**

**Lab Sample ID: 500-115969-5**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.658** | | 0.129 | 0.142 | 1.00 | 0.0832 | pCi/L | 08/25/16 19:33 | 09/16/16 07:44 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.1* | | *40 - 110* | *08/25/16 19:33* | *09/16/16 07:44* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.470 | U | 0.318 | 0.321 | 1.00 | 0.492 | pCi/L | 08/25/16 20:27 | 09/10/16 16:45 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.1* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:45* | *1* |
| *Y Carrier* | *89.3* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:45* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **1.13** | | 0.343 | 0.351 | 5.00 | 0.492 | pCi/L | | 09/20/16 19:36 | 1 |

## Client Sample ID: MW-12

**Date Collected: 08/18/16 11:22**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.58 | | 0.329 | 0.358 | 1.00 | 0.288 | pCi/L | 08/25/16 19:33 | 09/16/16 07:44 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *59.5* | | *40 - 110* | *08/25/16 19:33* | *09/16/16 07:44* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 2.10 | G | 0.826 | 0.848 | 1.00 | 1.13 | pCi/L | 08/25/16 20:27 | 09/10/16 16:45 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *59.5* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:45* | *1* |
| *Y Carrier* | *90.1* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:45* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 3.68 | | 0.889 | 0.920 | 5.00 | 1.13 | pCi/L | | 09/20/16 19:36 | 1 |

## Client Sample ID: MW-15

**Date Collected: 08/18/16 15:55**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.409 | | 0.109 | 0.115 | 1.00 | 0.0917 | pCi/L | 08/25/16 19:33 | 09/16/16 07:44 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *66.7* | | *40 - 110* | *08/25/16 19:33* | *09/16/16 07:44* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.203 | U | 0.395 | 0.395 | 1.00 | 0.672 | pCi/L | 08/25/16 20:27 | 09/10/16 16:45 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *66.7* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:45* | *1* |
| *Y Carrier* | *78.9* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:45* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.612 | U | 0.410 | 0.412 | 5.00 | 0.672 | pCi/L | | 09/20/16 19:36 | 1 |

## Client Sample ID: MW-17

**Date Collected: 08/15/16 17:43**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.380** | | 0.103 | 0.109 | 1.00 | 0.0854 | pCi/L | 08/25/16 19:33 | 09/16/16 07:44 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *68.1* | | *40 - 110* | *08/25/16 19:33* | *09/16/16 07:44* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.226 | U | 0.338 | 0.339 | 1.00 | 0.568 | pCi/L | 08/25/16 20:27 | 09/10/16 16:45 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *68.1* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:45* | *1* |
| *Y Carrier* | *82.2* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:45* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.606** | | 0.353 | 0.356 | 5.00 | 0.568 | pCi/L | | 09/20/16 19:36 | 1 |

## Client Sample ID: MW-18

**Date Collected: 08/15/16 16:46**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.431** | | 0.106 | 0.113 | 1.00 | 0.0861 | pCi/L | 08/25/16 19:33 | 09/16/16 07:45 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *78.1* | | *40 - 110* | *08/25/16 19:33* | *09/16/16 07:45* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.405 | U | 0.440 | 0.441 | 1.00 | 0.721 | pCi/L | 08/25/16 20:27 | 09/10/16 16:46 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *78.1* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:46* | *1* |
| *Y Carrier* | *78.5* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:46* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.836** | | 0.452 | 0.455 | 5.00 | 0.721 | pCi/L | | 09/20/16 19:36 | 1 |

## Client Sample ID: Duplicates

**Date Collected: 08/17/16 00:00**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-10

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.231** | | 0.139 | 0.140 | 1.00 | 0.201 | pCi/L | 08/25/16 19:35 | 09/16/16 07:45 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *45.9* | | *40 - 110* | *08/25/16 19:35* | *09/16/16 07:45* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0332 | U | 0.276 | 0.276 | 1.00 | 0.492 | pCi/L | 08/25/16 20:27 | 09/10/16 16:41 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *74.4* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:41* | *1* |
| *Y Carrier* | *84.1* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:41* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.264 | U | 0.308 | 0.309 | 5.00 | 0.492 | pCi/L | | 09/20/16 19:36 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |
| G | The Sample MDC is greater than the requested RL. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-2

## Rad

### Prep Batch: 266724

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-115969-2 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-115969-3 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-115969-4 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-115969-5 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-115969-6 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-115969-7 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-115969-8 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-115969-9 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-115969-10 | Duplicates | Total/NA | Water | PrecSep-21 | |
| MB 160-266724/1-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-266724/2-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 266726

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-115969-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-115969-2 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-115969-3 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-115969-4 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-115969-5 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-115969-6 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-115969-7 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-115969-8 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-115969-9 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-115969-10 | Duplicates | Total/NA | Water | PrecSep_0 | |
| MB 160-266726/1-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-266726/2-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-266724/1-A**
**Matrix: Water**
**Analysis Batch: 270277**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 266724**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.06147 | U | 0.0545 | 0.0548 | 1.00 | 0.0832 | pCi/L | 08/25/16 19:33 | 09/16/16 07:39 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.5* | | *40 - 110* | *08/25/16 19:33* | *09/16/16 07:39* | *1* |

**Lab Sample ID: LCS 160-266724/2-A**
**Matrix: Water**
**Analysis Batch: 270277**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 266724**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.2 | 14.95 | | 1.46 | 1.00 | 0.0919 | pCi/L | 134 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *77.5* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-266726/1-A**
**Matrix: Water**
**Analysis Batch: 269045**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 266726**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.1458 | U | 0.322 | 0.322 | 1.00 | 0.550 | pCi/L | 08/25/16 20:27 | 09/10/16 16:43 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.5* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:43* | *1* |
| *Y Carrier* | *79.6* | | *40 - 110* | *08/25/16 20:27* | *09/10/16 16:43* | *1* |

**Lab Sample ID: LCS 160-266726/2-A**
**Matrix: Water**
**Analysis Batch: 269045**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 266726**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 14.6 | 18.97 | | 2.05 | 1.00 | 0.545 | pCi/L | 130 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *77.5* | | *40 - 110* |
| *Y Carrier* | *86.7* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-2

## Client Sample ID: MW-01
**Date Collected: 08/17/16 16:09**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 266724 | 08/25/16 19:33 | MCJ | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 270277 | 09/16/16 07:41 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 266726 | 08/25/16 20:27 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 269045 | 09/10/16 16:44 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 270770 | 09/20/16 19:36 | RTM | TAL SL |

## Client Sample ID: MW-05
**Date Collected: 08/16/16 13:59**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 266724 | 08/25/16 19:33 | MCJ | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 270277 | 09/16/16 07:41 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 266726 | 08/25/16 20:27 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 269045 | 09/10/16 16:45 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 270770 | 09/20/16 19:36 | RTM | TAL SL |

## Client Sample ID: MW-08
**Date Collected: 08/17/16 10:25**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 266724 | 08/25/16 19:33 | MCJ | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 270279 | 09/16/16 07:43 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 266726 | 08/25/16 20:27 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 269045 | 09/10/16 16:45 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 270770 | 09/20/16 19:36 | RTM | TAL SL |

## Client Sample ID: MW-09
**Date Collected: 08/17/16 12:04**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 266724 | 08/25/16 19:33 | MCJ | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 270279 | 09/16/16 07:44 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 266726 | 08/25/16 20:27 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 269045 | 09/10/16 16:45 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 270770 | 09/20/16 19:36 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-2

## Client Sample ID: MW-11

**Date Collected: 08/17/16 13:52**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 266724 | 08/25/16 19:33 | MCJ | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 270279 | 09/16/16 07:44 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 266726 | 08/25/16 20:27 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 269045 | 09/10/16 16:45 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 270770 | 09/20/16 19:36 | RTM | TAL SL |

## Client Sample ID: MW-12

**Date Collected: 08/18/16 11:22**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 266724 | 08/25/16 19:33 | MCJ | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 270279 | 09/16/16 07:44 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 266726 | 08/25/16 20:27 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 269045 | 09/10/16 16:45 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 270770 | 09/20/16 19:36 | RTM | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 08/18/16 15:55**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 266724 | 08/25/16 19:33 | MCJ | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 270279 | 09/16/16 07:44 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 266726 | 08/25/16 20:27 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 269045 | 09/10/16 16:45 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 270770 | 09/20/16 19:36 | RTM | TAL SL |

## Client Sample ID: MW-17

**Date Collected: 08/15/16 17:43**
**Date Received: 08/19/16 18:10**

## Lab Sample ID: 500-115969-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 266724 | 08/25/16 19:33 | MCJ | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 270279 | 09/16/16 07:44 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 266726 | 08/25/16 20:27 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 269045 | 09/10/16 16:45 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 270770 | 09/20/16 19:36 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-2

## Client Sample ID: MW-18

**Lab Sample ID: 500-115969-9**

**Date Collected: 08/15/16 16:46**

**Matrix: Water**

**Date Received: 08/19/16 18:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 266724 | 08/25/16 19:33 | MCJ | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 270279 | 09/16/16 07:45 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 266726 | 08/25/16 20:27 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 269045 | 09/10/16 16:46 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 270770 | 09/20/16 19:36 | RTM | TAL SL |

## Client Sample ID: Duplicates

**Lab Sample ID: 500-115969-10**

**Date Collected: 08/17/16 00:00**

**Matrix: Water**

**Date Received: 08/19/16 18:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 266724 | 08/25/16 19:35 | MCJ | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 270279 | 09/16/16 07:45 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 266726 | 08/25/16 20:27 | MCJ | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 269044 | 09/10/16 16:41 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 270770 | 09/20/16 19:36 | RTM | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-2

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-17 |

## Laboratory: TestAmerica St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 003757 | 11-30-16 * |

The following analytes are included in this report, but certification is not offered by the governing authority:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

* Certification renewal pending - certification considered valid.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | Accounts Payable |
| Company: | KPRG and Associates, Inc | Company: | NRG Energy |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | 112 Telly St |
| | Brookfield, WI 53005 | | New Roads, LA 70760 |
| Phone: | 262-781-0475 | Phone: | 713 465-4113 |
| Email: | richardg@kprginc.com | Email | invoices@nrg.com |
| | | PO #: | 4501576732 |

**Lab Lot #** 500-115969

Package Sealed: (Yes) No — Samples Sealed: (Yes) No
Received on Ice: (Yes) No — Samples Intact: (Yes) No N/A
Temperature °C of Cooler: 1.3, 3.7, 4.6
Within Hold Time: (Yes) No — Preserv. Indicated: (Yes) No N/A
pH Check OK: (Yes) No — Res $Cl_2$ Check OK: Yes No (N/A)
Sample Labels and COC Agree: (Yes) No — COC not present

| Sampler Name: | Signature: | # / Cont. | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ian John Howieson | | Volume | | | | | | | | | | | | |
| **Project Name:** | **TestAmerica Project Number:** | Preserv. | | | | | | | | | | | | |
| Quarterly Powerton CCR | 50011612 | | | | | | | | | | | | | |
| **Project Location:** | **TAT** | | | | | | | | | | | | | |
| Pekin, IL | 15 Days | | | | | | | | | | | | | |
| **Lab PM:** | Eric Lang | | | | | | | | | | | | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 8-17-16 | 16:09 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-05 | 8-16-16 | 13:59 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-08 | 8-17-16 | 10:25 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-09 | 8-17-16 | 12:04 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-11 | 8-17-16 | 13:52 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-12 | 8-18-16 | 11:27 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-15 | 8-18-16 | 15:55 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-17 | 8-15-16 | 17:43 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-18 | 8-15-16 | 16:46 | W | 5 | X | X | X | X | X | X | |
| 10 | | Duplicates | 8-17-16 | — | W | 5 | X | X | X | X | X | X | |

500-115969 COC

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| ISH | KPRG | 8-19-16 | 18:10 | | TA | 8-19-16 | 18:10 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**
WW = Wastewater, SE = Sediment
W = Water, SO = Solid
S = Soil, DL = Drum Liquid
SL = Sludge, DS = Drum Solid
MS = Miscellaneous, L = Leachate
OL = Oil, W = Wipe
A = Air, O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received ___/___/___
Courier:
Hand Delivered ☐
Bill of Lading:

__1__of__1__

STL-8208 (0600)

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

500-115969 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| | | | |
|---|---|---|---|
| **Client Information (Sub Contract Lab)** | Sampler: | Lab PM: Lang, Eric A. | COC No: 500-77091.1 |
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | | Job #: 500-115969-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 9/20/2016 | | |
| City: Earth City | TAT Requested (days): | | |
| State, Zip: MO, 63045 | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | |
| Email: | WO #: | | |
| Project Name: Powerton CCR | Project #: 50011612 | | |
| Site: MWG - Powerton | SSOW#: | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Ra226Ra228_GFPC | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | X | X | | | | X | |
| MW-01 (500-115969-1) | 8/17/16 | 16:09 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-05 (500-115969-2) | 8/16/16 | 13:59 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-08 (500-115969-3) | 8/17/16 | 10:25 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-09 (500-115969-4) | 8/17/16 | 12:04 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-11 (500-115969-5) | 8/17/16 | 13:52 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-12 (500-115969-6) | 8/18/16 | 11:22 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-15 (500-115969-7) | 8/18/16 | 15:55 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-17 (500-115969-8) | 8/15/16 | 17:43 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-18 (500-115969-9) | 8/15/16 | 16:46 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| Duplicates (500-115969-10) | 8/17/16 | Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| | | | | | | | | | | | |

***Possible Hazard Identification***
*Unconfirmed*

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Special Instructions/QC Requirements:

| | | | | | | |
|---|---|---|---|---|---|---|
| Empty Kit Relinquished by: | | Date: | | Time: | | Method of Shipment: |
| Relinquished by: | Date/Time: 08/22/16 1300 | Company TA | Received by: | Date/Time: 8.23.16 0915 | Company TA STL | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company | |

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:



9/21/2016

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-115969-2

**Login Number: 115969**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.3, 3.7, 4.6 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-115969-2

**Login Number: 115969**
**List Number: 2**
**Creator: Clarke, Jill C**

**List Source: TestAmerica St. Louis**
**List Creation: 08/23/16 03:26 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 17.0, 17.0, 17.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-115969-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| | | Ba |
| Lab Sample ID | Client Sample ID | (40-110) |
| 500-115969-1 | MW-01 | 75.8 |
| 500-115969-2 | MW-05 | 75.8 |
| 500-115969-3 | MW-08 | 75.8 |
| 500-115969-4 | MW-09 | 76.1 |
| 500-115969-5 | MW-11 | 76.1 |
| 500-115969-6 | MW-12 | 59.5 |
| 500-115969-7 | MW-15 | 66.7 |
| 500-115969-8 | MW-17 | 68.1 |
| 500-115969-9 | MW-18 | 78.1 |
| 500-115969-10 | Duplicates | 45.9 |
| LCS 160-266724/2-A | Lab Control Sample | 77.5 |
| MB 160-266724/1-A | Method Blank | 79.5 |

**Tracer/Carrier Legend**

Ba = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| | | Ba | Y |
| Lab Sample ID | Client Sample ID | (40-110) | (40-110) |
| 500-115969-1 | MW-01 | 75.8 | 81.5 |
| 500-115969-2 | MW-05 | 75.8 | 87.5 |
| 500-115969-3 | MW-08 | 75.8 | 75.1 |
| 500-115969-4 | MW-09 | 76.1 | 84.9 |
| 500-115969-5 | MW-11 | 76.1 | 89.3 |
| 500-115969-6 | MW-12 | 59.5 | 90.1 |
| 500-115969-7 | MW-15 | 66.7 | 78.9 |
| 500-115969-8 | MW-17 | 68.1 | 82.2 |
| 500-115969-9 | MW-18 | 78.1 | 78.5 |
| 500-115969-10 | Duplicates | 74.4 | 84.1 |
| LCS 160-266726/2-A | Lab Control Sample | 77.5 | 86.7 |
| MB 160-266726/1-A | Method Blank | 79.5 | 79.6 |

**Tracer/Carrier Legend**

Ba = Ba Carrier
Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-120425-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*12/1/2016 11:36:38 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

## Job ID: 500-120425-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-120425-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 11/18/2016 7:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.8º C, 4.7º C and 5.1º C.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-120425-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0051 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.056 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.18 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 97 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0044 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0082 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0059 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 39 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.21 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 32 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-120425-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.051 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.93 | | 0.10 | | mg/L | 2 | | 6020A | Total Recoverable |
| Calcium | 94 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 620 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 66 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.23 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 77 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-120425-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.017 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0012 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.076 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.10 | | mg/L | 2 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.016 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 290 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.33 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 230 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-120425-4

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

## Client Sample ID: MW-09 (Continued) — Lab Sample ID: 500-120425-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0038 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.039 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.5 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 85 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.036 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0025 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 630 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 38 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 110 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-120425-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.071 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.44 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.10 | | mg/L | 2 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0037 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0013 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0088 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1100 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 130 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.44 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 240 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-120425-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.017 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.23 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.67 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.83 | | 0.10 | | mg/L | 2 | | 6020A | Total Recoverable |
| Cadmium | 0.0028 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-120425-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.46 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 340 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-120425-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.016 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0033 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.031 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.3 | | 0.10 | | mg/L | 2 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.018 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0078 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1900 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.47 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 560 | | 130 | | mg/L | 25 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-120425-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.022 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.19 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.073 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.5 | | 0.10 | | mg/L | 2 | | 6020A | Total Recoverable |
| Cadmium | 0.00051 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 200 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0012 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.042 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Thallium | 0.0021 | | 0.0020 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 2000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 210 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.56 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 560 | | 250 | | mg/L | 50 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-120425-9

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

## Client Sample ID: MW-18 (Continued) — Lab Sample ID: 500-120425-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.14 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.94 | | 0.10 | | mg/L | 2 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0053 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.58 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 250 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-120425-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.084 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.8 | | 0.10 | | mg/L | 2 | | 6020A | Total Recoverable |
| Calcium | 89 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0010 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00068 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.035 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0043 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 670 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 38 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 120 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-120425-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.13 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.75 | | 0.10 | | mg/L | 2 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.57 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 270 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-120425-1 | MW-01 | Water | 11/16/16 14:32 | 11/18/16 19:50 |
| 500-120425-2 | MW-05 | Water | 11/15/16 12:52 | 11/18/16 19:50 |
| 500-120425-3 | MW-08 | Water | 11/15/16 14:51 | 11/18/16 19:50 |
| 500-120425-4 | MW-09 | Water | 11/17/16 09:47 | 11/18/16 19:50 |
| 500-120425-5 | MW-11 | Water | 11/17/16 12:01 | 11/18/16 19:50 |
| 500-120425-6 | MW-12 | Water | 11/18/16 13:20 | 11/18/16 19:50 |
| 500-120425-7 | MW-15 | Water | 11/17/16 16:40 | 11/18/16 19:50 |
| 500-120425-8 | MW-17 | Water | 11/14/16 15:55 | 11/18/16 19:50 |
| 500-120425-9 | MW-18 | Water | 11/18/16 10:19 | 11/18/16 19:50 |
| 500-120425-10 | MW-19 | Water | 11/18/16 12:00 | 11/18/16 19:50 |
| 500-120425-11 | Duplicate | Water | 11/18/16 00:00 | 11/18/16 19:50 |

**Client Sample ID: MW-01**
**Date Collected: 11/16/16 14:32**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-1**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/22/16 09:03 | 11/23/16 20:02 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:54 | 1 |
| **Arsenic** | **0.0051** | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:54 | 1 |
| **Barium** | **0.056** | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:54 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:54 | 1 |
| **Boron** | **0.18** | | 0.050 | | mg/L | | 11/22/16 09:03 | 11/29/16 14:41 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:54 | 1 |
| **Calcium** | **97** | | 0.20 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:54 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:54 | 1 |
| **Cobalt** | **0.0044** | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:54 | 1 |
| **Lead** | **0.0082** | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:54 | 1 |
| **Molybdenum** | **0.0059** | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/29/16 14:41 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:54 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:54 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/16 16:30 | 11/21/16 12:08 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **500** | | 10 | | mg/L | | | 11/21/16 00:51 | 1 |
| **Chloride** | **39** | | 2.0 | | mg/L | | | 11/27/16 22:58 | 1 |
| **Fluoride** | **0.21** | | 0.10 | | mg/L | | | 11/26/16 14:42 | 1 |
| **Sulfate** | **32** | | 10 | | mg/L | | | 11/30/16 07:39 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

**Client Sample ID: MW-05**
**Date Collected: 11/15/16 12:52**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-2**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/22/16 09:03 | 11/23/16 20:05 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:57 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:57 | 1 |
| **Barium** | **0.051** | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:57 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:57 | 1 |
| **Boron** | **0.93** | | 0.10 | | mg/L | | 11/22/16 09:03 | 11/29/16 14:45 | 2 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:57 | 1 |
| **Calcium** | **94** | | 0.20 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:57 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:57 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:57 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:57 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:57 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:57 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:57 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/16 16:30 | 11/21/16 12:18 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **620** | | 10 | | mg/L | | | 11/21/16 00:59 | 1 |
| **Chloride** | **66** | | 2.0 | | mg/L | | | 11/27/16 22:58 | 1 |
| **Fluoride** | **0.23** | | 0.10 | | mg/L | | | 11/26/16 14:45 | 1 |
| **Sulfate** | **77** | | 20 | | mg/L | | | 11/30/16 07:42 | 4 |

**Client Sample ID: MW-08**
**Date Collected: 11/15/16 14:51**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-3**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.017** | | 0.010 | | mg/L | | 11/22/16 09:03 | 11/23/16 20:15 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:01 | 1 |
| **Arsenic** | **0.0012** | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:01 | 1 |
| **Barium** | **0.076** | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:01 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:01 | 1 |
| **Boron** | **1.2** | | 0.10 | | mg/L | | 11/22/16 09:03 | 11/29/16 14:49 | 2 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:01 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:01 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:01 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:01 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:01 | 1 |
| **Molybdenum** | **0.016** | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:01 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:01 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:01 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/16 16:30 | 11/21/16 12:19 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1300** | | 10 | | mg/L | | | 11/21/16 01:03 | 1 |
| **Chloride** | **290** | | 10 | | mg/L | | | 11/27/16 23:27 | 5 |
| **Fluoride** | **0.33** | | 0.10 | | mg/L | | | 11/26/16 14:57 | 1 |
| **Sulfate** | **230** | | 50 | | mg/L | | | 11/30/16 07:43 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

**Client Sample ID: MW-09**
**Date Collected: 11/17/16 09:47**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-4**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/22/16 09:03 | 11/23/16 20:22 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:05 | 1 |
| **Arsenic** | **0.0038** | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:05 | 1 |
| **Barium** | **0.039** | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:05 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:05 | 1 |
| **Boron** | **4.5** | | 0.50 | | mg/L | | 11/22/16 09:03 | 11/29/16 14:52 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:05 | 1 |
| **Calcium** | **85** | | 0.20 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:05 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:05 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:05 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:05 | 1 |
| **Molybdenum** | **0.036** | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:05 | 1 |
| **Selenium** | **0.0025** | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:05 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:05 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/16 16:30 | 11/21/16 12:21 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **630** | | 10 | | mg/L | | | 11/21/16 01:07 | 1 |
| **Chloride** | **38** | | 2.0 | | mg/L | | | 11/27/16 22:59 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 11/26/16 15:00 | 1 |
| **Sulfate** | **110** | | 25 | | mg/L | | | 11/30/16 07:44 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

**Client Sample ID: MW-11**
**Date Collected: 11/17/16 12:01**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-5**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/22/16 09:03 | 11/23/16 20:38 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:31 | 1 |
| **Arsenic** | **0.071** | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:31 | 1 |
| **Barium** | **0.44** | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:31 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:31 | 1 |
| **Boron** | **1.2** | | 0.10 | | mg/L | | 11/22/16 09:03 | 11/29/16 15:11 | 2 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:31 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:31 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:31 | 1 |
| **Cobalt** | **0.0037** | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:31 | 1 |
| **Lead** | **0.0013** | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:31 | 1 |
| **Molybdenum** | **0.0088** | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:31 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:31 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:31 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/16 16:30 | 11/21/16 12:22 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1100** | | 10 | | mg/L | | | 11/21/16 01:11 | 1 |
| **Chloride** | **130** | | 10 | | mg/L | | | 11/27/16 23:27 | 5 |
| **Fluoride** | **0.44** | | 0.10 | | mg/L | | | 11/26/16 15:03 | 1 |
| **Sulfate** | **240** | | 100 | | mg/L | | | 11/30/16 07:45 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

**Client Sample ID: MW-12**
**Date Collected: 11/18/16 13:20**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-6**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.017** | | 0.010 | | mg/L | | 11/22/16 09:03 | 11/23/16 20:42 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:35 | 1 |
| **Arsenic** | **0.23** | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:35 | 1 |
| **Barium** | **0.67** | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:35 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:35 | 1 |
| **Boron** | **0.83** | | 0.10 | | mg/L | | 11/22/16 09:03 | 11/29/16 15:15 | 2 |
| **Cadmium** | **0.0028** | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:35 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:35 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:35 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:35 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:35 | 1 |
| Molybdenum | <0.010 | | 0.010 | | mg/L | | 11/22/16 09:03 | 11/29/16 15:15 | 2 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:35 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:35 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/16 16:30 | 11/21/16 12:24 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1300** | | 10 | | mg/L | | | 11/21/16 01:15 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 11/27/16 23:28 | 5 |
| **Fluoride** | **0.46** | | 0.10 | | mg/L | | | 11/26/16 15:05 | 1 |
| **Sulfate** | **340** | | 100 | | mg/L | | | 11/30/16 07:48 | 20 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

## Client Sample ID: MW-15

**Date Collected: 11/17/16 16:40**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-7

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.016** | | 0.010 | | mg/L | | 11/22/16 09:03 | 11/23/16 20:45 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:39 | 1 |
| **Arsenic** | **0.0033** | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:39 | 1 |
| **Barium** | **0.031** | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:39 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:39 | 1 |
| **Boron** | **1.3** | | 0.10 | | mg/L | | 11/22/16 09:03 | 11/29/16 15:26 | 2 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:39 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:39 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:39 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:39 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:39 | 1 |
| **Molybdenum** | **0.018** | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:39 | 1 |
| **Selenium** | **0.0078** | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:39 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:39 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/16 16:30 | 11/21/16 12:25 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1900** | | 10 | | mg/L | | | 11/21/16 01:19 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 11/27/16 23:28 | 5 |
| **Fluoride** | **0.47** | | 0.10 | | mg/L | | | 11/26/16 15:08 | 1 |
| **Sulfate** | **560** | | 130 | | mg/L | | | 11/30/16 07:49 | 25 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

**Client Sample ID: MW-17**
**Date Collected: 11/14/16 15:55**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-8**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.022 | | 0.010 | | mg/L | | 11/22/16 09:03 | 11/23/16 20:49 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:43 | 1 |
| Arsenic | 0.19 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:43 | 1 |
| Barium | 0.073 | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:43 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:43 | 1 |
| Boron | 1.5 | | 0.10 | | mg/L | | 11/22/16 09:03 | 11/29/16 15:30 | 2 |
| Cadmium | 0.00051 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:43 | 1 |
| Calcium | 200 | | 0.20 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:43 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:43 | 1 |
| Cobalt | 0.0012 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:43 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:43 | 1 |
| Molybdenum | 0.042 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:43 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:43 | 1 |
| Thallium | 0.0021 | | 0.0020 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:43 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/16 16:30 | 11/21/16 12:26 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 2000 | | 10 | | mg/L | | | 11/21/16 01:23 | 1 |
| Chloride | 210 | | 10 | | mg/L | | | 11/28/16 00:02 | 5 |
| Fluoride | 0.56 | | 0.10 | | mg/L | | | 11/26/16 15:11 | 1 |
| Sulfate | 560 | | 250 | | mg/L | | | 11/30/16 07:50 | 50 |

**Client Sample ID: MW-18**
**Date Collected: 11/18/16 10:19**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-9**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.013** | | 0.010 | | mg/L | | 11/22/16 09:03 | 11/23/16 21:03 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:46 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:46 | 1 |
| **Barium** | **0.14** | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:46 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:46 | 1 |
| **Boron** | **0.94** | | 0.10 | | mg/L | | 11/22/16 09:03 | 11/29/16 15:34 | 2 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:46 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:46 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:46 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:46 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:46 | 1 |
| **Molybdenum** | **0.0053** | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:46 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:46 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:46 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/16 16:30 | 11/21/16 12:28 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1300** | | 10 | | mg/L | | | 11/21/16 01:27 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 11/28/16 00:03 | 5 |
| **Fluoride** | **0.58** | | 0.10 | | mg/L | | | 11/26/16 15:14 | 1 |
| **Sulfate** | **250** | | 100 | | mg/L | | | 11/30/16 07:51 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

**Client Sample ID: MW-19**
**Date Collected: 11/18/16 12:00**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-10**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/22/16 09:03 | 11/23/16 21:10 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:50 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:50 | 1 |
| **Barium** | **0.084** | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:50 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:50 | 1 |
| **Boron** | **3.8** | | 0.10 | | mg/L | | 11/22/16 09:03 | 11/29/16 15:38 | 2 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:50 | 1 |
| **Calcium** | **89** | | 0.20 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:50 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:50 | 1 |
| **Cobalt** | **0.0010** | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:50 | 1 |
| **Lead** | **0.00068** | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:50 | 1 |
| **Molybdenum** | **0.035** | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:50 | 1 |
| **Selenium** | **0.0043** | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:50 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:50 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/16 16:30 | 11/21/16 12:29 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **670** | | 10 | | mg/L | | | 11/21/16 01:31 | 1 |
| **Chloride** | **38** | | 2.0 | | mg/L | | | 11/28/16 00:35 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 11/26/16 15:17 | 1 |
| **Sulfate** | **120** | | 50 | | mg/L | | | 11/30/16 07:52 | 10 |

## Client Sample ID: Duplicate

**Date Collected: 11/18/16 00:00**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-11**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.013** | | 0.010 | | mg/L | | 11/22/16 09:03 | 11/23/16 21:13 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:54 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:54 | 1 |
| **Barium** | **0.13** | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:54 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:54 | 1 |
| **Boron** | **0.75** | | 0.10 | | mg/L | | 11/22/16 09:03 | 11/29/16 15:41 | 2 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:54 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:54 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:54 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:54 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:54 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:54 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:54 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/22/16 09:03 | 11/28/16 20:54 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/16 16:30 | 11/21/16 12:31 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1200** | | 10 | | mg/L | | | 11/21/16 01:35 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 11/28/16 00:36 | 5 |
| **Fluoride** | **0.57** | | 0.10 | | mg/L | | | 11/26/16 15:20 | 1 |
| **Sulfate** | **270** | | 100 | | mg/L | | | 11/30/16 07:55 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 361669

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-120425-2 | MW-05 | Total/NA | Water | 7470A | |
| 500-120425-3 | MW-08 | Total/NA | Water | 7470A | |
| 500-120425-4 | MW-09 | Total/NA | Water | 7470A | |
| 500-120425-5 | MW-11 | Total/NA | Water | 7470A | |
| 500-120425-6 | MW-12 | Total/NA | Water | 7470A | |
| 500-120425-7 | MW-15 | Total/NA | Water | 7470A | |
| 500-120425-8 | MW-17 | Total/NA | Water | 7470A | |
| 500-120425-9 | MW-18 | Total/NA | Water | 7470A | |
| 500-120425-10 | MW-19 | Total/NA | Water | 7470A | |
| 500-120425-11 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-361669/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-361669/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-120425-1 MS | MW-01 | Total/NA | Water | 7470A | |
| 500-120425-1 MSD | MW-01 | Total/NA | Water | 7470A | |
| 500-120425-1 DU | MW-01 | Total/NA | Water | 7470A | |

### Analysis Batch: 361865

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-1 | MW-01 | Total/NA | Water | 7470A | 361669 |
| 500-120425-2 | MW-05 | Total/NA | Water | 7470A | 361669 |
| 500-120425-3 | MW-08 | Total/NA | Water | 7470A | 361669 |
| 500-120425-4 | MW-09 | Total/NA | Water | 7470A | 361669 |
| 500-120425-5 | MW-11 | Total/NA | Water | 7470A | 361669 |
| 500-120425-6 | MW-12 | Total/NA | Water | 7470A | 361669 |
| 500-120425-7 | MW-15 | Total/NA | Water | 7470A | 361669 |
| 500-120425-8 | MW-17 | Total/NA | Water | 7470A | 361669 |
| 500-120425-9 | MW-18 | Total/NA | Water | 7470A | 361669 |
| 500-120425-10 | MW-19 | Total/NA | Water | 7470A | 361669 |
| 500-120425-11 | Duplicate | Total/NA | Water | 7470A | 361669 |
| MB 500-361669/12-A | Method Blank | Total/NA | Water | 7470A | 361669 |
| LCS 500-361669/13-A | Lab Control Sample | Total/NA | Water | 7470A | 361669 |
| 500-120425-1 MS | MW-01 | Total/NA | Water | 7470A | 361669 |
| 500-120425-1 MSD | MW-01 | Total/NA | Water | 7470A | 361669 |
| 500-120425-1 DU | MW-01 | Total/NA | Water | 7470A | 361669 |

### Prep Batch: 361946

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-120425-2 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-120425-3 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-120425-4 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-120425-5 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-120425-6 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-120425-7 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-120425-8 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-120425-9 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-120425-10 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-120425-11 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-361946/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-361946/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

## Metals (Continued)

### Prep Batch: 361946 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-4 MS | MW-09 | Total Recoverable | Water | 3005A | |
| 500-120425-4 MSD | MW-09 | Total Recoverable | Water | 3005A | |
| 500-120425-4 DU | MW-09 | Total Recoverable | Water | 3005A | |

### Analysis Batch: 362283

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-1 | MW-01 | Total Recoverable | Water | 6010C | 361946 |
| 500-120425-2 | MW-05 | Total Recoverable | Water | 6010C | 361946 |
| 500-120425-3 | MW-08 | Total Recoverable | Water | 6010C | 361946 |
| 500-120425-4 | MW-09 | Total Recoverable | Water | 6010C | 361946 |
| 500-120425-5 | MW-11 | Total Recoverable | Water | 6010C | 361946 |
| 500-120425-6 | MW-12 | Total Recoverable | Water | 6010C | 361946 |
| 500-120425-7 | MW-15 | Total Recoverable | Water | 6010C | 361946 |
| 500-120425-8 | MW-17 | Total Recoverable | Water | 6010C | 361946 |
| 500-120425-9 | MW-18 | Total Recoverable | Water | 6010C | 361946 |
| 500-120425-10 | MW-19 | Total Recoverable | Water | 6010C | 361946 |
| 500-120425-11 | Duplicate | Total Recoverable | Water | 6010C | 361946 |
| MB 500-361946/1-A | Method Blank | Total Recoverable | Water | 6010C | 361946 |
| LCS 500-361946/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 361946 |
| 500-120425-4 MS | MW-09 | Total Recoverable | Water | 6010C | 361946 |
| 500-120425-4 MSD | MW-09 | Total Recoverable | Water | 6010C | 361946 |
| 500-120425-4 DU | MW-09 | Total Recoverable | Water | 6010C | 361946 |

### Analysis Batch: 362749

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-1 | MW-01 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-2 | MW-05 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-3 | MW-08 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-4 | MW-09 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-5 | MW-11 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-6 | MW-12 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-7 | MW-15 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-8 | MW-17 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-9 | MW-18 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-10 | MW-19 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-11 | Duplicate | Total Recoverable | Water | 6020A | 361946 |
| MB 500-361946/1-A | Method Blank | Total Recoverable | Water | 6020A | 361946 |
| LCS 500-361946/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-4 MS | MW-09 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-4 MSD | MW-09 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-4 DU | MW-09 | Total Recoverable | Water | 6020A | 361946 |

### Analysis Batch: 362921

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-1 | MW-01 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-2 | MW-05 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-3 | MW-08 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-4 | MW-09 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-5 | MW-11 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-6 | MW-12 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-7 | MW-15 | Total Recoverable | Water | 6020A | 361946 |

## Metals (Continued)

### Analysis Batch: 362921 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-8 | MW-17 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-9 | MW-18 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-10 | MW-19 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-11 | Duplicate | Total Recoverable | Water | 6020A | 361946 |
| MB 500-361946/1-A | Method Blank | Total Recoverable | Water | 6020A | 361946 |
| LCS 500-361946/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-4 MS | MW-09 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-4 MSD | MW-09 | Total Recoverable | Water | 6020A | 361946 |
| 500-120425-4 DU | MW-09 | Total Recoverable | Water | 6020A | 361946 |

## General Chemistry

### Analysis Batch: 361707

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-120425-2 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-120425-3 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-120425-4 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-120425-5 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-120425-6 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-120425-7 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-120425-8 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-120425-9 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-120425-10 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-120425-11 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-361707/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-361707/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-120425-1 DU | MW-01 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 362658

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-120425-2 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-120425-3 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-120425-4 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-120425-5 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-120425-6 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-120425-7 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-362658/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-362658/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 362659

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-8 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-120425-9 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-120425-10 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-120425-11 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-362659/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-362659/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

## General Chemistry (Continued)

### Analysis Batch: 362739

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-120425-2 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-120425-3 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-120425-4 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-120425-5 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-120425-6 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-120425-7 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-120425-8 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-120425-9 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-120425-10 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-120425-11 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-362739/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-362739/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 362919

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-120425-2 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-120425-3 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-120425-4 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-120425-5 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-120425-6 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-120425-7 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-120425-8 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-120425-9 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-120425-10 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-120425-11 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-362919/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-362919/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-120425-1 MS | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-120425-1 MSD | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-120425-10 MS | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-120425-10 MSD | MW-19 | Total/NA | Water | SM 4500 SO4 E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-361946/1-A**
**Matrix: Water**
**Analysis Batch: 362283**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/22/16 09:03 | 11/23/16 19:55 | 1 |

**Lab Sample ID: LCS 500-361946/2-A**
**Matrix: Water**
**Analysis Batch: 362283**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.548 | | mg/L | | 110 | 80 - 120 |

**Lab Sample ID: 500-120425-4 MS**
**Matrix: Water**
**Analysis Batch: 362283**

**Client Sample ID: MW-09**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.548 | | mg/L | | 109 | 75 - 125 |

**Lab Sample ID: 500-120425-4 MSD**
**Matrix: Water**
**Analysis Batch: 362283**

**Client Sample ID: MW-09**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.524 | | mg/L | | 104 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-120425-4 DU**
**Matrix: Water**
**Analysis Batch: 362283**

**Client Sample ID: MW-09**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | <0.010 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-361946/1-A**
**Matrix: Water**
**Analysis Batch: 362749**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:46 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:46 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:46 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:46 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:46 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:46 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:46 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:46 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:46 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:46 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:46 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/22/16 09:03 | 11/28/16 19:46 | 1 |

**Lab Sample ID: MB 500-361946/1-A**
**Matrix: Water**
**Analysis Batch: 362921**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 11/22/16 09:03 | 11/29/16 13:31 | 1 |

**Lab Sample ID: LCS 500-361946/2-A**
**Matrix: Water**
**Analysis Batch: 362749**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.496 | | mg/L | | 99 | 80 - 120 |
| Arsenic | 0.100 | 0.103 | | mg/L | | 103 | 80 - 120 |
| Barium | 2.00 | 1.93 | | mg/L | | 97 | 80 - 120 |
| Beryllium | 0.0500 | 0.0483 | | mg/L | | 97 | 80 - 120 |
| Cadmium | 0.0500 | 0.0503 | | mg/L | | 101 | 80 - 120 |
| Calcium | 10.0 | 8.44 | | mg/L | | 84 | 80 - 120 |
| Chromium | 0.200 | 0.201 | | mg/L | | 101 | 80 - 120 |
| Cobalt | 0.500 | 0.510 | | mg/L | | 102 | 80 - 120 |
| Lead | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |
| Molybdenum | 1.00 | 0.969 | | mg/L | | 97 | 80 - 120 |
| Selenium | 0.100 | 0.100 | | mg/L | | 100 | 80 - 120 |
| Thallium | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |

**Lab Sample ID: LCS 500-361946/2-A**
**Matrix: Water**
**Analysis Batch: 362921**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 1.06 | | mg/L | | 106 | 80 - 120 |

**Lab Sample ID: 500-120425-4 MS**
**Matrix: Water**
**Analysis Batch: 362749**

**Client Sample ID: MW-09**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.514 | | mg/L | | 103 | 75 - 125 |
| Arsenic | 0.0038 | | 0.100 | 0.106 | | mg/L | | 102 | 75 - 125 |
| Barium | 0.039 | | 2.00 | 1.96 | | mg/L | | 96 | 75 - 125 |
| Beryllium | <0.0010 | | 0.0500 | 0.0508 | | mg/L | | 102 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0510 | | mg/L | | 102 | 75 - 125 |
| Calcium | 85 | | 10.0 | 90.2 | 4 | mg/L | | 53 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.198 | | mg/L | | 99 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.491 | | mg/L | | 98 | 75 - 125 |
| Lead | <0.00050 | | 0.100 | 0.102 | | mg/L | | 102 | 75 - 125 |
| Molybdenum | 0.036 | | 1.00 | 0.949 | | mg/L | | 91 | 75 - 125 |
| Selenium | 0.0025 | | 0.100 | 0.104 | | mg/L | | 102 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.102 | | mg/L | | 102 | 75 - 125 |

**Lab Sample ID: 500-120425-4 MS**
**Matrix: Water**
**Analysis Batch: 362921**

**Client Sample ID: MW-09**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 4.5 | | 1.00 | 5.14 | 4 | mg/L | | 67 | 75 - 125 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-120425-4 MSD**
**Matrix: Water**
**Analysis Batch: 362749**

**Client Sample ID: MW-09**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.492 | | mg/L | | 98 | 75 - 125 | 4 | 20 |
| Arsenic | 0.0038 | | 0.100 | 0.102 | | mg/L | | 98 | 75 - 125 | 4 | 20 |
| Barium | 0.039 | | 2.00 | 1.89 | | mg/L | | 93 | 75 - 125 | 4 | 20 |
| Beryllium | <0.0010 | | 0.0500 | 0.0504 | | mg/L | | 101 | 75 - 125 | 1 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0472 | | mg/L | | 94 | 75 - 125 | 8 | 20 |
| Calcium | 85 | | 10.0 | 85.5 | 4 | mg/L | | 6 | 75 - 125 | 5 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.189 | | mg/L | | 94 | 75 - 125 | 5 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.467 | | mg/L | | 93 | 75 - 125 | 5 | 20 |
| Lead | <0.00050 | | 0.100 | 0.0981 | | mg/L | | 98 | 75 - 125 | 4 | 20 |
| Molybdenum | 0.036 | | 1.00 | 0.909 | | mg/L | | 87 | 75 - 125 | 4 | 20 |
| Selenium | 0.0025 | | 0.100 | 0.0992 | | mg/L | | 97 | 75 - 125 | 5 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.0980 | | mg/L | | 98 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-120425-4 MSD**
**Matrix: Water**
**Analysis Batch: 362921**

**Client Sample ID: MW-09**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 4.5 | | 1.00 | 4.96 | 4 | mg/L | | 49 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-120425-4 DU**
**Matrix: Water**
**Analysis Batch: 362749**

**Client Sample ID: MW-09**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | | <0.0030 | | mg/L | | | | NC | 20 |
| Arsenic | 0.0038 | | | 0.00392 | | mg/L | | | | 4 | 20 |
| Barium | 0.039 | | | 0.0377 | | mg/L | | | | 3 | 20 |
| Beryllium | <0.0010 | | | <0.0010 | | mg/L | | | | NC | 20 |
| Cadmium | <0.00050 | | | <0.00050 | | mg/L | | | | NC | 20 |
| Calcium | 85 | | | 85.3 | | mg/L | | | | 0.5 | 20 |
| Chromium | <0.0050 | | | <0.0050 | | mg/L | | | | NC | 20 |
| Cobalt | <0.0010 | | | 0.00103 | | mg/L | | | | NC | 20 |
| Lead | <0.00050 | | | <0.00050 | | mg/L | | | | NC | 20 |
| Molybdenum | 0.036 | | | 0.0378 | | mg/L | | | | 5 | 20 |
| Selenium | 0.0025 | | | <0.0025 | | mg/L | | | | NC | 20 |
| Thallium | <0.0020 | | | <0.0020 | | mg/L | | | | NC | 20 |

**Lab Sample ID: 500-120425-4 DU**
**Matrix: Water**
**Analysis Batch: 362921**

**Client Sample ID: MW-09**
**Prep Type: Total Recoverable**
**Prep Batch: 361946**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 4.5 | | | 4.24 | | mg/L | | | | 5 | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-361669/12-A**
**Matrix: Water**
**Analysis Batch: 361865**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 361669**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/16 16:30 | 11/21/16 12:05 | 1 |

**Lab Sample ID: LCS 500-361669/13-A**
**Matrix: Water**
**Analysis Batch: 361865**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 361669**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00192 | | mg/L | | 96 | 80 - 120 |

**Lab Sample ID: 500-120425-1 MS**
**Matrix: Water**
**Analysis Batch: 361865**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 361669**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000890 | | mg/L | | 89 | 75 - 125 |

**Lab Sample ID: 500-120425-1 MSD**
**Matrix: Water**
**Analysis Batch: 361865**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 361669**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00106 | | mg/L | | 106 | 75 - 125 | 18 | 20 |

**Lab Sample ID: 500-120425-1 DU**
**Matrix: Water**
**Analysis Batch: 361865**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 361669**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-361707/1**
**Matrix: Water**
**Analysis Batch: 361707**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 11/21/16 00:24 | 1 |

**Lab Sample ID: LCS 500-361707/2**
**Matrix: Water**
**Analysis Batch: 361707**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 276 | | mg/L | | 110 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: 500-120425-1 DU**
**Matrix: Water**
**Analysis Batch: 361707**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 500 | | | 484 | | mg/L | | | | 4 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-362658/4**
**Matrix: Water**
**Analysis Batch: 362658**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 11/27/16 22:40 | 1 |

**Lab Sample ID: LCS 500-362658/5**
**Matrix: Water**
**Analysis Batch: 362658**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 50.5 | | mg/L | | 101 | 80 - 120 | | |

**Lab Sample ID: MB 500-362659/4**
**Matrix: Water**
**Analysis Batch: 362659**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 11/28/16 00:00 | 1 |

**Lab Sample ID: LCS 500-362659/5**
**Matrix: Water**
**Analysis Batch: 362659**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 49.9 | | mg/L | | 100 | 80 - 120 | | |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-362739/3**
**Matrix: Water**
**Analysis Batch: 362739**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 11/26/16 14:20 | 1 |

**Lab Sample ID: LCS 500-362739/4**
**Matrix: Water**
**Analysis Batch: 362739**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | | | 10.0 | 10.2 | | mg/L | | 102 | 80 - 120 | | |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-362919/3**
**Matrix: Water**
**Analysis Batch: 362919**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 11/30/16 07:36 | 1 |

**Lab Sample ID: LCS 500-362919/4**
**Matrix: Water**
**Analysis Batch: 362919**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 20.0 | 20.3 | | mg/L | | 102 | 80 - 120 | | |

**Lab Sample ID: 500-120425-1 MS**
**Matrix: Water**
**Analysis Batch: 362919**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 32 | | 80.0 | 115 | | mg/L | | 104 | 75 - 125 | | |

**Lab Sample ID: 500-120425-1 MSD**
**Matrix: Water**
**Analysis Batch: 362919**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 32 | | 80.0 | 120 | | mg/L | | 109 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-120425-10 MS**
**Matrix: Water**
**Analysis Batch: 362919**

**Client Sample ID: MW-19**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 120 | | 400 | 529 | | mg/L | | 101 | 75 - 125 | | |

**Lab Sample ID: 500-120425-10 MSD**
**Matrix: Water**
**Analysis Batch: 362919**

**Client Sample ID: MW-19**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 120 | | 400 | 548 | | mg/L | | 106 | 75 - 125 | 4 | 20 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

## Client Sample ID: MW-01
**Date Collected: 11/16/16 14:32**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 362283 | 11/23/16 20:02 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 362749 | 11/28/16 19:54 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 362921 | 11/29/16 14:41 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 361669 | 11/20/16 16:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 361865 | 11/21/16 12:08 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 361707 | 11/21/16 00:51 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 362658 | 11/27/16 22:58 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 362739 | 11/26/16 14:42 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 362919 | | CLB | TAL CHI |
| | | | | | (Start) | 11/30/16 07:39 | | |
| | | | | | (End) | 11/30/16 07:40 | | |

## Client Sample ID: MW-05
**Date Collected: 11/15/16 12:52**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 362283 | 11/23/16 20:05 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 362749 | 11/28/16 19:57 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 2 | 362921 | 11/29/16 14:45 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 361669 | 11/20/16 16:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 361865 | 11/21/16 12:18 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 361707 | 11/21/16 00:59 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 362658 | 11/27/16 22:58 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 362739 | 11/26/16 14:45 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 362919 | | CLB | TAL CHI |
| | | | | | (Start) | 11/30/16 07:42 | | |
| | | | | | (End) | 11/30/16 07:43 | | |

## Client Sample ID: MW-08
**Date Collected: 11/15/16 14:51**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 362283 | 11/23/16 20:15 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

## Client Sample ID: MW-08

**Date Collected: 11/15/16 14:51**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 362749 | 11/28/16 20:01 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 2 | 362921 | 11/29/16 14:49 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 361669 | 11/20/16 16:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 361865 | 11/21/16 12:19 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 361707 | 11/21/16 01:03 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 362658 | 11/27/16 23:27 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 362739 | 11/26/16 14:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 362919 | | CLB | TAL CHI |
| | | | | | (Start) | 11/30/16 07:43 | | |
| | | | | | (End) | 11/30/16 07:44 | | |

## Client Sample ID: MW-09

**Date Collected: 11/17/16 09:47**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 362283 | 11/23/16 20:22 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 362749 | 11/28/16 20:05 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 362921 | 11/29/16 14:52 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 361669 | 11/20/16 16:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 361865 | 11/21/16 12:21 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 361707 | 11/21/16 01:07 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 362658 | 11/27/16 22:59 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 362739 | 11/26/16 15:00 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 362919 | | CLB | TAL CHI |
| | | | | | (Start) | 11/30/16 07:44 | | |
| | | | | | (End) | 11/30/16 07:45 | | |

## Client Sample ID: MW-11

**Date Collected: 11/17/16 12:01**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 362283 | 11/23/16 20:38 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 362749 | 11/28/16 20:31 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 2 | 362921 | 11/29/16 15:11 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

## Client Sample ID: MW-11

**Date Collected: 11/17/16 12:01**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 361669 | 11/20/16 16:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 361865 | 11/21/16 12:22 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 361707 | 11/21/16 01:11 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 362658 | 11/27/16 23:27 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 362739 | 11/26/16 15:03 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 362919 | | CLB | TAL CHI |
| | | | | | (Start) | 11/30/16 07:45 | | |
| | | | | | (End) | 11/30/16 07:46 | | |

## Client Sample ID: MW-12

**Date Collected: 11/18/16 13:20**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 362283 | 11/23/16 20:42 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 362749 | 11/28/16 20:35 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 2 | 362921 | 11/29/16 15:15 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 361669 | 11/20/16 16:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 361865 | 11/21/16 12:24 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 361707 | 11/21/16 01:15 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 362658 | 11/27/16 23:28 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 362739 | 11/26/16 15:05 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 362919 | | CLB | TAL CHI |
| | | | | | (Start) | 11/30/16 07:48 | | |
| | | | | | (End) | 11/30/16 07:49 | | |

## Client Sample ID: MW-15

**Date Collected: 11/17/16 16:40**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 362283 | 11/23/16 20:45 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 362749 | 11/28/16 20:39 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 2 | 362921 | 11/29/16 15:26 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 361669 | 11/20/16 16:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 361865 | 11/21/16 12:25 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 361707 | 11/21/16 01:19 | CLB | TAL CHI |

## Client Sample ID: MW-15

**Lab Sample ID: 500-120425-7**

**Date Collected: 11/17/16 16:40**

**Matrix: Water**

**Date Received: 11/18/16 19:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 362658 | 11/27/16 23:28 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 362739 | 11/26/16 15:08 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 25 | 362919 | | CLB | TAL CHI |
| | | | | | (Start) | 11/30/16 07:49 | | |
| | | | | | (End) | 11/30/16 07:50 | | |

## Client Sample ID: MW-17

**Lab Sample ID: 500-120425-8**

**Date Collected: 11/14/16 15:55**

**Matrix: Water**

**Date Received: 11/18/16 19:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 362283 | 11/23/16 20:49 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 362749 | 11/28/16 20:43 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 2 | 362921 | 11/29/16 15:30 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 361669 | 11/20/16 16:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 361865 | 11/21/16 12:26 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 361707 | 11/21/16 01:23 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 362659 | 11/28/16 00:02 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 362739 | 11/26/16 15:11 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 50 | 362919 | | CLB | TAL CHI |
| | | | | | (Start) | 11/30/16 07:50 | | |
| | | | | | (End) | 11/30/16 07:51 | | |

## Client Sample ID: MW-18

**Lab Sample ID: 500-120425-9**

**Date Collected: 11/18/16 10:19**

**Matrix: Water**

**Date Received: 11/18/16 19:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 362283 | 11/23/16 21:03 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 362749 | 11/28/16 20:46 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 2 | 362921 | 11/29/16 15:34 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 361669 | 11/20/16 16:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 361865 | 11/21/16 12:28 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 361707 | 11/21/16 01:27 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 362659 | 11/28/16 00:03 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 362739 | 11/26/16 15:14 | EAT | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

## Client Sample ID: MW-18

**Date Collected: 11/18/16 10:19**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 362919 | | CLB | TAL CHI |
| | | | | | (Start) | 11/30/16 07:51 | | |
| | | | | | (End) | 11/30/16 07:52 | | |

## Client Sample ID: MW-19

**Date Collected: 11/18/16 12:00**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 362283 | 11/23/16 21:10 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 362749 | 11/28/16 20:50 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 2 | 362921 | 11/29/16 15:38 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 361669 | 11/20/16 16:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 361865 | 11/21/16 12:29 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 361707 | 11/21/16 01:31 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 362659 | 11/28/16 00:35 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 362739 | 11/26/16 15:17 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 362919 | | CLB | TAL CHI |
| | | | | | (Start) | 11/30/16 07:52 | | |
| | | | | | (End) | 11/30/16 07:53 | | |

## Client Sample ID: Duplicate

**Date Collected: 11/18/16 00:00**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-11

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 362283 | 11/23/16 21:13 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 362749 | 11/28/16 20:54 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 361946 | 11/22/16 09:03 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 2 | 362921 | 11/29/16 15:41 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 361669 | 11/20/16 16:30 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 361865 | 11/21/16 12:31 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 361707 | 11/21/16 01:35 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 362659 | 11/28/16 00:36 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 362739 | 11/26/16 15:20 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 362919 | | CLB | TAL CHI |
| | | | | | (Start) | 11/30/16 07:55 | | |
| | | | | | (End) | 11/30/16 07:56 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-1

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-17 |

TestAmerica

THE LEADER IN ENVIR

**TestAmerica Chica**
2417 Bond St.
University Park, IL 6(
708-534-5200
Fax. 708-534-5211

500-120425 COC

| **Report To:** | | **Bill To:** | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | Accounts Payable |
| Company: | KPRG and Associates, Inc | Company: | NRG Energy |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | 112 Telly St |
| | Brookfield, WI 53005 | | New Roads, LA 70760 |
| Phone: | 262-781-0475 | Phone: | 713 465-4113 |
| Email: | richardg@kprginc.com | Email | invoices@nrg.com |
| | | PO #: | 4501576732 |

**Lab Lot #** 500-120425

| | |
|---|---|
| **Package Sealed** Yes No | **Samples Sealed** Yes No |
| **Received on Ice** Yes No | **Samples Intact** Yes No N/A |
| **Temperature °C of Cooler** 0.8 4.7, 5.1 | |
| **Within Hold Time** Yes No | **Preserv. Indicated** Yes No N/A |
| **pH Check OK** Yes No | **Res $CL_2$ Check OK** Yes No N/A |
| **Sample Labels and COC Agree** Yes No COC not present | |

| | | | |
|---|---|---|---|
| **Sampler Name:** Ian John Howieson | **Signature:** | **# / Cont.** | |
| | | **Volume** | |
| **Project Name:** Quarterly Powerton CCR | **TestAmerica Project Number:** 50011612 | **Preserv.** | |
| **Project Location:** Pekin, IL | **TAT** 15 Days | | |
| **Lab PM:** Eric Lang | | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C-TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 11-16-16 | 14:32 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-05 | 11-15-16 | 12:52 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-08 | 11-15-16 | 14:51 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-09 | 11-17-16 | 09:47 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-11 | 11-17-16 | 12:01 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-12 | 11-18-16 | 13:20 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-15 | 11-17-16 | 16:40 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-17 | 11-14-16 | 15:55 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-18 | 11-18-16 | 10:19 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-19 | 11-18-16 | 12:00 | W | 5 | X | X | X | X | X | X | |
| 11 | | Duplicates | 11-18-16 | — | W | 5 | X | X | X | X | X | X | |

| | COMPANY: | DATE: | TIME: | | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| RELINQUISHED BY: ISH | KPRG | 11-18-16 | 19:50 | RECEIVED BY: | TestAmerica | 11/18/16 | 19:50 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received ____/____/____

Courier:

Hand Delivered ☐

Bill of Lading:

__1__of__1__

STL-8208 (0600)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-120425-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*1/6/2017 3:22:18 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

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*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-120425-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-120425-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 11/18/2016 7:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.8º C, 4.7º C and 5.1º C.

**RAD**
Method(s) 904.0: Radium-228 Prep Batch 160-281746:
The radium-228 detection goal was not met for the following sample due to the reduced sample volume attributed to the presence of matrix interferences (see prep NCM 101714): MW-17 (500-120425-8). Analytical results are reported with the detection limit achieved.

Method(s) PrecSep_0: Radium-228 Prep Batch 160-281746:
The following samples were run at a reduced aliquot due to cloudiness in the samples: MW-01 (500-120425-1).

Method(s) PrecSep_0: Radium-228 Prep Batch 160-281746:
The following samples were run at a reduced aliquot due to sediment in the samples: MW-12 (500-120425-6) and MW-17 (500-120425-8).

Method(s) PrecSep-21: Radium-226 Prep Batch 160-281743:
The following samples were run at a reduced aliquot due to cloudiness in the samples: MW-01 (500-120425-1).

Method(s) PrecSep-21: Radium-226 Prep Batch 160-281743:
The following samples were run at a reduced aliquot due to sediment in the samples: MW-12 (500-120425-6) and MW-17 (500-120425-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-120425-1 | MW-01 | Water | 11/16/16 14:32 | 11/18/16 19:50 |
| 500-120425-2 | MW-05 | Water | 11/15/16 12:52 | 11/18/16 19:50 |
| 500-120425-3 | MW-08 | Water | 11/15/16 14:51 | 11/18/16 19:50 |
| 500-120425-4 | MW-09 | Water | 11/17/16 09:47 | 11/18/16 19:50 |
| 500-120425-5 | MW-11 | Water | 11/17/16 12:01 | 11/18/16 19:50 |
| 500-120425-6 | MW-12 | Water | 11/18/16 13:20 | 11/18/16 19:50 |
| 500-120425-7 | MW-15 | Water | 11/17/16 16:40 | 11/18/16 19:50 |
| 500-120425-8 | MW-17 | Water | 11/14/16 15:55 | 11/18/16 19:50 |
| 500-120425-9 | MW-18 | Water | 11/18/16 10:19 | 11/18/16 19:50 |
| 500-120425-10 | MW-19 | Water | 11/18/16 12:00 | 11/18/16 19:50 |
| 500-120425-11 | Duplicate | Water | 11/18/16 00:00 | 11/18/16 19:50 |

## Client Sample ID: MW-01

**Date Collected: 11/16/16 14:32**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.255 | U | 0.282 | 0.283 | 1.00 | 0.448 | pCi/L | 12/01/16 07:33 | 01/04/17 21:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.8* | | *40 - 110* | *12/01/16 07:33* | *01/04/17 21:47* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.0520 | U | 0.341 | 0.341 | 1.00 | 0.618 | pCi/L | 12/01/16 08:03 | 01/04/17 14:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.8* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |
| *Y Carrier* | *90.8* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.203 | U | 0.442 | 0.443 | 5.00 | 0.618 | pCi/L | | 01/06/17 14:16 | 1 |

## Client Sample ID: MW-05

**Date Collected: 11/15/16 12:52**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0686 | U | 0.204 | 0.204 | 1.00 | 0.381 | pCi/L | 12/01/16 07:33 | 01/04/17 21:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.5* | | *40 - 110* | *12/01/16 07:33* | *01/04/17 21:47* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.381 | U | 0.273 | 0.275 | 1.00 | 0.425 | pCi/L | 12/01/16 08:03 | 01/04/17 14:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.5* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |
| *Y Carrier* | *92.0* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.449** | | 0.341 | 0.342 | 5.00 | 0.425 | pCi/L | | 01/06/17 14:16 | 1 |

## Client Sample ID: MW-08

**Date Collected: 11/15/16 14:51**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.207 | U | 0.241 | 0.242 | 1.00 | 0.391 | pCi/L | 12/01/16 07:33 | 01/04/17 21:44 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.4* | | *40 - 110* | *12/01/16 07:33* | *01/04/17 21:44* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.376 | U | 0.270 | 0.272 | 1.00 | 0.419 | pCi/L | 12/01/16 08:03 | 01/04/17 14:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.4* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |
| *Y Carrier* | *93.1* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.583** | | 0.362 | 0.364 | 5.00 | 0.419 | pCi/L | | 01/06/17 14:16 | 1 |

## Client Sample ID: MW-09

**Date Collected: 11/17/16 09:47**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.259 | U | 0.321 | 0.322 | 1.00 | 0.531 | pCi/L | 12/01/16 07:33 | 01/04/17 21:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *60.1* | | *40 - 110* | *12/01/16 07:33* | *01/04/17 21:53* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.387 | U | 0.354 | 0.356 | 1.00 | 0.569 | pCi/L | 12/01/16 08:03 | 01/04/17 14:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *60.1* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |
| *Y Carrier* | *90.5* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.646** | | 0.478 | 0.480 | 5.00 | 0.569 | pCi/L | | 01/06/17 14:16 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-2

**Client Sample ID: MW-11**
**Date Collected: 11/17/16 12:01**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-5**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.367** | | 0.258 | 0.260 | 1.00 | 0.354 | pCi/L | 12/01/16 07:33 | 01/04/17 21:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.3* | | *40 - 110* | *12/01/16 07:33* | *01/04/17 21:53* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.367 | U | 0.256 | 0.258 | 1.00 | 0.399 | pCi/L | 12/01/16 08:03 | 01/04/17 14:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.3* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |
| *Y Carrier* | *90.1* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.734** | | 0.364 | 0.367 | 5.00 | 0.399 | pCi/L | | 01/06/17 14:16 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-2

**Client Sample ID: MW-12**
**Date Collected: 11/18/16 13:20**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-6**
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.05 | | 0.619 | 0.627 | 1.00 | 0.805 | pCi/L | 12/01/16 07:33 | 01/04/17 21:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.8* | | *40 - 110* | *12/01/16 07:33* | *01/04/17 21:53* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.806 | | 0.515 | 0.521 | 1.00 | 0.784 | pCi/L | 12/01/16 08:03 | 01/04/17 14:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.8* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |
| *Y Carrier* | *90.8* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.86 | | 0.806 | 0.815 | 5.00 | 0.805 | pCi/L | | 01/06/17 14:16 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-2

**Client Sample ID: MW-15**
**Date Collected: 11/17/16 16:40**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-7**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0982 | U | 0.310 | 0.310 | 1.00 | 0.570 | pCi/L | 12/01/16 07:33 | 01/04/17 21:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *66.4* | | *40 - 110* | *12/01/16 07:33* | *01/04/17 21:53* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.146 | U | 0.295 | 0.296 | 1.00 | 0.506 | pCi/L | 12/01/16 08:03 | 01/04/17 14:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *66.4* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |
| *Y Carrier* | *89.7* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.244 | U | 0.428 | 0.428 | 5.00 | 0.570 | pCi/L | | 01/06/17 14:16 | 1 |

## Client Sample ID: MW-17

**Date Collected: 11/14/16 15:55**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 2.05 | G | 1.30 | 1.32 | 1.00 | 1.80 | pCi/L | 12/01/16 07:33 | 01/04/17 21:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.2* | | *40 - 110* | *12/01/16 07:33* | *01/04/17 21:53* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.72 | G | 1.02 | 1.03 | 1.00 | 1.54 | pCi/L | 12/01/16 08:03 | 01/04/17 14:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.2* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |
| *Y Carrier* | *93.1* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 3.76 | | 1.66 | 1.67 | 5.00 | 1.80 | pCi/L | | 01/06/17 14:16 | 1 |

## Client Sample ID: MW-18

**Date Collected: 11/18/16 10:19**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.270 | U | 0.274 | 0.275 | 1.00 | 0.432 | pCi/L | 12/01/16 07:33 | 01/04/17 23:39 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *71.5* | | *40 - 110* | *12/01/16 07:33* | *01/04/17 23:39* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.218 | U | 0.272 | 0.273 | 1.00 | 0.451 | pCi/L | 12/01/16 08:03 | 01/04/17 14:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *71.5* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |
| *Y Carrier* | *94.2* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:20* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.488** | | 0.386 | 0.388 | 5.00 | 0.451 | pCi/L | | 01/06/17 14:16 | 1 |

## Client Sample ID: MW-19

**Date Collected: 11/18/16 12:00**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-10

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0867 | U | 0.191 | 0.191 | 1.00 | 0.433 | pCi/L | 12/01/16 07:33 | 01/04/17 23:39 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.2* | | *40 - 110* | *12/01/16 07:33* | *01/04/17 23:39* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.509** | | 0.311 | 0.315 | 1.00 | 0.476 | pCi/L | 12/01/16 08:03 | 01/04/17 14:23 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.2* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:23* | *1* |
| *Y Carrier* | *92.0* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:23* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.423 | U | 0.365 | 0.368 | 5.00 | 0.476 | pCi/L | | 01/06/17 14:16 | 1 |

## Client Sample ID: Duplicate

**Date Collected: 11/18/16 00:00**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-11

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.434** | | 0.305 | 0.308 | 1.00 | 0.419 | pCi/L | 12/01/16 07:33 | 01/04/17 23:39 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *67.0* | | *40 - 110* | *12/01/16 07:33* | *01/04/17 23:39* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.347 | U | 0.330 | 0.332 | 1.00 | 0.534 | pCi/L | 12/01/16 08:03 | 01/04/17 14:23 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *67.0* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:23* | *1* |
| *Y Carrier* | *90.8* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:23* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.781** | | 0.450 | 0.453 | 5.00 | 0.534 | pCi/L | | 01/06/17 14:16 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |
| G | The Sample MDC is greater than the requested RL. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-2

## Rad

### Prep Batch: 281743

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-120425-2 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-120425-3 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-120425-4 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-120425-5 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-120425-6 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-120425-7 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-120425-8 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-120425-9 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-120425-10 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-120425-11 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-281743/1-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-281743/2-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-120425-3 DU | MW-08 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 281746

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-120425-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-120425-2 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-120425-3 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-120425-4 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-120425-5 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-120425-6 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-120425-7 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-120425-8 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-120425-9 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-120425-10 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-120425-11 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-281746/1-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-281746/2-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-120425-3 DU | MW-08 | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-281743/1-A**
**Matrix: Water**
**Analysis Batch: 286428**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 281743**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.04894 | U | 0.260 | 0.260 | 1.00 | 0.493 | pCi/L | 12/01/16 07:33 | 01/04/17 21:46 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *74.6* | | *40 - 110* | *12/01/16 07:33* | *01/04/17 21:46* | *1* |

**Lab Sample ID: LCS 160-281743/2-A**
**Matrix: Water**
**Analysis Batch: 286428**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 281743**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.1 | 13.32 | | 1.68 | 1.00 | 0.434 | pCi/L | 120 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *85.2* | | *40 - 110* |

**Lab Sample ID: 500-120425-3 DU**
**Matrix: Water**
**Analysis Batch: 286045**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**
**Prep Batch: 281743**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.207 | U | | -0.06635 | U | 0.178 | 1.00 | 0.403 | pCi/L | | | 0.65 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *82.3* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-281746/1-A**
**Matrix: Water**
**Analysis Batch: 286427**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 281746**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.1783 | U | 0.275 | 0.275 | 1.00 | 0.462 | pCi/L | 12/01/16 08:03 | 01/04/17 14:18 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *74.6* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:18* | *1* |
| *Y Carrier* | *95.0* | | *40 - 110* | *12/01/16 08:03* | *01/04/17 14:18* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-281746/2-A**
**Matrix: Water**
**Analysis Batch: 286427**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 281746**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 14.0 | 17.32 | | 1.84 | 1.00 | 0.398 | pCi/L | 123 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *85.2* | | *40 - 110* |
| *Y Carrier* | *92.3* | | *40 - 110* |

**Lab Sample ID: 500-120425-3 DU**
**Matrix: Water**
**Analysis Batch: 286427**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**
**Prep Batch: 281746**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.376 | U | | 0.1255 | U | 0.231 | 1.00 | 0.394 | pCi/L | | | 0.50 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *82.3* | | *40 - 110* |
| *Y Carrier* | *92.0* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-2

## Client Sample ID: MW-01
**Date Collected: 11/16/16 14:32**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 281743 | 12/01/16 07:33 | AS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 286428 | 01/04/17 21:47 | ALD | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 281746 | 12/01/16 08:03 | AS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 286427 | 01/04/17 14:20 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 286840 | 01/06/17 14:16 | RTM | TAL SL |

## Client Sample ID: MW-05
**Date Collected: 11/15/16 12:52**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 281743 | 12/01/16 07:33 | AS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 286428 | 01/04/17 21:47 | ALD | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 281746 | 12/01/16 08:03 | AS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 286427 | 01/04/17 14:20 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 286840 | 01/06/17 14:16 | RTM | TAL SL |

## Client Sample ID: MW-08
**Date Collected: 11/15/16 14:51**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 281743 | 12/01/16 07:33 | AS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 286427 | 01/04/17 21:44 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 281746 | 12/01/16 08:03 | AS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 286427 | 01/04/17 14:20 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 286840 | 01/06/17 14:16 | RTM | TAL SL |

## Client Sample ID: MW-09
**Date Collected: 11/17/16 09:47**
**Date Received: 11/18/16 19:50**

## Lab Sample ID: 500-120425-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 281743 | 12/01/16 07:33 | AS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 286045 | 01/04/17 21:53 | ALD | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 281746 | 12/01/16 08:03 | AS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 286427 | 01/04/17 14:20 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 286840 | 01/06/17 14:16 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-2

## Client Sample ID: MW-11

**Date Collected: 11/17/16 12:01**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-5**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 281743 | 12/01/16 07:33 | AS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 286045 | 01/04/17 21:53 | ALD | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 281746 | 12/01/16 08:03 | AS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 286427 | 01/04/17 14:20 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 286840 | 01/06/17 14:16 | RTM | TAL SL |

## Client Sample ID: MW-12

**Date Collected: 11/18/16 13:20**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-6**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 281743 | 12/01/16 07:33 | AS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 286045 | 01/04/17 21:53 | ALD | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 281746 | 12/01/16 08:03 | AS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 286427 | 01/04/17 14:20 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 286840 | 01/06/17 14:16 | RTM | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 11/17/16 16:40**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-7**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 281743 | 12/01/16 07:33 | AS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 286045 | 01/04/17 21:53 | ALD | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 281746 | 12/01/16 08:03 | AS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 286427 | 01/04/17 14:20 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 286840 | 01/06/17 14:16 | RTM | TAL SL |

## Client Sample ID: MW-17

**Date Collected: 11/14/16 15:55**
**Date Received: 11/18/16 19:50**

**Lab Sample ID: 500-120425-8**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 281743 | 12/01/16 07:33 | AS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 286045 | 01/04/17 21:53 | ALD | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 281746 | 12/01/16 08:03 | AS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 286427 | 01/04/17 14:20 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 286840 | 01/06/17 14:16 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-2

## Client Sample ID: MW-18

**Lab Sample ID: 500-120425-9**

**Date Collected: 11/18/16 10:19**

**Matrix: Water**

**Date Received: 11/18/16 19:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 281743 | 12/01/16 07:33 | AS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 286045 | 01/04/17 23:39 | ALD | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 281746 | 12/01/16 08:03 | AS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 286427 | 01/04/17 14:20 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 286840 | 01/06/17 14:16 | RTM | TAL SL |

## Client Sample ID: MW-19

**Lab Sample ID: 500-120425-10**

**Date Collected: 11/18/16 12:00**

**Matrix: Water**

**Date Received: 11/18/16 19:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 281743 | 12/01/16 07:33 | AS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 286045 | 01/04/17 23:39 | ALD | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 281746 | 12/01/16 08:03 | AS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 286428 | 01/04/17 14:23 | ALD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 286840 | 01/06/17 14:16 | RTM | TAL SL |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-120425-11**

**Date Collected: 11/18/16 00:00**

**Matrix: Water**

**Date Received: 11/18/16 19:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 281743 | 12/01/16 07:33 | AS | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 286045 | 01/04/17 23:39 | ALD | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 281746 | 12/01/16 08:03 | AS | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 286428 | 01/04/17 14:23 | ALD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 286840 | 01/06/17 14:16 | RTM | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-2

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-17 |

## Laboratory: TestAmerica St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200023 | 11-30-17 |

The following analytes are included in this report, but certification is not offered by the governing authority:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

TestAmerica

THE LEADER IN ENVIR

**TestAmerica Chica**
2417 Bond St.
University Park, IL 6(
708-534-5200
Fax. 708-534-5211

500-120425 COC

| **Report To:** | | **Bill To:** | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | Accounts Payable |
| Company: | KPRG and Associates, Inc | Company: | NRG Energy |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | 112 Telly St |
| | Brookfield, WI 53005 | | New Roads, LA 70760 |
| Phone: | 262-781-0475 | Phone: | 713 465-4113 |
| Email: | richardg@kprginc.com | Email | invoices@nrg.com |
| | | PO #: | 4501576732 |

**Lab Lot #** 500-120425

| | |
|---|---|
| **Package Sealed** Yes No | **Samples Sealed** Yes No |
| **Received on Ice** Yes No | **Samples Intact** Yes No N/A |
| **Temperature °C of Cooler** 0.8 4.7, 5.1 | |
| **Within Hold Time** Yes No | **Preserv. Indicated** Yes No N/A |
| **pH Check OK** Yes No | **Res $CL_2$ Check OK** Yes No N/A |
| **Sample Labels and COC Agree** Yes No COC not present | |

| | | | |
|---|---|---|---|
| **Sampler Name:** Ian John Howieson | **Signature:** | **# / Cont.** | |
| | | **Volume** | |
| **Project Name:** Quarterly Powerton CCR | **TestAmerica Project Number:** 50011612 | **Preserv.** | |
| **Project Location:** Pekin, IL | **TAT** 15 Days | | |
| **Lab PM:** Eric Lang | | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C-TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 11-16-16 | 14:32 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-05 | 11-15-16 | 12:52 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-08 | 11-15-16 | 14:51 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-09 | 11-17-16 | 09:47 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-11 | 11-17-16 | 12:01 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-12 | 11-18-16 | 13:20 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-15 | 11-17-16 | 16:40 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-17 | 11-14-16 | 15:55 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-18 | 11-18-16 | 10:19 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-19 | 11-18-16 | 12:00 | W | 5 | X | X | X | X | X | X | |
| 11 | | Duplicates | 11-18-16 | — | W | 5 | X | X | X | X | X | X | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| RELINQUISHED BY: ISH | COMPANY: KPRG | DATE: 11-18-16 | TIME: 19:50 | RECEIVED BY: | COMPANY: TestAmerica | DATE: 11/18/16 | TIME: 19:50 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

_____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received ____/____/____

Courier:

Hand Delivered ☐

Bill of Lading:

__1__of__1__

STL-8208 (0600)

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

500-120425 Chain of Custody

estAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| | | | | |
|---|---|---|---|---|
| **Client Information (Sub Contract Lab)** | Sampler: | Lab PM: Lang, Eric A. | | No: -80620.1 |
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-120425-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 12/20/2016 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Ra226Ra228_GFPC | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-120425-1) | 11/16/16 | 14:32 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-05 (500-120425-2) | 11/15/16 | 12:52 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-08 (500-120425-3) | 11/15/16 | 14:51 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-09 (500-120425-4) | 11/17/16 | 09:47 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-11 (500-120425-5) | 11/17/16 | 12:01 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-12 (500-120425-6) | 11/18/16 | 13:20 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-15 (500-120425-7) | 11/17/16 | 16:40 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-17 (500-120425-8) | 11/14/16 | 15:55 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-18 (500-120425-9) | 11/18/16 | 10:19 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| | |
|---|---|
| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| | | | |
|---|---|---|---|
| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |

| | | | | | | |
|---|---|---|---|---|---|---|
| Relinquished by: | Date/Time: 11/21/16 @ 1600 | Company TA | Received by: | Date/Time: 11-22-16/1000 | Company TA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| | | |
|---|---|---|
| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |

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1/9/201

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-80620.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-120425-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 12/20/2016 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Ra226Ra228_GFPC | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-19 (500-120425-10) | 11/18/16 | 12:00 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| Duplicate (500-120425-11) | 11/18/16 | Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 11/21/16 @ 1600 | TA | [signature] | 11.22.16 1000 | TA |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-120425-2

**Login Number: 120425**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.8,4.7,5.1 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-120425-2

**Login Number: 120425**
**List Number: 2**
**Creator: Clarke, Jill C**

**List Source: TestAmerica St. Louis**
**List Creation: 11/22/16 03:55 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 18.4, 18.4, 18.4 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-120425-2

**Login Number: 120425**
**List Number: 3**
**Creator: Clarke, Jill C**

**List Source: TestAmerica St. Louis**
**List Creation: 11/22/16 04:06 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 18.4, 18.4, 18.4 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-120425-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) |
| 500-120425-1 | MW-01 | 79.8 |
| 500-120425-2 | MW-05 | 79.5 |
| 500-120425-3 | MW-08 | 76.4 |
| 500-120425-3 DU | MW-08 | 82.3 |
| 500-120425-4 | MW-09 | 60.1 |
| 500-120425-5 | MW-11 | 88.3 |
| 500-120425-6 | MW-12 | 79.8 |
| 500-120425-7 | MW-15 | 66.4 |
| 500-120425-8 | MW-17 | 83.2 |
| 500-120425-9 | MW-18 | 71.5 |
| 500-120425-10 | MW-19 | 75.2 |
| 500-120425-11 | Duplicate | 67.0 |
| LCS 160-281743/2-A | Lab Control Sample | 85.2 |
| MB 160-281743/1-A | Method Blank | 74.6 |

**Tracer/Carrier Legend**

Ba = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) | Y (40-110) |
| 500-120425-1 | MW-01 | 79.8 | 90.8 |
| 500-120425-2 | MW-05 | 79.5 | 92.0 |
| 500-120425-3 | MW-08 | 76.4 | 93.1 |
| 500-120425-3 DU | MW-08 | 82.3 | 92.0 |
| 500-120425-4 | MW-09 | 60.1 | 90.5 |
| 500-120425-5 | MW-11 | 88.3 | 90.1 |
| 500-120425-6 | MW-12 | 79.8 | 90.8 |
| 500-120425-7 | MW-15 | 66.4 | 89.7 |
| 500-120425-8 | MW-17 | 83.2 | 93.1 |
| 500-120425-9 | MW-18 | 71.5 | 94.2 |
| 500-120425-10 | MW-19 | 75.2 | 92.0 |
| 500-120425-11 | Duplicate | 67.0 | 90.8 |
| LCS 160-281746/2-A | Lab Control Sample | 85.2 | 92.3 |
| MB 160-281746/1-A | Method Blank | 74.6 | 95.0 |

**Tracer/Carrier Legend**

Ba = Ba Carrier
Y = Y Carrier

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-120425-1

**Login Number: 120425**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.8,4.7,5.1 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-124079-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*3/8/2017 4:43:48 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-124079-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-124079-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 2/17/2017 7:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.6º C, 2.9º C and 3.1º C.

**Metals**
Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-373234. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-124079-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0041 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.056 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.18 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0045 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0076 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0056 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 550 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 55 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 60 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-124079-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.062 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.79 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00091 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 760 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 100 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.25 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-124079-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0030 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.086 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.5 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 150 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00087 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.026 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 460 | | 50 | | mg/L | 25 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.28 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 230 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

## Client Sample ID: MW-09 — Lab Sample ID: 500-124079-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0032 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.043 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.1 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 84 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.035 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0062 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 620 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 38 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 160 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-124079-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.040 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.30 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.6 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0030 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00094 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.013 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 910 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 110 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.40 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 260 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-124079-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.010 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.29 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.26 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.48 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.0057 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-124079-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0042 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.015 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 190 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.37 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 630 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-124079-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.025 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.020 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.056 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.9 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 200 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.027 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0032 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1700 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 190 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.43 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 670 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-124079-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.049 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.5 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 90 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.037 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0065 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 630 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 37 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 160 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-124079-9

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

## Client Sample ID: MW-17 (Continued) — Lab Sample ID: 500-124079-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.019 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.35 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.16 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.6 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Cadmium | 0.00093 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 190 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00079 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.088 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Thallium | 0.0025 | | 0.0020 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1600 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 230 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.56 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 770 | | 200 | | mg/L | 40 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-124079-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.14 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.56 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0058 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 190 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.50 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 340 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-124079-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.088 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.7 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 88 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00061 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

## Client Sample ID: MW-19 (Continued)

## Lab Sample ID: 500-124079-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 0.046 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0063 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 630 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 37 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 180 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-124079-1 | MW-01 | Water | 02/14/17 14:55 | 02/17/17 19:50 |
| 500-124079-2 | MW-05 | Water | 02/14/17 13:20 | 02/17/17 19:50 |
| 500-124079-3 | MW-08 | Water | 02/16/17 15:56 | 02/17/17 19:50 |
| 500-124079-4 | MW-09 | Water | 02/15/17 11:28 | 02/17/17 19:50 |
| 500-124079-5 | MW-11 | Water | 02/16/17 10:18 | 02/17/17 19:50 |
| 500-124079-6 | MW-12 | Water | 02/16/17 11:55 | 02/17/17 19:50 |
| 500-124079-7 | MW-15 | Water | 02/17/17 13:08 | 02/17/17 19:50 |
| 500-124079-8 | Duplicate | Water | 02/15/17 00:00 | 02/17/17 19:50 |
| 500-124079-9 | MW-17 | Water | 02/13/17 15:47 | 02/17/17 19:50 |
| 500-124079-10 | MW-18 | Water | 02/15/17 15:26 | 02/17/17 19:50 |
| 500-124079-11 | MW-19 | Water | 02/15/17 13:26 | 02/17/17 19:50 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

**Client Sample ID: MW-01**
**Date Collected: 02/14/17 14:55**
**Date Received: 02/17/17 19:50**

**Lab Sample ID: 500-124079-1**
**Matrix: Water**

## Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/20/17 08:26 | 02/21/17 21:03 | 1 |

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:47 | 1 |
| **Arsenic** | **0.0041** | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:47 | 1 |
| **Barium** | **0.056** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:47 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:47 | 1 |
| **Boron** | **0.18** | | 0.050 | | mg/L | | 02/20/17 08:26 | 02/24/17 13:13 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:47 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:47 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:47 | 1 |
| **Cobalt** | **0.0045** | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:47 | 1 |
| **Lead** | **0.0076** | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:47 | 1 |
| **Molybdenum** | **0.0056** | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:47 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:47 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:47 | 1 |

## Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/20/17 12:00 | 02/21/17 11:21 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **550** | | 10 | | mg/L | | | 02/20/17 04:02 | 1 |
| **Chloride** | **55** | | 2.0 | | mg/L | | | 02/19/17 20:52 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 02/22/17 14:23 | 1 |
| **Sulfate** | **60** | | 10 | | mg/L | | | 03/02/17 07:18 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

**Client Sample ID: MW-05**
**Date Collected: 02/14/17 13:20**
**Date Received: 02/17/17 19:50**

**Lab Sample ID: 500-124079-2**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/20/17 08:26 | 02/21/17 21:07 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:51 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:51 | 1 |
| **Barium** | **0.062** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:51 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:51 | 1 |
| **Boron** | **0.79** | | 0.050 | | mg/L | | 02/20/17 08:26 | 02/24/17 13:17 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:51 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:51 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:51 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:51 | 1 |
| **Lead** | **0.00091** | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:51 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:51 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:51 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:51 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/20/17 12:00 | 02/21/17 11:30 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **760** | | 10 | | mg/L | | | 02/20/17 04:07 | 1 |
| **Chloride** | **100** | | 10 | | mg/L | | | 02/19/17 20:53 | 5 |
| **Fluoride** | **0.25** | | 0.10 | | mg/L | | | 02/22/17 14:25 | 1 |
| **Sulfate** | **170** | | 50 | | mg/L | | | 03/02/17 07:19 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

**Client Sample ID: MW-08**
**Date Collected: 02/16/17 15:56**
**Date Received: 02/17/17 19:50**

**Lab Sample ID: 500-124079-3**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/20/17 08:26 | 02/21/17 21:10 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:55 | 1 |
| **Arsenic** | **0.0030** | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:55 | 1 |
| **Barium** | **0.086** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:55 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:55 | 1 |
| **Boron** | **1.5** | | 0.25 | | mg/L | | 02/20/17 08:26 | 02/24/17 13:21 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:55 | 1 |
| **Calcium** | **150** | | 0.20 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:55 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:55 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:55 | 1 |
| **Lead** | **0.00087** | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:55 | 1 |
| **Molybdenum** | **0.026** | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:55 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:55 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:55 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/20/17 12:00 | 02/21/17 11:32 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 02/20/17 04:10 | 1 |
| **Chloride** | **460** | | 50 | | mg/L | | | 02/19/17 21:29 | 25 |
| **Fluoride** | **0.28** | | 0.10 | | mg/L | | | 03/04/17 19:07 | 1 |
| **Sulfate** | **230** | | 50 | | mg/L | | | 03/02/17 07:20 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

**Client Sample ID: MW-09**
**Date Collected: 02/15/17 11:28**
**Date Received: 02/17/17 19:50**

**Lab Sample ID: 500-124079-4**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/20/17 08:26 | 02/21/17 21:15 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:58 | 1 |
| **Arsenic** | **0.0032** | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:58 | 1 |
| **Barium** | **0.043** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:58 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:58 | 1 |
| **Boron** | **4.1** | | 0.50 | | mg/L | | 02/20/17 08:26 | 02/24/17 13:24 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:58 | 1 |
| **Calcium** | **84** | | 0.20 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:58 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:58 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:58 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:58 | 1 |
| **Molybdenum** | **0.035** | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:58 | 1 |
| **Selenium** | **0.0062** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:58 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:58 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/20/17 12:00 | 02/21/17 11:33 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **620** | | 10 | | mg/L | | | 02/20/17 04:12 | 1 |
| **Chloride** | **38** | | 2.0 | | mg/L | | | 02/19/17 20:57 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 03/04/17 19:12 | 1 |
| **Sulfate** | **160** | | 50 | | mg/L | | | 03/02/17 07:21 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

**Client Sample ID: MW-11**
**Date Collected: 02/16/17 10:18**
**Date Received: 02/17/17 19:50**

**Lab Sample ID: 500-124079-5**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/20/17 08:26 | 02/21/17 21:18 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:02 | 1 |
| **Arsenic** | **0.040** | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:02 | 1 |
| **Barium** | **0.30** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:02 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:02 | 1 |
| **Boron** | **1.6** | | 0.25 | | mg/L | | 02/20/17 08:26 | 02/24/17 13:28 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:02 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:02 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:02 | 1 |
| **Cobalt** | **0.0030** | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:02 | 1 |
| **Lead** | **0.00094** | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:02 | 1 |
| **Molybdenum** | **0.013** | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:02 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:02 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:02 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/20/17 12:00 | 02/21/17 11:35 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **910** | | 10 | | mg/L | | | 02/20/17 04:15 | 1 |
| **Chloride** | **110** | | 10 | | mg/L | | | 02/19/17 21:29 | 5 |
| **Fluoride** | **0.40** | | 0.10 | | mg/L | | | 03/04/17 19:16 | 1 |
| **Sulfate** | **260** | | 50 | | mg/L | | | 03/02/17 07:22 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

**Client Sample ID: MW-12**
**Date Collected: 02/16/17 11:55**
**Date Received: 02/17/17 19:50**

**Lab Sample ID: 500-124079-6**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.010** | | 0.010 | | mg/L | | 02/20/17 08:26 | 02/21/17 21:22 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:06 | 1 |
| **Arsenic** | **0.29** | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:06 | 1 |
| **Barium** | **0.26** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:06 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:06 | 1 |
| **Boron** | **0.48** | | 0.050 | | mg/L | | 02/20/17 08:26 | 02/24/17 13:32 | 1 |
| **Cadmium** | **0.0057** | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:06 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:06 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:06 | 1 |
| **Cobalt** | **0.0013** | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:06 | 1 |
| **Lead** | **0.0042** | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:06 | 1 |
| **Molybdenum** | **0.015** | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:06 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:06 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:06 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/20/17 12:00 | 02/21/17 11:36 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1300** | | 10 | | mg/L | | | 02/20/17 04:17 | 1 |
| **Chloride** | **190** | | 10 | | mg/L | | | 02/19/17 20:59 | 5 |
| **Fluoride** | **0.37** | | 0.10 | | mg/L | | | 03/04/17 19:19 | 1 |
| **Sulfate** | **630** | | 100 | | mg/L | | | 03/02/17 07:23 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

**Client Sample ID: MW-15**
**Date Collected: 02/17/17 13:08**
**Date Received: 02/17/17 19:50**

**Lab Sample ID: 500-124079-7**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.025** | | 0.010 | | mg/L | | 02/20/17 08:26 | 02/21/17 21:26 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:10 | 1 |
| **Arsenic** | **0.020** | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:10 | 1 |
| **Barium** | **0.056** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:10 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:10 | 1 |
| **Boron** | **1.9** | | 0.25 | | mg/L | | 02/20/17 08:26 | 02/24/17 13:36 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:10 | 1 |
| **Calcium** | **200** | | 0.20 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:10 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:10 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:10 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:10 | 1 |
| **Molybdenum** | **0.027** | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:10 | 1 |
| **Selenium** | **0.0032** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:10 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:10 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/20/17 12:00 | 02/21/17 11:38 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1700** | | 10 | | mg/L | | | 02/20/17 04:20 | 1 |
| **Chloride** | **190** | | 10 | | mg/L | | | 02/19/17 20:59 | 5 |
| **Fluoride** | **0.43** | | 0.10 | | mg/L | | | 03/04/17 19:22 | 1 |
| **Sulfate** | **670** | | 100 | | mg/L | | | 03/02/17 07:24 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

**Client Sample ID: Duplicate**
**Date Collected: 02/15/17 00:00**
**Date Received: 02/17/17 19:50**

**Lab Sample ID: 500-124079-8**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/20/17 08:26 | 02/21/17 21:30 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:13 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:13 | 1 |
| **Barium** | **0.049** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:13 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:13 | 1 |
| **Boron** | **4.5** | | 0.50 | | mg/L | | 02/20/17 08:26 | 02/24/17 13:39 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:13 | 1 |
| **Calcium** | **90** | | 0.20 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:13 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:13 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:13 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:13 | 1 |
| **Molybdenum** | **0.037** | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:13 | 1 |
| **Selenium** | **0.0065** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:13 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:13 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/20/17 12:00 | 02/21/17 11:39 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **630** | | 10 | | mg/L | | | 02/20/17 04:23 | 1 |
| **Chloride** | **37** | | 2.0 | | mg/L | | | 02/19/17 21:00 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 03/04/17 19:25 | 1 |
| **Sulfate** | **160** | | 50 | | mg/L | | | 03/02/17 07:25 | 10 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

**Client Sample ID: MW-17**
**Date Collected: 02/13/17 15:47**
**Date Received: 02/17/17 19:50**

**Lab Sample ID: 500-124079-9**
**Matrix: Water**

## Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.019** | | 0.010 | | mg/L | | 02/20/17 08:26 | 02/21/17 21:41 | 1 |

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:25 | 1 |
| **Arsenic** | **0.35** | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:25 | 1 |
| **Barium** | **0.16** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:25 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:25 | 1 |
| **Boron** | **1.6** | | 0.25 | | mg/L | | 02/20/17 08:26 | 02/24/17 13:51 | 5 |
| **Cadmium** | **0.00093** | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:25 | 1 |
| **Calcium** | **190** | | 0.20 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:25 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:25 | 1 |
| **Cobalt** | **0.0014** | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:25 | 1 |
| **Lead** | **0.00079** | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:25 | 1 |
| **Molybdenum** | **0.088** | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:25 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:25 | 1 |
| **Thallium** | **0.0025** | | 0.0020 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:25 | 1 |

## Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/20/17 12:00 | 02/21/17 11:41 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1600** | | 10 | | mg/L | | | 02/20/17 04:25 | 1 |
| **Chloride** | **230** | | 10 | | mg/L | | | 02/19/17 21:00 | 5 |
| **Fluoride** | **0.56** | | 0.10 | | mg/L | | | 03/04/17 19:28 | 1 |
| **Sulfate** | **770** | | 200 | | mg/L | | | 03/02/17 07:26 | 40 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

**Client Sample ID: MW-18**
**Date Collected: 02/15/17 15:26**
**Date Received: 02/17/17 19:50**

**Lab Sample ID: 500-124079-10**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.014** | | 0.010 | | mg/L | | 02/20/17 08:26 | 02/21/17 21:45 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:28 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:28 | 1 |
| **Barium** | **0.14** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:28 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:28 | 1 |
| **Boron** | **0.56** | | 0.050 | | mg/L | | 02/20/17 08:26 | 02/24/17 13:55 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:28 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:28 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:28 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:28 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:28 | 1 |
| **Molybdenum** | **0.0058** | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:28 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:28 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:28 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/20/17 12:00 | 02/21/17 11:45 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1200** | | 10 | | mg/L | | | 02/20/17 04:28 | 1 |
| **Chloride** | **190** | | 10 | | mg/L | | | 02/19/17 21:01 | 5 |
| **Fluoride** | **0.50** | | 0.10 | | mg/L | | | 03/04/17 19:41 | 1 |
| **Sulfate** | **340** | | 100 | | mg/L | | | 03/02/17 07:27 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

**Client Sample ID: MW-19**
**Date Collected: 02/15/17 13:26**
**Date Received: 02/17/17 19:50**

**Lab Sample ID: 500-124079-11**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/20/17 08:26 | 02/21/17 22:04 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:47 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:47 | 1 |
| **Barium** | **0.088** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:47 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:47 | 1 |
| **Boron** | **4.7** | | 0.50 | | mg/L | | 02/20/17 08:26 | 02/24/17 14:13 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:47 | 1 |
| **Calcium** | **88** | | 0.20 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:47 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:47 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:47 | 1 |
| **Lead** | **0.00061** | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:47 | 1 |
| **Molybdenum** | **0.046** | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:47 | 1 |
| **Selenium** | **0.0063** | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:47 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/20/17 08:26 | 02/22/17 15:47 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/20/17 12:00 | 02/21/17 11:47 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **630** | | 10 | | mg/L | | | 02/20/17 04:30 | 1 |
| **Chloride** | **37** | | 2.0 | | mg/L | | | 02/19/17 21:03 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 03/04/17 19:44 | 1 |
| **Sulfate** | **180** | | 50 | | mg/L | | | 03/06/17 04:54 | 10 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 372697

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-124079-2 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-124079-3 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-124079-4 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-124079-5 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-124079-6 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-124079-7 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-124079-8 | Duplicate | Total Recoverable | Water | 3005A | |
| 500-124079-9 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-124079-10 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-124079-11 | MW-19 | Total Recoverable | Water | 3005A | |
| MB 500-372697/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-372697/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-124079-10 MS | MW-18 | Total Recoverable | Water | 3005A | |
| 500-124079-10 MSD | MW-18 | Total Recoverable | Water | 3005A | |
| 500-124079-10 DU | MW-18 | Total Recoverable | Water | 3005A | |

### Prep Batch: 372759

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-124079-2 | MW-05 | Total/NA | Water | 7470A | |
| 500-124079-3 | MW-08 | Total/NA | Water | 7470A | |
| 500-124079-4 | MW-09 | Total/NA | Water | 7470A | |
| 500-124079-5 | MW-11 | Total/NA | Water | 7470A | |
| 500-124079-6 | MW-12 | Total/NA | Water | 7470A | |
| 500-124079-7 | MW-15 | Total/NA | Water | 7470A | |
| 500-124079-8 | Duplicate | Total/NA | Water | 7470A | |
| 500-124079-9 | MW-17 | Total/NA | Water | 7470A | |
| 500-124079-10 | MW-18 | Total/NA | Water | 7470A | |
| 500-124079-11 | MW-19 | Total/NA | Water | 7470A | |
| MB 500-372759/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-372759/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-124079-1 MS | MW-01 | Total/NA | Water | 7470A | |
| 500-124079-1 MSD | MW-01 | Total/NA | Water | 7470A | |
| 500-124079-1 DU | MW-01 | Total/NA | Water | 7470A | |

### Analysis Batch: 372932

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-1 | MW-01 | Total/NA | Water | 7470A | 372759 |
| 500-124079-2 | MW-05 | Total/NA | Water | 7470A | 372759 |
| 500-124079-3 | MW-08 | Total/NA | Water | 7470A | 372759 |
| 500-124079-4 | MW-09 | Total/NA | Water | 7470A | 372759 |
| 500-124079-5 | MW-11 | Total/NA | Water | 7470A | 372759 |
| 500-124079-6 | MW-12 | Total/NA | Water | 7470A | 372759 |
| 500-124079-7 | MW-15 | Total/NA | Water | 7470A | 372759 |
| 500-124079-8 | Duplicate | Total/NA | Water | 7470A | 372759 |
| 500-124079-9 | MW-17 | Total/NA | Water | 7470A | 372759 |
| 500-124079-10 | MW-18 | Total/NA | Water | 7470A | 372759 |
| 500-124079-11 | MW-19 | Total/NA | Water | 7470A | 372759 |
| MB 500-372759/12-A | Method Blank | Total/NA | Water | 7470A | 372759 |
| LCS 500-372759/13-A | Lab Control Sample | Total/NA | Water | 7470A | 372759 |

## Metals (Continued)

### Analysis Batch: 372932 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-1 MS | MW-01 | Total/NA | Water | 7470A | 372759 |
| 500-124079-1 MSD | MW-01 | Total/NA | Water | 7470A | 372759 |
| 500-124079-1 DU | MW-01 | Total/NA | Water | 7470A | 372759 |

### Analysis Batch: 373077

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-1 | MW-01 | Total Recoverable | Water | 6010C | 372697 |
| 500-124079-2 | MW-05 | Total Recoverable | Water | 6010C | 372697 |
| 500-124079-3 | MW-08 | Total Recoverable | Water | 6010C | 372697 |
| 500-124079-4 | MW-09 | Total Recoverable | Water | 6010C | 372697 |
| 500-124079-5 | MW-11 | Total Recoverable | Water | 6010C | 372697 |
| 500-124079-6 | MW-12 | Total Recoverable | Water | 6010C | 372697 |
| 500-124079-7 | MW-15 | Total Recoverable | Water | 6010C | 372697 |
| 500-124079-8 | Duplicate | Total Recoverable | Water | 6010C | 372697 |
| 500-124079-9 | MW-17 | Total Recoverable | Water | 6010C | 372697 |
| 500-124079-10 | MW-18 | Total Recoverable | Water | 6010C | 372697 |
| 500-124079-11 | MW-19 | Total Recoverable | Water | 6010C | 372697 |
| MB 500-372697/1-A | Method Blank | Total Recoverable | Water | 6010C | 372697 |
| LCS 500-372697/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 372697 |
| 500-124079-10 MS | MW-18 | Total Recoverable | Water | 6010C | 372697 |
| 500-124079-10 MSD | MW-18 | Total Recoverable | Water | 6010C | 372697 |
| 500-124079-10 DU | MW-18 | Total Recoverable | Water | 6010C | 372697 |

### Analysis Batch: 373234

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-1 | MW-01 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-2 | MW-05 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-3 | MW-08 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-4 | MW-09 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-5 | MW-11 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-6 | MW-12 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-7 | MW-15 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-8 | Duplicate | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-9 | MW-17 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-10 | MW-18 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-11 | MW-19 | Total Recoverable | Water | 6020A | 372697 |
| MB 500-372697/1-A | Method Blank | Total Recoverable | Water | 6020A | 372697 |
| LCS 500-372697/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-10 MS | MW-18 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-10 MSD | MW-18 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-10 DU | MW-18 | Total Recoverable | Water | 6020A | 372697 |

### Analysis Batch: 373471

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-1 | MW-01 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-2 | MW-05 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-3 | MW-08 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-4 | MW-09 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-5 | MW-11 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-6 | MW-12 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-7 | MW-15 | Total Recoverable | Water | 6020A | 372697 |

## Metals (Continued)

### Analysis Batch: 373471 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-8 | Duplicate | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-9 | MW-17 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-10 | MW-18 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-11 | MW-19 | Total Recoverable | Water | 6020A | 372697 |
| MB 500-372697/1-A | Method Blank | Total Recoverable | Water | 6020A | 372697 |
| LCS 500-372697/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-10 MS | MW-18 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-10 MSD | MW-18 | Total Recoverable | Water | 6020A | 372697 |
| 500-124079-10 DU | MW-18 | Total Recoverable | Water | 6020A | 372697 |

## General Chemistry

### Analysis Batch: 372668

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-124079-2 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-124079-3 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-124079-4 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-124079-5 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-124079-6 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-124079-7 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-124079-8 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| 500-124079-9 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-124079-10 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-124079-11 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-372668/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-372668/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-124079-5 MS | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-124079-5 MSD | MW-11 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 372676

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-124079-2 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-124079-3 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-124079-4 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-124079-5 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-124079-6 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-124079-7 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-124079-8 | Duplicate | Total/NA | Water | SM 2540C | |
| 500-124079-9 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-124079-10 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-124079-11 | MW-19 | Total/NA | Water | SM 2540C | |
| MB 500-372676/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-372676/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-124079-1 DU | MW-01 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 373142

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-1 | MW-01 | Total/NA | Water | SM 4500 F C | |

## General Chemistry (Continued)

### Analysis Batch: 373142 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-2 | MW-05 | Total/NA | Water | SM 4500 F C | |
| MB 500-373142/4 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-373142/5 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 374123

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-124079-2 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-124079-3 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-124079-4 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-124079-5 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-124079-6 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-124079-7 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-124079-8 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| 500-124079-9 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-124079-10 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-374123/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-374123/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 374508

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-11 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-374508/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-374508/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 374704

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-3 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-124079-4 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-124079-5 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-124079-6 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-124079-7 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-124079-8 | Duplicate | Total/NA | Water | SM 4500 F C | |
| 500-124079-9 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-124079-10 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-124079-11 | MW-19 | Total/NA | Water | SM 4500 F C | |
| MB 500-374704/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-374704/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-372697/1-A**
**Matrix: Water**
**Analysis Batch: 373077**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 372697**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/20/17 08:26 | 02/21/17 20:56 | 1 |

**Lab Sample ID: LCS 500-372697/2-A**
**Matrix: Water**
**Analysis Batch: 373077**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 372697**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.505 | | mg/L | | 101 | 80 - 120 |

**Lab Sample ID: 500-124079-10 MS**
**Matrix: Water**
**Analysis Batch: 373077**

**Client Sample ID: MW-18**
**Prep Type: Total Recoverable**
**Prep Batch: 372697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.500 | 0.541 | | mg/L | | 105 | 75 - 125 |

**Lab Sample ID: 500-124079-10 MSD**
**Matrix: Water**
**Analysis Batch: 373077**

**Client Sample ID: MW-18**
**Prep Type: Total Recoverable**
**Prep Batch: 372697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.500 | 0.518 | | mg/L | | 101 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-124079-10 DU**
**Matrix: Water**
**Analysis Batch: 373077**

**Client Sample ID: MW-18**
**Prep Type: Total Recoverable**
**Prep Batch: 372697**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.0118 | | mg/L | | 19 | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-372697/1-A**
**Matrix: Water**
**Analysis Batch: 373234**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 372697**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:40 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:40 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:40 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:40 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:40 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:40 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:40 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:40 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:40 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:40 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:40 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/20/17 08:26 | 02/22/17 14:40 | 1 |

**Lab Sample ID: MB 500-372697/1-A**
**Matrix: Water**
**Analysis Batch: 373471**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 372697**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 02/20/17 08:26 | 02/24/17 12:26 | 1 |

**Lab Sample ID: LCS 500-372697/2-A**
**Matrix: Water**
**Analysis Batch: 373234**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 372697**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.518 | | mg/L | | 104 | 80 - 120 |
| Arsenic | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |
| Barium | 2.00 | 2.12 | | mg/L | | 106 | 80 - 120 |
| Beryllium | 0.0500 | 0.0491 | | mg/L | | 98 | 80 - 120 |
| Cadmium | 0.0500 | 0.0528 | | mg/L | | 106 | 80 - 120 |
| Calcium | 10.0 | 9.53 | | mg/L | | 95 | 80 - 120 |
| Chromium | 0.200 | 0.204 | | mg/L | | 102 | 80 - 120 |
| Cobalt | 0.500 | 0.513 | | mg/L | | 103 | 80 - 120 |
| Lead | 0.100 | 0.103 | | mg/L | | 103 | 80 - 120 |
| Molybdenum | 1.00 | 0.959 | | mg/L | | 96 | 80 - 120 |
| Selenium | 0.100 | 0.105 | | mg/L | | 105 | 80 - 120 |
| Thallium | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |

**Lab Sample ID: LCS 500-372697/2-A**
**Matrix: Water**
**Analysis Batch: 373471**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 372697**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 1.01 | | mg/L | | 101 | 80 - 120 |

**Lab Sample ID: 500-124079-10 MS**
**Matrix: Water**
**Analysis Batch: 373234**

**Client Sample ID: MW-18**
**Prep Type: Total Recoverable**
**Prep Batch: 372697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.555 | | mg/L | | 111 | 75 - 125 |
| Arsenic | <0.0010 | | 0.100 | 0.114 | | mg/L | | 113 | 75 - 125 |
| Barium | 0.14 | | 2.00 | 2.27 | | mg/L | | 106 | 75 - 125 |
| Beryllium | <0.0010 | | 0.0500 | 0.0504 | | mg/L | | 101 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0535 | | mg/L | | 107 | 75 - 125 |
| Calcium | 140 | | 10.0 | 144 | 4 | mg/L | | 12 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.204 | | mg/L | | 102 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.500 | | mg/L | | 100 | 75 - 125 |
| Lead | <0.00050 | | 0.100 | 0.0999 | | mg/L | | 100 | 75 - 125 |
| Molybdenum | 0.0058 | | 1.00 | 1.03 | | mg/L | | 102 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.0946 | | mg/L | | 95 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.100 | | mg/L | | 100 | 75 - 125 |

**Lab Sample ID: 500-124079-10 MS**
**Matrix: Water**
**Analysis Batch: 373471**

**Client Sample ID: MW-18**
**Prep Type: Total Recoverable**
**Prep Batch: 372697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.56 | | 1.00 | 1.61 | | mg/L | | 105 | 75 - 125 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-124079-10 MSD** — **Client Sample ID: MW-18**
**Matrix: Water** — **Prep Type: Total Recoverable**
**Analysis Batch: 373234** — **Prep Batch: 372697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.529 | | mg/L | | 106 | 75 - 125 | 5 | 20 |
| Arsenic | <0.0010 | | 0.100 | 0.108 | | mg/L | | 107 | 75 - 125 | 6 | 20 |
| Barium | 0.14 | | 2.00 | 2.17 | | mg/L | | 101 | 75 - 125 | 4 | 20 |
| Beryllium | <0.0010 | | 0.0500 | 0.0465 | | mg/L | | 93 | 75 - 125 | 8 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0504 | | mg/L | | 101 | 75 - 125 | 6 | 20 |
| Calcium | 140 | | 10.0 | 141 | 4 | mg/L | | -18 | 75 - 125 | 2 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.194 | | mg/L | | 97 | 75 - 125 | 5 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.466 | | mg/L | | 93 | 75 - 125 | 7 | 20 |
| Lead | <0.00050 | | 0.100 | 0.0952 | | mg/L | | 95 | 75 - 125 | 5 | 20 |
| Molybdenum | 0.0058 | | 1.00 | 0.983 | | mg/L | | 98 | 75 - 125 | 5 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.0893 | | mg/L | | 89 | 75 - 125 | 6 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.0956 | | mg/L | | 96 | 75 - 125 | 5 | 20 |

**Lab Sample ID: 500-124079-10 MSD** — **Client Sample ID: MW-18**
**Matrix: Water** — **Prep Type: Total Recoverable**
**Analysis Batch: 373471** — **Prep Batch: 372697**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.56 | | 1.00 | 1.55 | | mg/L | | 99 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-124079-10 DU** — **Client Sample ID: MW-18**
**Matrix: Water** — **Prep Type: Total Recoverable**
**Analysis Batch: 373234** — **Prep Batch: 372697**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | | <0.0030 | | mg/L | | | | NC | 20 |
| Arsenic | <0.0010 | | | <0.0010 | | mg/L | | | | NC | 20 |
| Barium | 0.14 | | | 0.130 | | mg/L | | | | 9 | 20 |
| Beryllium | <0.0010 | | | <0.0010 | | mg/L | | | | NC | 20 |
| Cadmium | <0.00050 | | | <0.00050 | | mg/L | | | | NC | 20 |
| Calcium | 140 | | | 132 | | mg/L | | | | 8 | 20 |
| Chromium | <0.0050 | | | <0.0050 | | mg/L | | | | NC | 20 |
| Cobalt | <0.0010 | | | <0.0010 | | mg/L | | | | NC | 20 |
| Lead | <0.00050 | | | <0.00050 | | mg/L | | | | NC | 20 |
| Molybdenum | 0.0058 | | | 0.00529 | | mg/L | | | | 9 | 20 |
| Selenium | <0.0025 | | | <0.0025 | | mg/L | | | | NC | 20 |
| Thallium | <0.0020 | | | <0.0020 | | mg/L | | | | NC | 20 |

**Lab Sample ID: 500-124079-10 DU** — **Client Sample ID: MW-18**
**Matrix: Water** — **Prep Type: Total Recoverable**
**Analysis Batch: 373471** — **Prep Batch: 372697**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.56 | | | 0.521 | | mg/L | | | | 8 | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-372759/12-A**
**Matrix: Water**
**Analysis Batch: 372932**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 372759**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 02/20/17 12:00 | 02/21/17 11:18 | 1 |

**Lab Sample ID: LCS 500-372759/13-A**
**Matrix: Water**
**Analysis Batch: 372932**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 372759**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00206 | | mg/L | | 103 | 80 - 120 |

**Lab Sample ID: 500-124079-1 MS**
**Matrix: Water**
**Analysis Batch: 372932**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 372759**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00103 | | mg/L | | 103 | 75 - 125 |

**Lab Sample ID: 500-124079-1 MSD**
**Matrix: Water**
**Analysis Batch: 372932**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 372759**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000904 | | mg/L | | 90 | 75 - 125 | 13 | 20 |

**Lab Sample ID: 500-124079-1 DU**
**Matrix: Water**
**Analysis Batch: 372932**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 372759**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-372676/1**
**Matrix: Water**
**Analysis Batch: 372676**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 02/20/17 03:50 | 1 |

**Lab Sample ID: LCS 500-372676/2**
**Matrix: Water**
**Analysis Batch: 372676**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 292 | | mg/L | | 117 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: 500-124079-1 DU** — **Client Sample ID: MW-01**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 372676**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 550 | | | 536 | | mg/L | | | | 2 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-372668/4** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 372668**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 02/19/17 20:48 | 1 |

**Lab Sample ID: LCS 500-372668/5** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 372668**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 50.4 | | mg/L | | 101 | 80 - 120 | | |

**Lab Sample ID: 500-124079-5 MS** — **Client Sample ID: MW-11**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 372668**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 110 | | 50.0 | 152 | | mg/L | | 86 | 75 - 125 | | |

**Lab Sample ID: 500-124079-5 MSD** — **Client Sample ID: MW-11**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 372668**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 110 | | 50.0 | 152 | | mg/L | | 84 | 75 - 125 | 0 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-373142/4** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 373142**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 02/22/17 13:14 | 1 |

**Lab Sample ID: LCS 500-373142/5** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 373142**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | | | 10.0 | 9.74 | | mg/L | | 97 | 80 - 120 | | |

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: MB 500-374704/3**
**Matrix: Water**
**Analysis Batch: 374704**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 03/04/17 19:03 | 1 |

**Lab Sample ID: LCS 500-374704/4**
**Matrix: Water**
**Analysis Batch: 374704**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.3 | | mg/L | | 103 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-374123/3**
**Matrix: Water**
**Analysis Batch: 374123**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 03/02/17 07:06 | 1 |

**Lab Sample ID: LCS 500-374123/4**
**Matrix: Water**
**Analysis Batch: 374123**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 20.4 | | mg/L | | 102 | 80 - 120 |

**Lab Sample ID: MB 500-374508/3**
**Matrix: Water**
**Analysis Batch: 374508**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 03/06/17 04:52 | 1 |

**Lab Sample ID: LCS 500-374508/4**
**Matrix: Water**
**Analysis Batch: 374508**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 19.9 | | mg/L | | 99 | 80 - 120 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

## Client Sample ID: MW-01

**Date Collected: 02/14/17 14:55**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 373077 | 02/21/17 21:03 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 373234 | 02/22/17 14:47 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 373471 | 02/24/17 13:13 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 372759 | 02/20/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 372932 | 02/21/17 11:21 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 372676 | 02/20/17 04:02 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 372668 | 02/19/17 20:52 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 373142 | 02/22/17 14:23 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 374123 | | CLB | TAL CHI |
| | | | | | (Start) | 03/02/17 07:18 | | |
| | | | | | (End) | 03/02/17 07:19 | | |

## Client Sample ID: MW-05

**Date Collected: 02/14/17 13:20**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 373077 | 02/21/17 21:07 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 373234 | 02/22/17 14:51 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 373471 | 02/24/17 13:17 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 372759 | 02/20/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 372932 | 02/21/17 11:30 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 372676 | 02/20/17 04:07 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 372668 | 02/19/17 20:53 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 373142 | 02/22/17 14:25 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 374123 | | CLB | TAL CHI |
| | | | | | (Start) | 03/02/17 07:19 | | |
| | | | | | (End) | 03/02/17 07:20 | | |

## Client Sample ID: MW-08

**Date Collected: 02/16/17 15:56**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 373077 | 02/21/17 21:10 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

## Client Sample ID: MW-08

**Date Collected: 02/16/17 15:56**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 373234 | 02/22/17 14:55 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 373471 | 02/24/17 13:21 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 372759 | 02/20/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 372932 | 02/21/17 11:32 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 372676 | 02/20/17 04:10 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 25 | 372668 | 02/19/17 21:29 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 374704 | 03/04/17 19:07 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 374123 | | CLB | TAL CHI |
| | | | | | (Start) | 03/02/17 07:20 | | |
| | | | | | (End) | 03/02/17 07:21 | | |

## Client Sample ID: MW-09

**Date Collected: 02/15/17 11:28**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 373077 | 02/21/17 21:15 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 373234 | 02/22/17 14:58 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 373471 | 02/24/17 13:24 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 372759 | 02/20/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 372932 | 02/21/17 11:33 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 372676 | 02/20/17 04:12 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 372668 | 02/19/17 20:57 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 374704 | 03/04/17 19:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 374123 | | CLB | TAL CHI |
| | | | | | (Start) | 03/02/17 07:21 | | |
| | | | | | (End) | 03/02/17 07:22 | | |

## Client Sample ID: MW-11

**Date Collected: 02/16/17 10:18**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 373077 | 02/21/17 21:18 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 373234 | 02/22/17 15:02 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 373471 | 02/24/17 13:28 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

## Client Sample ID: MW-11

**Date Collected: 02/16/17 10:18**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 372759 | 02/20/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 372932 | 02/21/17 11:35 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 372676 | 02/20/17 04:15 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 372668 | 02/19/17 21:29 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 374704 | 03/04/17 19:16 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 374123 | | CLB | TAL CHI |
| | | | | | (Start) | 03/02/17 07:22 | | |
| | | | | | (End) | 03/02/17 07:23 | | |

## Client Sample ID: MW-12

**Date Collected: 02/16/17 11:55**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 373077 | 02/21/17 21:22 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 373234 | 02/22/17 15:06 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 373471 | 02/24/17 13:32 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 372759 | 02/20/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 372932 | 02/21/17 11:36 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 372676 | 02/20/17 04:17 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 372668 | 02/19/17 20:59 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 374704 | 03/04/17 19:19 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 374123 | | CLB | TAL CHI |
| | | | | | (Start) | 03/02/17 07:23 | | |
| | | | | | (End) | 03/02/17 07:24 | | |

## Client Sample ID: MW-15

**Date Collected: 02/17/17 13:08**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 373077 | 02/21/17 21:26 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 373234 | 02/22/17 15:10 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 373471 | 02/24/17 13:36 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 372759 | 02/20/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 372932 | 02/21/17 11:38 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 372676 | 02/20/17 04:20 | CLB | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

## Client Sample ID: MW-15

**Date Collected: 02/17/17 13:08**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 372668 | 02/19/17 20:59 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 374704 | 03/04/17 19:22 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 374123 | | CLB | TAL CHI |
| | | | | | (Start) | 03/02/17 07:24 | | |
| | | | | | (End) | 03/02/17 07:25 | | |

## Client Sample ID: Duplicate

**Date Collected: 02/15/17 00:00**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 373077 | 02/21/17 21:30 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 373234 | 02/22/17 15:13 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 373471 | 02/24/17 13:39 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 372759 | 02/20/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 372932 | 02/21/17 11:39 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 372676 | 02/20/17 04:23 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 372668 | 02/19/17 21:00 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 374704 | 03/04/17 19:25 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 374123 | | CLB | TAL CHI |
| | | | | | (Start) | 03/02/17 07:25 | | |
| | | | | | (End) | 03/02/17 07:26 | | |

## Client Sample ID: MW-17

**Date Collected: 02/13/17 15:47**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 373077 | 02/21/17 21:41 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 373234 | 02/22/17 15:25 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 373471 | 02/24/17 13:51 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 372759 | 02/20/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 372932 | 02/21/17 11:41 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 372676 | 02/20/17 04:25 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 372668 | 02/19/17 21:00 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 374704 | 03/04/17 19:28 | EAT | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

## Client Sample ID: MW-17

**Date Collected: 02/13/17 15:47**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 SO4 E | | 40 | 374123 | | CLB | TAL CHI |
| | | | | | (Start) | 03/02/17 07:26 | | |
| | | | | | (End) | 03/02/17 07:27 | | |

## Client Sample ID: MW-18

**Date Collected: 02/15/17 15:26**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 373077 | 02/21/17 21:45 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 373234 | 02/22/17 15:28 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 373471 | 02/24/17 13:55 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 372759 | 02/20/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 372932 | 02/21/17 11:45 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 372676 | 02/20/17 04:28 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 372668 | 02/19/17 21:01 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 374704 | 03/04/17 19:41 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 374123 | | CLB | TAL CHI |
| | | | | | (Start) | 03/02/17 07:27 | | |
| | | | | | (End) | 03/02/17 07:28 | | |

## Client Sample ID: MW-19

**Date Collected: 02/15/17 13:26**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-11

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 373077 | 02/21/17 22:04 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 373234 | 02/22/17 15:47 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 372697 | 02/20/17 08:26 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 373471 | 02/24/17 14:13 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 372759 | 02/20/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 372932 | 02/21/17 11:47 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 372676 | 02/20/17 04:30 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 372668 | 02/19/17 21:03 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 374704 | 03/04/17 19:44 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 374508 | | CLB | TAL CHI |
| | | | | | (Start) | 03/06/17 04:54 | | |
| | | | | | (End) | 03/06/17 04:55 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-1

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-17 * |

* Certification renewal pending - certification considered valid.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chica
2417 Bond St.
University Park, IL (
708-534-5200
Fax. 708-534-5211

500-124079 COC

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-124079

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No N/A |

**Temperature °C of Cooler** 2.6, 3.1, 2.9

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| Yes No | Yes No N/A |

**Sample Labels and COC Agree**
Yes No COC not present

| Sampler Name: | COMPANY: | # / Cont. |
|---|---|---|
| Ian John Howieson | KPRG & Associates Inc. | Volume |
| **Project Name:** | **TestAmerica Project Number:** | Preserv. |
| Quarterly- Powerton CCR | 50011612 | |
| **Project Location:** | **TAT** | |
| Pekin, IL | 15 Days | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 2-14-17 | 14:55 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-05 | 2-14-17 | 13:20 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-08 | 2-16-17 | 15:56 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-09 | 2-15-17 | 11:28 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-11 | 2-16-17 | 10:18 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-12 | 2-16-17 | 11:55 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-15 | 2-17-17 | 13:08 | W | 5 | X | X | X | X | X | X | |
| 8 | | Duplicates | 2-15-17 | — | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 2-17-17 | 19:50 | Kelly Nelson | TA | 2/17/17 | 1950 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**eservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

**Date Received** ___/___/___
**Courier:**
**Hand Delivered** ☐
**Bill of Lading:**

__1__of__2__

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-124079

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No N/A |
| **Temperature °C of Cooler** | |

| Sampler Name: | COMPANY: |
|---|---|
| Ian John Howieson | KPRG & Associates Inc. |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly- Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com |

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No N/A |
| **pH Check OK** | **Res $CL_2$ Check OK** |
| Yes No | Yes No N/A |

**Sample Labels and COC Agree**
Yes No COC not present

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | | MW-17 | 2-13-17 | 15:47 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-18 | 2-15-17 | 15:26 | W | 5 | X | X | X | X | X | X | |
| 11 | | MW-19 | 2-15-17 | 13:26 | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 2-17-17 | 19:30 | Kathy Nelson | TA | 2/17/17 | 1950 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**eservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

**Date Received** ___/___/___
**Courier:**
**Hand Delivered** ☐
**Bill of Lading:**

__2__of__2__

STL-8208 (0600)

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-124079-1

**Login Number: 124079**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.6,3.1,2.9 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-124079-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*3/20/2017 1:14:09 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-124079-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-124079-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 2/17/2017 7:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.6º C, 2.9º C and 3.1º C.

**RAD**
Method(s) PrecSep_0: Radium 228; Prep Batch 294241
The following samples were reduced to 500 mL due to high amounts of sediment. MW-01 (500-124079-1), MW-12 (500-124079-6) and MW-17 (500-124079-9)

Method(s) PrecSep-21: Radium 226; Prep Batch 294118
The following sample was reduced to 500 mL due to high amounts of sediment. MW-01 (500-124079-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-124079-1 | MW-01 | Water | 02/14/17 14:55 | 02/17/17 19:50 |
| 500-124079-2 | MW-05 | Water | 02/14/17 13:20 | 02/17/17 19:50 |
| 500-124079-3 | MW-08 | Water | 02/16/17 15:56 | 02/17/17 19:50 |
| 500-124079-4 | MW-09 | Water | 02/15/17 11:28 | 02/17/17 19:50 |
| 500-124079-5 | MW-11 | Water | 02/16/17 10:18 | 02/17/17 19:50 |
| 500-124079-6 | MW-12 | Water | 02/16/17 11:55 | 02/17/17 19:50 |
| 500-124079-7 | MW-15 | Water | 02/17/17 13:08 | 02/17/17 19:50 |
| 500-124079-8 | Duplicate | Water | 02/15/17 00:00 | 02/17/17 19:50 |
| 500-124079-9 | MW-17 | Water | 02/13/17 15:47 | 02/17/17 19:50 |
| 500-124079-10 | MW-18 | Water | 02/15/17 15:26 | 02/17/17 19:50 |
| 500-124079-11 | MW-19 | Water | 02/15/17 13:26 | 02/17/17 19:50 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-2

## Client Sample ID: MW-01

**Date Collected: 02/14/17 14:55**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0723 | U | 0.194 | 0.194 | 1.00 | 0.357 | pCi/L | 02/23/17 08:51 | 03/17/17 05:30 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.1* | | *40 - 110* | *02/23/17 08:51* | *03/17/17 05:30* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0181 | U | 0.469 | 0.469 | 1.00 | 0.837 | pCi/L | 02/23/17 10:12 | 03/13/17 14:36 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.1* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:36* | *1* |
| *Y Carrier* | *82.2* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:36* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.0904 | U | 0.508 | 0.508 | 5.00 | 0.837 | pCi/L | | 03/17/17 13:51 | 1 |

## Client Sample ID: MW-05

**Date Collected: 02/14/17 13:20**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.154** | | 0.0970 | 0.0980 | 1.00 | 0.116 | pCi/L | 02/23/17 08:51 | 03/17/17 05:30 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.3* | | *40 - 110* | *02/23/17 08:51* | *03/17/17 05:30* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0752 | U | 0.207 | 0.208 | 1.00 | 0.359 | pCi/L | 02/23/17 10:12 | 03/13/17 14:37 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.3* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:37* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:37* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.229 | U | 0.229 | 0.230 | 5.00 | 0.359 | pCi/L | | 03/17/17 13:51 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-2

## Client Sample ID: MW-08

**Date Collected: 02/16/17 15:56**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.340** | | 0.152 | 0.155 | 1.00 | 0.176 | pCi/L | 02/23/17 08:51 | 03/17/17 05:30 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *02/23/17 08:51* | *03/17/17 05:30* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0132 | U | 0.209 | 0.209 | 1.00 | 0.375 | pCi/L | 02/23/17 10:12 | 03/13/17 14:37 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:37* | *1* |
| *Y Carrier* | *83.4* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:37* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.353 | U | 0.259 | 0.261 | 5.00 | 0.375 | pCi/L | | 03/17/17 13:51 | 1 |

## Client Sample ID: MW-09

**Date Collected: 02/15/17 11:28**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0225 | U | 0.0939 | 0.0939 | 1.00 | 0.179 | pCi/L | 02/23/17 08:51 | 03/17/17 05:30 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.5* | | *40 - 110* | *02/23/17 08:51* | *03/17/17 05:30* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.00208 | U | 0.210 | 0.210 | 1.00 | 0.377 | pCi/L | 02/23/17 10:12 | 03/13/17 14:37 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.5* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:37* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:37* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.0204 | U | 0.230 | 0.230 | 5.00 | 0.377 | pCi/L | | 03/17/17 13:51 | 1 |

## Client Sample ID: MW-11

**Date Collected: 02/16/17 10:18**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.303** | | 0.145 | 0.147 | 1.00 | 0.173 | pCi/L | 02/23/17 08:51 | 03/17/17 05:30 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.4* | | *40 - 110* | *02/23/17 08:51* | *03/17/17 05:30* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0378 | U | 0.179 | 0.179 | 1.00 | 0.317 | pCi/L | 02/23/17 10:12 | 03/13/17 14:37 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.4* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:37* | *1* |
| *Y Carrier* | *92.3* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:37* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.341** | | 0.230 | 0.232 | 5.00 | 0.317 | pCi/L | | 03/17/17 13:51 | 1 |

## Client Sample ID: MW-12

**Date Collected: 02/16/17 11:55**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.780** | | 0.305 | 0.313 | 1.00 | 0.308 | pCi/L | 02/23/17 08:51 | 03/17/17 05:30 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.4* | | *40 - 110* | *02/23/17 08:51* | *03/17/17 05:30* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.367 | U | 0.439 | 0.440 | 1.00 | 0.725 | pCi/L | 02/23/17 10:12 | 03/13/17 14:38 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.4* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:38* | *1* |
| *Y Carrier* | *89.7* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:38* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **1.15** | | 0.534 | 0.540 | 5.00 | 0.725 | pCi/L | | 03/17/17 13:51 | 1 |

## Client Sample ID: MW-15

**Date Collected: 02/17/17 13:08**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0775 | U | 0.0996 | 0.0999 | 1.00 | 0.166 | pCi/L | 02/23/17 08:51 | 03/17/17 05:31 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.1* | | *40 - 110* | *02/23/17 08:51* | *03/17/17 05:31* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.277 | U | 0.193 | 0.194 | 1.00 | 0.392 | pCi/L | 02/23/17 10:12 | 03/13/17 14:38 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.1* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:38* | *1* |
| *Y Carrier* | *91.2* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:38* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | -0.200 | U | 0.217 | 0.219 | 5.00 | 0.392 | pCi/L | | 03/17/17 13:51 | 1 |

## Client Sample ID: Duplicate

**Date Collected: 02/15/17 00:00**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0477 | U | 0.0739 | 0.0740 | 1.00 | 0.128 | pCi/L | 02/23/17 08:51 | 03/17/17 05:31 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.5* | | *40 - 110* | *02/23/17 08:51* | *03/17/17 05:31* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.144 | U | 0.208 | 0.208 | 1.00 | 0.348 | pCi/L | 02/23/17 10:12 | 03/13/17 14:38 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.5* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:38* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:38* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.192 | U | 0.220 | 0.221 | 5.00 | 0.348 | pCi/L | | 03/17/17 13:51 | 1 |

## Client Sample ID: MW-17

**Date Collected: 02/13/17 15:47**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.07 | | 0.340 | 0.353 | 1.00 | 0.292 | pCi/L | 02/23/17 08:51 | 03/17/17 05:31 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *02/23/17 08:51* | *03/17/17 05:31* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.01 | | 0.510 | 0.518 | 1.00 | 0.749 | pCi/L | 02/23/17 10:12 | 03/13/17 14:38 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:38* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:38* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 2.08 | | 0.613 | 0.627 | 5.00 | 0.749 | pCi/L | | 03/17/17 13:51 | 1 |

## Client Sample ID: MW-18

**Date Collected: 02/15/17 15:26**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-10

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.184 | | 0.108 | 0.109 | 1.00 | 0.126 | pCi/L | 02/23/17 08:51 | 03/17/17 05:31 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.6* | | *40 - 110* | *02/23/17 08:51* | *03/17/17 05:31* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0881 | U | 0.201 | 0.201 | 1.00 | 0.347 | pCi/L | 02/23/17 10:12 | 03/13/17 14:38 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.6* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:38* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:38* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.272 | U | 0.228 | 0.229 | 5.00 | 0.347 | pCi/L | | 03/17/17 13:51 | 1 |

## Client Sample ID: MW-19

**Date Collected: 02/15/17 13:26**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-11

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.149 | U | 0.123 | 0.124 | 1.00 | 0.186 | pCi/L | 02/23/17 08:51 | 03/17/17 05:32 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.7* | | *40 - 110* | *02/23/17 08:51* | *03/17/17 05:32* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.0180 | U | 0.271 | 0.271 | 1.00 | 0.482 | pCi/L | 02/23/17 10:12 | 03/13/17 14:38 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.7* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:38* | *1* |
| *Y Carrier* | *84.1* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:38* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.131 | U | 0.297 | 0.298 | 5.00 | 0.482 | pCi/L | | 03/17/17 13:51 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains no Free Liquid |
| DER | Duplicate error ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision level concentration |
| MDA | Minimum detectable activity |
| EDL | Estimated Detection Limit |
| MDC | Minimum detectable concentration |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative error ratio |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-2

## Rad

### Prep Batch: 294118

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-124079-2 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-124079-3 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-124079-4 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-124079-5 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-124079-6 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-124079-7 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-124079-8 | Duplicate | Total/NA | Water | PrecSep-21 | |
| 500-124079-9 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-124079-10 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-124079-11 | MW-19 | Total/NA | Water | PrecSep-21 | |
| MB 160-294118/1-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-294118/2-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 294241

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-124079-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-124079-2 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-124079-3 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-124079-4 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-124079-5 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-124079-6 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-124079-7 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-124079-8 | Duplicate | Total/NA | Water | PrecSep_0 | |
| 500-124079-9 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-124079-10 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-124079-11 | MW-19 | Total/NA | Water | PrecSep_0 | |
| MB 160-294241/1-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-294241/2-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-294118/1-A**
**Matrix: Water**
**Analysis Batch: 298073**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 294118**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.04648 | U | 0.0917 | 0.0918 | 1.00 | 0.164 | pCi/L | 02/23/17 08:51 | 03/17/17 05:28 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.4* | | *40 - 110* | *02/23/17 08:51* | *03/17/17 05:28* | *1* |

**Lab Sample ID: LCS 160-294118/2-A**
**Matrix: Water**
**Analysis Batch: 298073**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 294118**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 11.54 | | 1.27 | 1.00 | 0.139 | pCi/L | 102 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *92.0* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-294241/1-A**
**Matrix: Water**
**Analysis Batch: 297322**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 294241**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.3038 | U | 0.224 | 0.225 | 1.00 | 0.352 | pCi/L | 02/23/17 10:12 | 03/13/17 14:13 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.4* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:13* | *1* |
| *Y Carrier* | *89.7* | | *40 - 110* | *02/23/17 10:12* | *03/13/17 14:13* | *1* |

**Lab Sample ID: LCS 160-294241/2-A**
**Matrix: Water**
**Analysis Batch: 297322**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 294241**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 13.7 | 15.49 | | 1.64 | 1.00 | 0.375 | pCi/L | 113 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *92.0* | | *40 - 110* |
| *Y Carrier* | *92.3* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-2

## Client Sample ID: MW-01
**Date Collected: 02/14/17 14:55**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 294118 | 02/23/17 08:51 | MBC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 298073 | 03/17/17 05:30 | MLK | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 294241 | 02/23/17 10:12 | MBC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 297320 | 03/13/17 14:36 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 298216 | 03/17/17 13:51 | RTM | TAL SL |

## Client Sample ID: MW-05
**Date Collected: 02/14/17 13:20**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 294118 | 02/23/17 08:51 | MBC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 298073 | 03/17/17 05:30 | MLK | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 294241 | 02/23/17 10:12 | MBC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 297321 | 03/13/17 14:37 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 298216 | 03/17/17 13:51 | RTM | TAL SL |

## Client Sample ID: MW-08
**Date Collected: 02/16/17 15:56**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 294118 | 02/23/17 08:51 | MBC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 298073 | 03/17/17 05:30 | MLK | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 294241 | 02/23/17 10:12 | MBC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 297321 | 03/13/17 14:37 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 298216 | 03/17/17 13:51 | RTM | TAL SL |

## Client Sample ID: MW-09
**Date Collected: 02/15/17 11:28**
**Date Received: 02/17/17 19:50**

## Lab Sample ID: 500-124079-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 294118 | 02/23/17 08:51 | MBC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 298073 | 03/17/17 05:30 | MLK | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 294241 | 02/23/17 10:12 | MBC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 297321 | 03/13/17 14:37 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 298216 | 03/17/17 13:51 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-2

## Client Sample ID: MW-11

**Lab Sample ID: 500-124079-5**

**Date Collected: 02/16/17 10:18**

**Matrix: Water**

**Date Received: 02/17/17 19:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 294118 | 02/23/17 08:51 | MBC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 298073 | 03/17/17 05:30 | MLK | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 294241 | 02/23/17 10:12 | MBC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 297321 | 03/13/17 14:37 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 298216 | 03/17/17 13:51 | RTM | TAL SL |

## Client Sample ID: MW-12

**Lab Sample ID: 500-124079-6**

**Date Collected: 02/16/17 11:55**

**Matrix: Water**

**Date Received: 02/17/17 19:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 294118 | 02/23/17 08:51 | MBC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 298073 | 03/17/17 05:30 | MLK | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 294241 | 02/23/17 10:12 | MBC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 297321 | 03/13/17 14:38 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 298216 | 03/17/17 13:51 | RTM | TAL SL |

## Client Sample ID: MW-15

**Lab Sample ID: 500-124079-7**

**Date Collected: 02/17/17 13:08**

**Matrix: Water**

**Date Received: 02/17/17 19:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 294118 | 02/23/17 08:51 | MBC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 298073 | 03/17/17 05:31 | MLK | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 294241 | 02/23/17 10:12 | MBC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 297321 | 03/13/17 14:38 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 298216 | 03/17/17 13:51 | RTM | TAL SL |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-124079-8**

**Date Collected: 02/15/17 00:00**

**Matrix: Water**

**Date Received: 02/17/17 19:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 294118 | 02/23/17 08:51 | MBC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 298073 | 03/17/17 05:31 | MLK | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 294241 | 02/23/17 10:12 | MBC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 297321 | 03/13/17 14:38 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 298216 | 03/17/17 13:51 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-2

## Client Sample ID: MW-17

**Lab Sample ID: 500-124079-9**

**Date Collected: 02/13/17 15:47**

**Matrix: Water**

**Date Received: 02/17/17 19:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 294118 | 02/23/17 08:51 | MBC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 298073 | 03/17/17 05:31 | MLK | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 294241 | 02/23/17 10:12 | MBC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 297321 | 03/13/17 14:38 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 298216 | 03/17/17 13:51 | RTM | TAL SL |

## Client Sample ID: MW-18

**Lab Sample ID: 500-124079-10**

**Date Collected: 02/15/17 15:26**

**Matrix: Water**

**Date Received: 02/17/17 19:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 294118 | 02/23/17 08:51 | MBC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 298073 | 03/17/17 05:31 | MLK | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 294241 | 02/23/17 10:12 | MBC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 297321 | 03/13/17 14:38 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 298216 | 03/17/17 13:51 | RTM | TAL SL |

## Client Sample ID: MW-19

**Lab Sample ID: 500-124079-11**

**Date Collected: 02/15/17 13:26**

**Matrix: Water**

**Date Received: 02/17/17 19:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 294118 | 02/23/17 08:51 | MBC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 298074 | 03/17/17 05:32 | MLK | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 294241 | 02/23/17 10:12 | MBC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 297321 | 03/13/17 14:38 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 298216 | 03/17/17 13:51 | RTM | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-2

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-17 * |

## Laboratory: TestAmerica St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200023 | 11-30-17 |

The following analytes are included in this report, but certification is not offered by the governing authority:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

* Certification renewal pending - certification considered valid.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chica
2417 Bond St.
University Park, IL (
708-534-5200
Fax. 708-534-5211

500-124079 COC

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-124079

| | |
|---|---|
| Package Sealed: Yes / No | Samples Sealed: Yes / No |
| Received on Ice: Yes / No | Samples Intact: Yes / No / N/A |
| Temperature °C of Cooler: 2.6, 3.1, 2.9 | |
| Within Hold Time: Yes / No | Preserv. Indicated: Yes / No / N/A |
| pH Check OK: Yes / No | Res $Cl_2$ Check OK: Yes / No / N/A |
| Sample Labels and COC Agree: Yes / No / COC not present | |

| | | | |
|---|---|---|---|
| **Sampler Name:** Ian John Howieson | **COMPANY:** KPRG & Associates Inc. | **# / Cont.** | |
| | | **Volume** | |
| **Project Name:** Quarterly- Powerton CCR | **TestAmerica Project Number:** 50011612 | **Preserv.** | |
| **Project Location:** Pekin, IL | **TAT** 15 Days | | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 2-14-17 | 14:55 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-05 | 2-14-17 | 13:20 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-08 | 2-16-17 | 15:56 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-09 | 2-15-17 | 11:28 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-11 | 2-16-17 | 10:18 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-12 | 2-16-17 | 11:55 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-15 | 2-17-17 | 13:08 | W | 5 | X | X | X | X | X | X | |
| 8 | | Duplicates | 2-15-17 | — | W | 5 | X | X | X | X | X | X | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| RELINQUISHED BY: IJH | COMPANY: KPRG | DATE: 2-17-17 | TIME: 19:50 | RECEIVED BY: Kathy Nelson | COMPANY: TA | DATE: 2/17/17 | TIME: 1950 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**eservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received ____/____/____
Courier:
Hand Delivered ☐
Bill of Lading:

__1__of__2__

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-124079

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No N/A |
| **Temperature °C of Cooler** | |

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| Yes No | Yes No N/A |

**Sample Labels and COC Agree**
Yes No COC not present

| Sampler Name: | COMPANY: | # / Cont. |
|---|---|---|
| Ian John Howieson | KPRG & Associates Inc. | Volume |
| **Project Name:** | **TestAmerica Project Number:** | Preserv. |
| Quarterly- Powerton CCR | 50011612 | |
| **Project Location:** | **TAT** | |
| Pekin, IL | 15 Days | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | | MW-17 | 2-13-17 | 15:47 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-18 | 2-15-17 | 15:26 | W | 5 | X | X | X | X | X | X | |
| 11 | | MW-19 | 2-15-17 | 13:26 | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 2-17-17 | 14:30 | Kathy Nelson | TA | 2/17/17 | 1950 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**eservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received ____/____/____
Courier:
Hand Delivered ☐
Bill of Lading:

__2__of__2__

STL-8208 (0600)

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

500-124079 Chain of Custody

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| | | | | |
|---|---|---|---|---|
| **Client Information (Sub Contract Lab)** | Sampler: | Lab PM: Lang, Eric A. | | COC No: 500-83936.1 |
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-124079-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 3/20/2017 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Ra226Ra228_GFPC | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-124079-1) | 2/14/17 | 14:55 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-05 (500-124079-2) | 2/14/17 | 13:20 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-08 (500-124079-3) | 2/16/17 | 15:56 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-09 (500-124079-4) | 2/15/17 | 11:28 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-11 (500-124079-5) | 2/16/17 | 10:18 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-12 (500-124079-6) | 2/16/17 | 11:55 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-15 (500-124079-7) | 2/17/17 | 13:08 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| Duplicate (500-124079-8) | 2/15/17 | Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-17 (500-124079-9) | 2/13/17 | 15:47 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| | |
|---|---|
| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| | | | |
|---|---|---|---|
| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |

| | | | | | | |
|---|---|---|---|---|---|---|
| Relinquished by: Sherri Scott | Date/Time: 2/20/17 1250 | Company TA-CHL | Received by: Kristen Taylor | Date/Time: 2/21/17 0920 | Company TA-STL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| | | |
|---|---|---|
| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |



3/20/2017

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-83936.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-124079-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 3/20/2017 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Ra226Ra228_GFPC | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-18 (500-124079-10) | 2/15/17 | 15:26 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-19 (500-124079-11) | 2/15/17 | 13:26 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Sherri Scott | 2/20/17 1250 | TA-CHI | [signature] | 2/21/17 0920 | TASTL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-124079-2

**Login Number: 124079**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.6,3.1,2.9 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-124079-2

**Login Number: 124079**
**List Number: 2**
**Creator: Taylor, Kristene N**

**List Source: TestAmerica St. Louis**
**List Creation: 02/21/17 04:35 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 19.0,19.0,19.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-124079-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) |
| 500-124079-1 | MW-01 | 94.1 |
| 500-124079-2 | MW-05 | 97.3 |
| 500-124079-3 | MW-08 | 93.8 |
| 500-124079-4 | MW-09 | 96.5 |
| 500-124079-5 | MW-11 | 94.4 |
| 500-124079-6 | MW-12 | 91.4 |
| 500-124079-7 | MW-15 | 94.1 |
| 500-124079-8 | Duplicate | 93.5 |
| 500-124079-9 | MW-17 | 93.8 |
| 500-124079-10 | MW-18 | 95.6 |
| 500-124079-11 | MW-19 | 94.7 |
| LCS 160-294118/2-A | Lab Control Sample | 92.0 |
| MB 160-294118/1-A | Method Blank | 99.4 |

**Tracer/Carrier Legend**

Ba = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) | Y (40-110) |
| 500-124079-1 | MW-01 | 94.1 | 82.2 |
| 500-124079-2 | MW-05 | 97.3 | 87.1 |
| 500-124079-3 | MW-08 | 93.8 | 83.4 |
| 500-124079-4 | MW-09 | 96.5 | 87.1 |
| 500-124079-5 | MW-11 | 94.4 | 92.3 |
| 500-124079-6 | MW-12 | 91.4 | 89.7 |
| 500-124079-7 | MW-15 | 94.1 | 91.2 |
| 500-124079-8 | Duplicate | 93.5 | 87.9 |
| 500-124079-9 | MW-17 | 93.8 | 87.1 |
| 500-124079-10 | MW-18 | 95.6 | 87.1 |
| 500-124079-11 | MW-19 | 94.7 | 84.1 |
| LCS 160-294241/2-A | Lab Control Sample | 92.0 | 92.3 |
| MB 160-294241/1-A | Method Blank | 99.4 | 89.7 |

**Tracer/Carrier Legend**

Ba = Ba Carrier
Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-127751-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*5/19/2017 10:08:13 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-127751-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-127751-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/5/2017 5:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.5º C, 2.7º C and 3.2º C.

**Metals**
Method(s) 6020A: The internal standard Terbium was used to report the elements Lead (Pb) and Thallium(Tl) in batch 500-384908 .The LCS and MS were spiked with Trace digestion spike which contains the element Bismuth(Bi).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-127751-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0015 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.045 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.19 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 86 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0033 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0067 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 460 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 66 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.16 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 45 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-127751-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.059 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.70 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0066 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 710 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 92 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.28 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-127751-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.022 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0029 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.13 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.55 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0083 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 300 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.33 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 320 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-127751-4

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

## Client Sample ID: MW-09 (Continued) — Lab Sample ID: 500-127751-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0012 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.034 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.5 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 85 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.034 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.011 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 680 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 38 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-127751-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.039 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.26 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.3 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 160 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0035 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00093 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.015 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 160 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.42 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 440 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-127751-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.011 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.10 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.17 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.49 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.0022 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-127751-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 0.0038 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.017 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 190 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.37 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 500 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-127751-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.023 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.049 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.5 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 180 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.023 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0034 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1700 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 190 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.57 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 670 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-127751-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.016 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.24 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.39 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Beryllium | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Cadmium | 0.0023 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 170 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0023 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00066 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.036 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

## Client Sample ID: MW-17 (Continued) — Lab Sample ID: 500-127751-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Thallium | 0.0065 | | 0.0020 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 210 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.61 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 720 | | 130 | | mg/L | 25 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-127751-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.010 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0032 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.46 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00057 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1100 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.52 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 360 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-127751-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.076 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.3 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 88 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0012 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.035 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0068 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 640 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 38 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.14 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 160 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-127751-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

## Client Sample ID: Duplicate (Continued)

## Lab Sample ID: 500-127751-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.047 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.18 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 90 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0040 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0084 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 450 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 60 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.15 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 57 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-127751-1 | MW-01 | Water | 05/03/17 09:48 | 05/05/17 17:30 |
| 500-127751-2 | MW-05 | Water | 05/01/17 15:54 | 05/05/17 17:30 |
| 500-127751-3 | MW-08 | Water | 05/02/17 13:25 | 05/05/17 17:30 |
| 500-127751-4 | MW-09 | Water | 05/03/17 11:24 | 05/05/17 17:30 |
| 500-127751-5 | MW-11 | Water | 05/03/17 13:37 | 05/05/17 17:30 |
| 500-127751-6 | MW-12 | Water | 05/03/17 16:00 | 05/05/17 17:30 |
| 500-127751-7 | MW-15 | Water | 05/04/17 13:05 | 05/05/17 17:30 |
| 500-127751-8 | MW-17 | Water | 05/04/17 15:47 | 05/05/17 17:30 |
| 500-127751-9 | MW-18 | Water | 05/05/17 10:04 | 05/05/17 17:30 |
| 500-127751-10 | MW-19 | Water | 05/05/17 11:17 | 05/05/17 17:30 |
| 500-127751-11 | Duplicate | Water | 05/03/17 00:00 | 05/05/17 17:30 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

**Client Sample ID: MW-01**
**Date Collected: 05/03/17 09:48**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-1**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/10/17 07:55 | 05/12/17 13:17 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:55 | 1 |
| **Arsenic** | **0.0015** | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:55 | 1 |
| **Barium** | **0.045** | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:55 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:55 | 1 |
| **Boron** | **0.19** | | 0.050 | | mg/L | | 05/10/17 07:55 | 05/15/17 13:09 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:55 | 1 |
| **Calcium** | **86** | | 0.20 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:55 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:55 | 1 |
| **Cobalt** | **0.0033** | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:55 | 1 |
| **Lead** | **0.0067** | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:55 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:55 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:55 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:55 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/09/17 11:00 | 05/10/17 09:16 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **460** | | 10 | | mg/L | | | 05/08/17 07:59 | 1 |
| **Chloride** | **66** | | 2.0 | | mg/L | | | 05/11/17 23:06 | 1 |
| **Fluoride** | **0.16** | | 0.10 | | mg/L | | | 05/17/17 18:23 | 1 |
| **Sulfate** | **45** | | 20 | | mg/L | | | 05/13/17 23:43 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

**Client Sample ID: MW-05**
**Date Collected: 05/01/17 15:54**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-2**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/10/17 07:55 | 05/12/17 13:21 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:59 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:59 | 1 |
| **Barium** | **0.059** | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:59 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:59 | 1 |
| **Boron** | **0.70** | | 0.050 | | mg/L | | 05/10/17 07:55 | 05/15/17 13:13 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:59 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:59 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:59 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:59 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:59 | 1 |
| **Molybdenum** | **0.0066** | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:59 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:59 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:59 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/09/17 11:00 | 05/10/17 09:22 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **710** | | 10 | | mg/L | | | 05/08/17 08:06 | 1 |
| **Chloride** | **92** | | 10 | | mg/L | | | 05/11/17 23:07 | 5 |
| **Fluoride** | **0.28** | | 0.10 | | mg/L | | | 05/17/17 18:26 | 1 |
| **Sulfate** | **170** | | 50 | | mg/L | | | 05/13/17 23:44 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

**Client Sample ID: MW-08**
**Date Collected: 05/02/17 13:25**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-3**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.022** | | 0.010 | | mg/L | | 05/10/17 07:55 | 05/12/17 13:25 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:03 | 1 |
| **Arsenic** | **0.0029** | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:03 | 1 |
| **Barium** | **0.13** | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:03 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:03 | 1 |
| **Boron** | **0.55** | | 0.050 | | mg/L | | 05/10/17 07:55 | 05/15/17 13:17 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:03 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:03 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:03 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:03 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:03 | 1 |
| **Molybdenum** | **0.0083** | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:03 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:03 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:03 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/09/17 11:00 | 05/10/17 09:24 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1300** | | 10 | | mg/L | | | 05/08/17 08:11 | 1 |
| **Chloride** | **300** | | 10 | | mg/L | | | 05/11/17 23:08 | 5 |
| **Fluoride** | **0.33** | | 0.10 | | mg/L | | | 05/17/17 18:29 | 1 |
| **Sulfate** | **320** | | 100 | | mg/L | | | 05/13/17 23:45 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

**Client Sample ID: MW-09**
**Date Collected: 05/03/17 11:24**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-4**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/10/17 07:55 | 05/12/17 13:30 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:06 | 1 |
| **Arsenic** | **0.0012** | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:06 | 1 |
| **Barium** | **0.034** | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:06 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:06 | 1 |
| **Boron** | **3.5** | | 0.50 | | mg/L | | 05/10/17 07:55 | 05/15/17 13:20 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:06 | 1 |
| **Calcium** | **85** | | 0.20 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:06 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:06 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:06 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:06 | 1 |
| **Molybdenum** | **0.034** | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:06 | 1 |
| **Selenium** | **0.011** | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:06 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:06 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/09/17 11:00 | 05/10/17 09:25 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **680** | | 10 | | mg/L | | | 05/08/17 08:14 | 1 |
| **Chloride** | **38** | | 2.0 | | mg/L | | | 05/11/17 23:11 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 05/17/17 18:37 | 1 |
| **Sulfate** | **170** | | 50 | | mg/L | | | 05/13/17 23:46 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

**Client Sample ID: MW-11**
**Date Collected: 05/03/17 13:37**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-5**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/10/17 07:55 | 05/12/17 13:33 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:10 | 1 |
| **Arsenic** | **0.039** | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:10 | 1 |
| **Barium** | **0.26** | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:10 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:10 | 1 |
| **Boron** | **1.3** | | 0.25 | | mg/L | | 05/10/17 07:55 | 05/15/17 13:24 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:10 | 1 |
| **Calcium** | **160** | | 0.20 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:10 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:10 | 1 |
| **Cobalt** | **0.0035** | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:10 | 1 |
| **Lead** | **0.00093** | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:10 | 1 |
| **Molybdenum** | **0.015** | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:10 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:10 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:10 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/09/17 11:00 | 05/10/17 09:27 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1300** | | 10 | | mg/L | | | 05/08/17 08:16 | 1 |
| **Chloride** | **160** | | 10 | | mg/L | | | 05/11/17 23:42 | 5 |
| **Fluoride** | **0.42** | | 0.10 | | mg/L | | | 05/17/17 18:40 | 1 |
| **Sulfate** | **440** | | 100 | | mg/L | | | 05/13/17 23:47 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

**Client Sample ID: MW-12**
**Date Collected: 05/03/17 16:00**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-6**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.011 | | 0.010 | | mg/L | | 05/10/17 07:55 | 05/12/17 14:17 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:14 | 1 |
| Arsenic | 0.10 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:14 | 1 |
| Barium | 0.17 | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:14 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:14 | 1 |
| Boron | 0.49 | | 0.050 | | mg/L | | 05/10/17 07:55 | 05/15/17 13:36 | 1 |
| Cadmium | 0.0022 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:14 | 1 |
| Calcium | 120 | | 0.20 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:14 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:14 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:14 | 1 |
| Lead | 0.0038 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:14 | 1 |
| Molybdenum | 0.017 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:14 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:14 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:14 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/09/17 11:00 | 05/10/17 09:28 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1200 | | 10 | | mg/L | | | 05/08/17 08:19 | 1 |
| Chloride | 190 | | 10 | | mg/L | | | 05/11/17 23:15 | 5 |
| Fluoride | 0.37 | | 0.10 | | mg/L | | | 05/17/17 18:43 | 1 |
| Sulfate | 500 | | 100 | | mg/L | | | 05/15/17 08:15 | 20 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

## Client Sample ID: MW-15

**Date Collected: 05/04/17 13:05**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-7

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.023** | | 0.010 | | mg/L | | 05/10/17 07:55 | 05/12/17 14:21 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:25 | 1 |
| **Arsenic** | **0.011** | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:25 | 1 |
| **Barium** | **0.049** | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:25 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:25 | 1 |
| **Boron** | **1.5** | | 0.25 | | mg/L | | 05/10/17 07:55 | 05/15/17 13:39 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:25 | 1 |
| **Calcium** | **180** | | 0.20 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:25 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:25 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:25 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:25 | 1 |
| **Molybdenum** | **0.023** | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:25 | 1 |
| **Selenium** | **0.0034** | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:25 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:25 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/09/17 11:00 | 05/10/17 09:33 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1700** | | 10 | | mg/L | | | 05/08/17 08:21 | 1 |
| **Chloride** | **190** | | 10 | | mg/L | | | 05/11/17 23:15 | 5 |
| **Fluoride** | **0.57** | | 0.10 | | mg/L | | | 05/17/17 18:54 | 1 |
| **Sulfate** | **670** | | 100 | | mg/L | | | 05/15/17 08:16 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

**Client Sample ID: MW-17**
**Date Collected: 05/04/17 15:47**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-8**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.016 | | 0.010 | | mg/L | | 05/10/17 07:55 | 05/12/17 14:32 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:29 | 1 |
| Arsenic | 0.24 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:29 | 1 |
| Barium | 0.39 | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:29 | 1 |
| Beryllium | 0.0013 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:29 | 1 |
| Boron | 1.2 | | 0.25 | | mg/L | | 05/10/17 07:55 | 05/15/17 13:43 | 5 |
| Cadmium | 0.0023 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:29 | 1 |
| Calcium | 170 | | 0.20 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:29 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:29 | 1 |
| Cobalt | 0.0023 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:29 | 1 |
| Lead | 0.00066 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:29 | 1 |
| Molybdenum | 0.036 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:29 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:29 | 1 |
| Thallium | 0.0065 | | 0.0020 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:29 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/09/17 11:00 | 05/10/17 09:34 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1500 | | 10 | | mg/L | | | 05/08/17 08:24 | 1 |
| Chloride | 210 | | 10 | | mg/L | | | 05/11/17 23:16 | 5 |
| Fluoride | 0.61 | | 0.10 | | mg/L | | | 05/17/17 18:57 | 1 |
| Sulfate | 720 | | 130 | | mg/L | | | 05/15/17 08:17 | 25 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

**Client Sample ID: MW-18**
**Date Collected: 05/05/17 10:04**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-9**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.010 | | 0.010 | | mg/L | | 05/10/17 07:55 | 05/12/17 14:36 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:33 | 1 |
| Arsenic | 0.0032 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:33 | 1 |
| Barium | 0.12 | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:33 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:33 | 1 |
| Boron | 0.46 | | 0.050 | | mg/L | | 05/10/17 07:55 | 05/15/17 13:47 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:33 | 1 |
| Calcium | 130 | | 0.20 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:33 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:33 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:33 | 1 |
| Lead | 0.00057 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:33 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:33 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:33 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:33 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/09/17 11:00 | 05/10/17 09:36 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1100 | | 10 | | mg/L | | | 05/08/17 08:27 | 1 |
| Chloride | 180 | | 10 | | mg/L | | | 05/11/17 23:16 | 5 |
| Fluoride | 0.52 | | 0.10 | | mg/L | | | 05/17/17 19:00 | 1 |
| Sulfate | 360 | | 100 | | mg/L | | | 05/15/17 08:18 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

**Client Sample ID: MW-19**
**Date Collected: 05/05/17 11:17**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-10**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/10/17 07:55 | 05/12/17 14:40 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:37 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:37 | 1 |
| **Barium** | **0.076** | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:37 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:37 | 1 |
| **Boron** | **3.3** | | 0.50 | | mg/L | | 05/10/17 07:55 | 05/15/17 13:51 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:37 | 1 |
| **Calcium** | **88** | | 0.20 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:37 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:37 | 1 |
| **Cobalt** | **0.0013** | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:37 | 1 |
| **Lead** | **0.0012** | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:37 | 1 |
| **Molybdenum** | **0.035** | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:37 | 1 |
| **Selenium** | **0.0068** | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:37 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:37 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/09/17 11:00 | 05/10/17 09:37 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **640** | | 10 | | mg/L | | | 05/08/17 08:29 | 1 |
| **Chloride** | **38** | | 2.0 | | mg/L | | | 05/11/17 23:17 | 1 |
| **Fluoride** | **0.14** | | 0.10 | | mg/L | | | 05/17/17 19:03 | 1 |
| **Sulfate** | **160** | | 50 | | mg/L | | | 05/15/17 08:19 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

**Client Sample ID: Duplicate**
**Date Collected: 05/03/17 00:00**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-11**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/10/17 07:55 | 05/12/17 14:44 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:40 | 1 |
| **Arsenic** | **0.0014** | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:40 | 1 |
| **Barium** | **0.047** | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:40 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:40 | 1 |
| **Boron** | **0.18** | | 0.050 | | mg/L | | 05/10/17 07:55 | 05/15/17 13:55 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:40 | 1 |
| **Calcium** | **90** | | 0.20 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:40 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:40 | 1 |
| **Cobalt** | **0.0040** | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:40 | 1 |
| **Lead** | **0.0084** | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:40 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:40 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:40 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/10/17 07:55 | 05/11/17 18:40 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/09/17 11:00 | 05/10/17 09:39 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **450** | | 10 | | mg/L | | | 05/08/17 08:32 | 1 |
| **Chloride** | **60** | | 2.0 | | mg/L | | | 05/11/17 23:19 | 1 |
| **Fluoride** | **0.15** | | 0.10 | | mg/L | | | 05/17/17 19:07 | 1 |
| **Sulfate** | **57** | | 10 | | mg/L | | | 05/15/17 08:22 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 384371

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-127751-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-127751-2 | MW-05 | Total/NA | Water | 7470A | |
| 500-127751-3 | MW-08 | Total/NA | Water | 7470A | |
| 500-127751-4 | MW-09 | Total/NA | Water | 7470A | |
| 500-127751-5 | MW-11 | Total/NA | Water | 7470A | |
| 500-127751-6 | MW-12 | Total/NA | Water | 7470A | |
| 500-127751-7 | MW-15 | Total/NA | Water | 7470A | |
| 500-127751-8 | MW-17 | Total/NA | Water | 7470A | |
| 500-127751-9 | MW-18 | Total/NA | Water | 7470A | |
| 500-127751-10 | MW-19 | Total/NA | Water | 7470A | |
| 500-127751-11 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-384371/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-384371/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-127751-1 MS | MW-01 | Total/NA | Water | 7470A | |
| 500-127751-1 MSD | MW-01 | Total/NA | Water | 7470A | |
| 500-127751-1 DU | MW-01 | Total/NA | Water | 7470A | |

### Prep Batch: 384540

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-127751-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-127751-2 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-127751-3 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-127751-4 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-127751-5 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-127751-6 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-127751-7 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-127751-8 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-127751-9 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-127751-10 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-127751-11 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-384540/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-384540/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 384572

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-127751-1 | MW-01 | Total/NA | Water | 7470A | 384371 |
| 500-127751-2 | MW-05 | Total/NA | Water | 7470A | 384371 |
| 500-127751-3 | MW-08 | Total/NA | Water | 7470A | 384371 |
| 500-127751-4 | MW-09 | Total/NA | Water | 7470A | 384371 |
| 500-127751-5 | MW-11 | Total/NA | Water | 7470A | 384371 |
| 500-127751-6 | MW-12 | Total/NA | Water | 7470A | 384371 |
| 500-127751-7 | MW-15 | Total/NA | Water | 7470A | 384371 |
| 500-127751-8 | MW-17 | Total/NA | Water | 7470A | 384371 |
| 500-127751-9 | MW-18 | Total/NA | Water | 7470A | 384371 |
| 500-127751-10 | MW-19 | Total/NA | Water | 7470A | 384371 |
| 500-127751-11 | Duplicate | Total/NA | Water | 7470A | 384371 |
| MB 500-384371/12-A | Method Blank | Total/NA | Water | 7470A | 384371 |
| LCS 500-384371/13-A | Lab Control Sample | Total/NA | Water | 7470A | 384371 |
| 500-127751-1 MS | MW-01 | Total/NA | Water | 7470A | 384371 |
| 500-127751-1 MSD | MW-01 | Total/NA | Water | 7470A | 384371 |
| 500-127751-1 DU | MW-01 | Total/NA | Water | 7470A | 384371 |

### Analysis Batch: 384908

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-127751-1 | MW-01 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-2 | MW-05 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-3 | MW-08 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-4 | MW-09 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-5 | MW-11 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-6 | MW-12 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-7 | MW-15 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-8 | MW-17 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-9 | MW-18 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-10 | MW-19 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-11 | Duplicate | Total Recoverable | Water | 6020A | 384540 |
| MB 500-384540/1-A | Method Blank | Total Recoverable | Water | 6020A | 384540 |
| LCS 500-384540/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 384540 |

### Analysis Batch: 385029

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-127751-1 | MW-01 | Total Recoverable | Water | 6010C | 384540 |
| 500-127751-2 | MW-05 | Total Recoverable | Water | 6010C | 384540 |
| 500-127751-3 | MW-08 | Total Recoverable | Water | 6010C | 384540 |
| 500-127751-4 | MW-09 | Total Recoverable | Water | 6010C | 384540 |
| 500-127751-5 | MW-11 | Total Recoverable | Water | 6010C | 384540 |
| 500-127751-6 | MW-12 | Total Recoverable | Water | 6010C | 384540 |
| 500-127751-7 | MW-15 | Total Recoverable | Water | 6010C | 384540 |
| 500-127751-8 | MW-17 | Total Recoverable | Water | 6010C | 384540 |
| 500-127751-9 | MW-18 | Total Recoverable | Water | 6010C | 384540 |
| 500-127751-10 | MW-19 | Total Recoverable | Water | 6010C | 384540 |
| 500-127751-11 | Duplicate | Total Recoverable | Water | 6010C | 384540 |
| MB 500-384540/1-A | Method Blank | Total Recoverable | Water | 6010C | 384540 |
| LCS 500-384540/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 384540 |

### Analysis Batch: 385270

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-127751-1 | MW-01 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-2 | MW-05 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-3 | MW-08 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-4 | MW-09 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-5 | MW-11 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-6 | MW-12 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-7 | MW-15 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-8 | MW-17 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-9 | MW-18 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-10 | MW-19 | Total Recoverable | Water | 6020A | 384540 |
| 500-127751-11 | Duplicate | Total Recoverable | Water | 6020A | 384540 |
| MB 500-384540/1-A | Method Blank | Total Recoverable | Water | 6020A | 384540 |
| LCS 500-384540/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 384540 |

## General Chemistry

### Analysis Batch: 384161

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-127751-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-127751-2 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-127751-3 | MW-08 | Total/NA | Water | SM 2540C | |

## General Chemistry (Continued)

### Analysis Batch: 384161 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-127751-4 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-127751-5 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-127751-6 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-127751-7 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-127751-8 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-127751-9 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-127751-10 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-127751-11 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-384161/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-384161/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-127751-1 MS | MW-01 | Total/NA | Water | SM 2540C | |
| 500-127751-1 DU | MW-01 | Total/NA | Water | SM 2540C | |
| 500-127751-2 DU | MW-05 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 384861

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-127751-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-127751-2 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-127751-3 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-127751-4 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-127751-5 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-127751-6 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-127751-7 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-127751-8 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-127751-9 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-127751-10 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-127751-11 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-384861/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-384861/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-127751-4 MS | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-127751-4 MSD | MW-09 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 385077

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-127751-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-127751-2 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-127751-3 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-127751-4 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-127751-5 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-385077/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-385077/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 385170

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-127751-6 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-127751-7 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-127751-8 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-127751-9 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-127751-10 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-127751-11 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-385170/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |

## General Chemistry (Continued)

### Analysis Batch: 385170 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-385170/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-127751-10 MS | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-127751-10 MSD | MW-19 | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 385715

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-127751-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-127751-2 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-127751-3 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-127751-4 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-127751-5 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-127751-6 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-127751-7 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-127751-8 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-127751-9 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-127751-10 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-127751-11 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-385715/32 | Method Blank | Total/NA | Water | SM 4500 F C | |
| MB 500-385715/4 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-385715/33 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| LCS 500-385715/5 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-384540/1-A**
**Matrix: Water**
**Analysis Batch: 385029**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 384540**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/10/17 07:55 | 05/12/17 13:10 | 1 |

**Lab Sample ID: LCS 500-384540/2-A**
**Matrix: Water**
**Analysis Batch: 385029**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 384540**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.511 | | mg/L | | 102 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-384540/1-A**
**Matrix: Water**
**Analysis Batch: 384908**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 384540**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:48 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:48 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:48 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:48 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:48 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:48 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:48 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:48 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:48 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:48 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:48 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/10/17 07:55 | 05/11/17 17:48 | 1 |

**Lab Sample ID: MB 500-384540/1-A**
**Matrix: Water**
**Analysis Batch: 385270**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 384540**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 05/10/17 07:55 | 05/15/17 13:01 | 1 |

**Lab Sample ID: LCS 500-384540/2-A**
**Matrix: Water**
**Analysis Batch: 384908**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 384540**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.493 | | mg/L | | 99 | 80 - 120 |
| Arsenic | 0.100 | 0.0957 | | mg/L | | 96 | 80 - 120 |
| Barium | 2.00 | 1.99 | | mg/L | | 99 | 80 - 120 |
| Beryllium | 0.0500 | 0.0473 | | mg/L | | 95 | 80 - 120 |
| Cadmium | 0.0500 | 0.0507 | | mg/L | | 101 | 80 - 120 |
| Calcium | 10.0 | 11.4 | | mg/L | | 114 | 80 - 120 |
| Chromium | 0.200 | 0.202 | | mg/L | | 101 | 80 - 120 |
| Cobalt | 0.500 | 0.500 | | mg/L | | 100 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-384540/2-A**
**Matrix: Water**
**Analysis Batch: 384908**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 384540**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lead | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |
| Molybdenum | 1.00 | 0.928 | | mg/L | | 93 | 80 - 120 |
| Selenium | 0.100 | 0.0971 | | mg/L | | 97 | 80 - 120 |
| Thallium | 0.100 | 0.103 | | mg/L | | 103 | 80 - 120 |

**Lab Sample ID: LCS 500-384540/2-A**
**Matrix: Water**
**Analysis Batch: 385270**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 384540**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 0.990 | | mg/L | | 99 | 80 - 120 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-384371/12-A**
**Matrix: Water**
**Analysis Batch: 384572**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 384371**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/09/17 11:00 | 05/10/17 08:58 | 1 |

**Lab Sample ID: LCS 500-384371/13-A**
**Matrix: Water**
**Analysis Batch: 384572**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 384371**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00200 | | mg/L | | 100 | 80 - 120 |

**Lab Sample ID: 500-127751-1 MS**
**Matrix: Water**
**Analysis Batch: 384572**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 384371**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00103 | | mg/L | | 103 | 75 - 125 |

**Lab Sample ID: 500-127751-1 MSD**
**Matrix: Water**
**Analysis Batch: 384572**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 384371**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000993 | | mg/L | | 99 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-127751-1 DU**
**Matrix: Water**
**Analysis Batch: 384572**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 384371**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-384161/1**
**Matrix: Water**
**Analysis Batch: 384161**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 05/08/17 07:54 | 1 |

**Lab Sample ID: LCS 500-384161/2**
**Matrix: Water**
**Analysis Batch: 384161**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | | | 250 | 290 | | mg/L | | 116 | 80 - 120 | | |

**Lab Sample ID: 500-127751-1 MS**
**Matrix: Water**
**Analysis Batch: 384161**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 460 | | 250 | 762 | | mg/L | | 120 | 75 - 125 | | |

**Lab Sample ID: 500-127751-1 DU**
**Matrix: Water**
**Analysis Batch: 384161**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 460 | | | 476 | | mg/L | | | | 3 | 5 |

**Lab Sample ID: 500-127751-2 DU**
**Matrix: Water**
**Analysis Batch: 384161**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 710 | | | 746 | | mg/L | | | | 4 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-384861/12**
**Matrix: Water**
**Analysis Batch: 384861**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/11/17 23:01 | 1 |

**Lab Sample ID: LCS 500-384861/13**
**Matrix: Water**
**Analysis Batch: 384861**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 52.1 | | mg/L | | 104 | 80 - 120 | | |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: 500-127751-4 MS**
**Matrix: Water**
**Analysis Batch: 384861**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 38 | | 50.0 | 81.4 | | mg/L | | 87 | 75 - 125 |

**Lab Sample ID: 500-127751-4 MSD**
**Matrix: Water**
**Analysis Batch: 384861**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 38 | | 50.0 | 81.8 | | mg/L | | 87 | 75 - 125 | 0 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-385715/32**
**Matrix: Water**
**Analysis Batch: 385715**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/17/17 18:32 | 1 |

**Lab Sample ID: MB 500-385715/4**
**Matrix: Water**
**Analysis Batch: 385715**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/17/17 17:00 | 1 |

**Lab Sample ID: LCS 500-385715/33**
**Matrix: Water**
**Analysis Batch: 385715**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 9.87 | | mg/L | | 99 | 80 - 120 |

**Lab Sample ID: LCS 500-385715/5**
**Matrix: Water**
**Analysis Batch: 385715**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.2 | | mg/L | | 102 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-385077/3**
**Matrix: Water**
**Analysis Batch: 385077**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/13/17 23:26 | 1 |

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: LCS 500-385077/4**
**Matrix: Water**
**Analysis Batch: 385077**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 19.9 | | mg/L | | 99 | 80 - 120 |

**Lab Sample ID: MB 500-385170/3**
**Matrix: Water**
**Analysis Batch: 385170**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/15/17 08:13 | 1 |

**Lab Sample ID: LCS 500-385170/4**
**Matrix: Water**
**Analysis Batch: 385170**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 19.4 | | mg/L | | 97 | 80 - 120 |

**Lab Sample ID: 500-127751-10 MS**
**Matrix: Water**
**Analysis Batch: 385170**

**Client Sample ID: MW-19**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 160 | | 400 | 533 | | mg/L | | 93 | 75 - 125 |

**Lab Sample ID: 500-127751-10 MSD**
**Matrix: Water**
**Analysis Batch: 385170**

**Client Sample ID: MW-19**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 160 | | 400 | 545 | | mg/L | | 96 | 75 - 125 | 2 | 20 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

## Client Sample ID: MW-01

**Date Collected: 05/03/17 09:48**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 385029 | 05/12/17 13:17 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 384908 | 05/11/17 17:55 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 385270 | 05/15/17 13:09 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 384371 | 05/09/17 11:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 384572 | 05/10/17 09:16 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 384161 | 05/08/17 07:59 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 384861 | 05/11/17 23:06 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 385715 | 05/17/17 18:23 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 385077 | | CLB | TAL CHI |
| | | | | | (Start) | 05/13/17 23:43 | | |
| | | | | | (End) | 05/13/17 23:44 | | |

## Client Sample ID: MW-05

**Date Collected: 05/01/17 15:54**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 385029 | 05/12/17 13:21 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 384908 | 05/11/17 17:59 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 385270 | 05/15/17 13:13 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 384371 | 05/09/17 11:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 384572 | 05/10/17 09:22 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 384161 | 05/08/17 08:06 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 384861 | 05/11/17 23:07 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 385715 | 05/17/17 18:26 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 385077 | | CLB | TAL CHI |
| | | | | | (Start) | 05/13/17 23:44 | | |
| | | | | | (End) | 05/13/17 23:45 | | |

## Client Sample ID: MW-08

**Date Collected: 05/02/17 13:25**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 385029 | 05/12/17 13:25 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |

## Client Sample ID: MW-08

**Date Collected: 05/02/17 13:25**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-3**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 384908 | 05/11/17 18:03 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 385270 | 05/15/17 13:17 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 384371 | 05/09/17 11:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 384572 | 05/10/17 09:24 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 384161 | 05/08/17 08:11 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 384861 | 05/11/17 23:08 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 385715 | 05/17/17 18:29 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 385077 | | CLB | TAL CHI |
| | | | | | (Start) | 05/13/17 23:45 | | |
| | | | | | (End) | 05/13/17 23:46 | | |

## Client Sample ID: MW-09

**Date Collected: 05/03/17 11:24**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-4**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 385029 | 05/12/17 13:30 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 384908 | 05/11/17 18:06 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 385270 | 05/15/17 13:20 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 384371 | 05/09/17 11:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 384572 | 05/10/17 09:25 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 384161 | 05/08/17 08:14 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 384861 | 05/11/17 23:11 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 385715 | 05/17/17 18:37 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 385077 | | CLB | TAL CHI |
| | | | | | (Start) | 05/13/17 23:46 | | |
| | | | | | (End) | 05/13/17 23:47 | | |

## Client Sample ID: MW-11

**Date Collected: 05/03/17 13:37**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-5**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 385029 | 05/12/17 13:33 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 384908 | 05/11/17 18:10 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 385270 | 05/15/17 13:24 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

## Client Sample ID: MW-11

**Date Collected: 05/03/17 13:37**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 384371 | 05/09/17 11:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 384572 | 05/10/17 09:27 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 384161 | 05/08/17 08:16 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 384861 | 05/11/17 23:42 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 385715 | 05/17/17 18:40 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 385077 | | CLB | TAL CHI |
| | | | | | (Start) | 05/13/17 23:47 | | |
| | | | | | (End) | 05/13/17 23:48 | | |

## Client Sample ID: MW-12

**Date Collected: 05/03/17 16:00**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 385029 | 05/12/17 14:17 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 384908 | 05/11/17 18:14 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 385270 | 05/15/17 13:36 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 384371 | 05/09/17 11:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 384572 | 05/10/17 09:28 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 384161 | 05/08/17 08:19 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 384861 | 05/11/17 23:15 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 385715 | 05/17/17 18:43 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 385170 | | CLB | TAL CHI |
| | | | | | (Start) | 05/15/17 08:15 | | |
| | | | | | (End) | 05/15/17 08:16 | | |

## Client Sample ID: MW-15

**Date Collected: 05/04/17 13:05**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 385029 | 05/12/17 14:21 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 384908 | 05/11/17 18:25 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 385270 | 05/15/17 13:39 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 384371 | 05/09/17 11:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 384572 | 05/10/17 09:33 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 384161 | 05/08/17 08:21 | CLB | TAL CHI |

## Client Sample ID: MW-15

**Lab Sample ID: 500-127751-7**

**Date Collected: 05/04/17 13:05**

**Matrix: Water**

**Date Received: 05/05/17 17:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 384861 | 05/11/17 23:15 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 385715 | 05/17/17 18:54 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 385170 | | CLB | TAL CHI |
| | | | | | (Start) | 05/15/17 08:16 | | |
| | | | | | (End) | 05/15/17 08:17 | | |

## Client Sample ID: MW-17

**Lab Sample ID: 500-127751-8**

**Date Collected: 05/04/17 15:47**

**Matrix: Water**

**Date Received: 05/05/17 17:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 385029 | 05/12/17 14:32 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 384908 | 05/11/17 18:29 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 385270 | 05/15/17 13:43 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 384371 | 05/09/17 11:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 384572 | 05/10/17 09:34 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 384161 | 05/08/17 08:24 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 384861 | 05/11/17 23:16 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 385715 | 05/17/17 18:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 25 | 385170 | | CLB | TAL CHI |
| | | | | | (Start) | 05/15/17 08:17 | | |
| | | | | | (End) | 05/15/17 08:18 | | |

## Client Sample ID: MW-18

**Lab Sample ID: 500-127751-9**

**Date Collected: 05/05/17 10:04**

**Matrix: Water**

**Date Received: 05/05/17 17:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 385029 | 05/12/17 14:36 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 384908 | 05/11/17 18:33 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 385270 | 05/15/17 13:47 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 384371 | 05/09/17 11:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 384572 | 05/10/17 09:36 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 384161 | 05/08/17 08:27 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 384861 | 05/11/17 23:16 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 385715 | 05/17/17 19:00 | EAT | TAL CHI |

## Client Sample ID: MW-18

**Date Collected: 05/05/17 10:04**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-9**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 385170 | | CLB | TAL CHI |
| | | | | | (Start) | 05/15/17 08:18 | | |
| | | | | | (End) | 05/15/17 08:19 | | |

## Client Sample ID: MW-19

**Date Collected: 05/05/17 11:17**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-10**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 385029 | 05/12/17 14:40 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 384908 | 05/11/17 18:37 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 385270 | 05/15/17 13:51 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 384371 | 05/09/17 11:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 384572 | 05/10/17 09:37 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 384161 | 05/08/17 08:29 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 384861 | 05/11/17 23:17 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 385715 | 05/17/17 19:03 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 385170 | | CLB | TAL CHI |
| | | | | | (Start) | 05/15/17 08:19 | | |
| | | | | | (End) | 05/15/17 08:20 | | |

## Client Sample ID: Duplicate

**Date Collected: 05/03/17 00:00**
**Date Received: 05/05/17 17:30**

**Lab Sample ID: 500-127751-11**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 385029 | 05/12/17 14:44 | KML | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 384908 | 05/11/17 18:40 | PFK | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 384540 | 05/10/17 07:55 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 385270 | 05/15/17 13:55 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 384371 | 05/09/17 11:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 384572 | 05/10/17 09:39 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 384161 | 05/08/17 08:32 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 384861 | 05/11/17 23:19 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 385715 | 05/17/17 19:07 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 385170 | | CLB | TAL CHI |
| | | | | | (Start) | 05/15/17 08:22 | | |
| | | | | | (End) | 05/15/17 08:24 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-18 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Chic
2417 Bond St.
University Park, IL
708-534-5200
Fax. 708-534-5211 500-127751 COC

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-127751

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No N/A |

**Temperature °C of Cooler** 3.1-3.2, 2.6-2.7, 2.4-2.5

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| Yes No | Yes No N/A |

Sample Labels and COC Agree: Yes No — COC not present

| Sampler Name: | COMPANY: |
|---|---|
| Ian John Howieson | KPRG & Associates Inc. |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly- Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 5-3-17 | 09:48 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-05 | 5-1-17 | 15:54 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-08 | 5-2-17 | 13:25 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-09 | 5-3-17 | 11:24 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-11 | 5-3-17 | 13:37 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-12 | 5-3-17 | 16:00 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-15 | 5-4-17 | 13:05 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-17 | 5-4-17 | 15:47 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-18 | 5-5-17 | 10:04 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-19 | 5-5-17 | 11:17 | W | 5 | X | X | X | X | X | X | |
| 11 | | Duplicates | 5-3-17 | — | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 5-5-17 | 17:30 | | TALI | 05/05/17 | 1730 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**
WW = Wastewater, W = Water, S = Soil, SL = Sludge, MS = Miscellaneous, OL = Oil, A = Air, SE = Sediment, SO = Solid, DL = Drum Liquid, DS = Drum Solid, L = Leachate, W = Wipe, O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 05/05/17
Courier:
Hand Delivered [X]
Bill of Lading:

__1__of__1__



STL-8208 (0600)

5/19/2017

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-127751-1
SDG Number:

**Login Number: 127751**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.2,2.7,2.5 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica

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# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-127751-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*6/5/2017 2:38:17 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-127751-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-127751-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/5/2017 5:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperatures of the 3 coolers at receipt time were 2.5º C, 2.7º C and 3.2º C.

**RAD**
Method(s) PrecSep_0: Radium 228 Prep Batch 160-308122
The following sample was reduced due to heavy amounts of sediment making sample murky and brown.
MW-17 (500-127751-8)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-308112
The following sample was reduced due to heavy amounts of sediment making sample murky and brown.

MW-17 (500-127751-8)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-127751-1 | MW-01 | Water | 05/03/17 09:48 | 05/05/17 17:30 |
| 500-127751-2 | MW-05 | Water | 05/01/17 15:54 | 05/05/17 17:30 |
| 500-127751-3 | MW-08 | Water | 05/02/17 13:25 | 05/05/17 17:30 |
| 500-127751-4 | MW-09 | Water | 05/03/17 11:24 | 05/05/17 17:30 |
| 500-127751-5 | MW-11 | Water | 05/03/17 13:37 | 05/05/17 17:30 |
| 500-127751-6 | MW-12 | Water | 05/03/17 16:00 | 05/05/17 17:30 |
| 500-127751-7 | MW-15 | Water | 05/04/17 13:05 | 05/05/17 17:30 |
| 500-127751-8 | MW-17 | Water | 05/04/17 15:47 | 05/05/17 17:30 |
| 500-127751-9 | MW-18 | Water | 05/05/17 10:04 | 05/05/17 17:30 |
| 500-127751-10 | MW-19 | Water | 05/05/17 11:17 | 05/05/17 17:30 |
| 500-127751-11 | Duplicate | Water | 05/03/17 00:00 | 05/05/17 17:30 |

## Client Sample ID: MW-01

**Date Collected: 05/03/17 09:48**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.195** | | 0.0959 | 0.0975 | 1.00 | 0.112 | pCi/L | 05/10/17 10:51 | 06/01/17 08:10 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.6* | | *40 - 110* | *05/10/17 10:51* | *06/01/17 08:10* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.378 | U | 0.258 | 0.261 | 1.00 | 0.396 | pCi/L | 05/10/17 11:13 | 05/24/17 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.6* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:53* | *1* |
| *Y Carrier* | *74.4* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.574** | | 0.276 | 0.278 | 5.00 | 0.396 | pCi/L | | 06/02/17 12:09 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-2

## Client Sample ID: MW-05

**Date Collected: 05/01/17 15:54**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0898 | U | 0.0803 | 0.0807 | 1.00 | 0.122 | pCi/L | 05/10/17 10:51 | 06/01/17 08:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.3* | | *40 - 110* | *05/10/17 10:51* | *06/01/17 08:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.281 | U | 0.272 | 0.273 | 1.00 | 0.439 | pCi/L | 05/10/17 11:13 | 05/24/17 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.3* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:53* | *1* |
| *Y Carrier* | *73.3* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.371 | U | 0.284 | 0.285 | 5.00 | 0.439 | pCi/L | | 06/02/17 12:09 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-2

## Client Sample ID: MW-08

**Date Collected: 05/02/17 13:25**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.182** | | 0.0956 | 0.0970 | 1.00 | 0.116 | pCi/L | 05/10/17 10:51 | 06/01/17 08:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *81.7* | | *40 - 110* | *05/10/17 10:51* | *06/01/17 08:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.204 | U | 0.287 | 0.287 | 1.00 | 0.480 | pCi/L | 05/10/17 11:13 | 05/24/17 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *81.7* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:53* | *1* |
| *Y Carrier* | *74.4* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.386 | U | 0.302 | 0.303 | 5.00 | 0.480 | pCi/L | | 06/02/17 12:09 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-2

## Client Sample ID: MW-09

**Date Collected: 05/03/17 11:24**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0245 | U | 0.0592 | 0.0592 | 1.00 | 0.110 | pCi/L | 05/10/17 10:51 | 06/01/17 08:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.2* | | *40 - 110* | *05/10/17 10:51* | *06/01/17 08:12* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.299 | U | 0.277 | 0.279 | 1.00 | 0.445 | pCi/L | 05/10/17 11:13 | 05/24/17 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.2* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:53* | *1* |
| *Y Carrier* | *69.2* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.324 | U | 0.284 | 0.285 | 5.00 | 0.445 | pCi/L | | 06/02/17 12:09 | 1 |

## Client Sample ID: MW-11

**Date Collected: 05/03/17 13:37**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.265** | | 0.103 | 0.106 | 1.00 | 0.105 | pCi/L | 05/10/17 10:51 | 06/01/17 08:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.6* | | *40 - 110* | *05/10/17 10:51* | *06/01/17 08:12* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.397 | U | 0.275 | 0.277 | 1.00 | 0.424 | pCi/L | 05/10/17 11:13 | 05/24/17 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.6* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:53* | *1* |
| *Y Carrier* | *70.7* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.662** | | 0.294 | 0.297 | 5.00 | 0.424 | pCi/L | | 06/02/17 12:09 | 1 |

## Client Sample ID: MW-12

**Date Collected: 05/03/17 16:00**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.141** | | 0.0870 | 0.0879 | 1.00 | 0.116 | pCi/L | 05/10/17 10:51 | 06/01/17 08:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.4* | | *40 - 110* | *05/10/17 10:51* | *06/01/17 08:12* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.377 | U | 0.295 | 0.297 | 1.00 | 0.467 | pCi/L | 05/10/17 11:13 | 05/24/17 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.4* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:53* | *1* |
| *Y Carrier* | *75.5* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.518** | | 0.308 | 0.310 | 5.00 | 0.467 | pCi/L | | 06/02/17 12:09 | 1 |

## Client Sample ID: MW-15

**Date Collected: 05/04/17 13:05**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.142 | | 0.0844 | 0.0854 | 1.00 | 0.113 | pCi/L | 05/10/17 10:51 | 06/01/17 08:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *05/10/17 10:51* | *06/01/17 08:12* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.119 | U | 0.266 | 0.266 | 1.00 | 0.456 | pCi/L | 05/10/17 11:13 | 05/24/17 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:53* | *1* |
| *Y Carrier* | *70.3* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.260 | U | 0.279 | 0.279 | 5.00 | 0.456 | pCi/L | | 06/02/17 12:09 | 1 |

## Client Sample ID: MW-17

**Date Collected: 05/04/17 15:47**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.786 | | 0.241 | 0.252 | 1.00 | 0.222 | pCi/L | 05/10/17 10:51 | 06/01/17 08:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.0* | | *40 - 110* | *05/10/17 10:51* | *06/01/17 08:12* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.12 | | 0.645 | 0.654 | 1.00 | 0.968 | pCi/L | 05/10/17 11:13 | 05/24/17 10:54 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.0* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:54* | *1* |
| *Y Carrier* | *66.9* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:54* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.91 | | 0.689 | 0.700 | 5.00 | 0.968 | pCi/L | | 06/02/17 12:09 | 1 |

## Client Sample ID: MW-18

**Date Collected: 05/05/17 10:04**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.170** | | 0.0912 | 0.0925 | 1.00 | 0.114 | pCi/L | 05/10/17 10:51 | 06/01/17 08:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.5* | | *40 - 110* | *05/10/17 10:51* | *06/01/17 08:12* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.442 | U | 0.372 | 0.374 | 1.00 | 0.596 | pCi/L | 05/10/17 11:13 | 05/24/17 10:54 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.5* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:54* | *1* |
| *Y Carrier* | *75.1* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:54* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.612** | | 0.383 | 0.385 | 5.00 | 0.596 | pCi/L | | 06/02/17 12:09 | 1 |

## Client Sample ID: MW-19

**Date Collected: 05/05/17 11:17**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-10

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.222 | | 0.101 | 0.103 | 1.00 | 0.120 | pCi/L | 05/10/17 10:51 | 06/01/17 08:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.4* | | *40 - 110* | *05/10/17 10:51* | *06/01/17 08:12* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.701 | | 0.381 | 0.387 | 1.00 | 0.580 | pCi/L | 05/10/17 11:13 | 05/24/17 10:55 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.4* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:55* | *1* |
| *Y Carrier* | *69.2* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:55* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.923 | | 0.394 | 0.400 | 5.00 | 0.580 | pCi/L | | 06/02/17 12:09 | 1 |

## Client Sample ID: Duplicate

**Date Collected: 05/03/17 00:00**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-11

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0639 | U | 0.0682 | 0.0684 | 1.00 | 0.108 | pCi/L | 05/10/17 10:51 | 06/01/17 08:13 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.4* | | *40 - 110* | *05/10/17 10:51* | *06/01/17 08:13* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.542** | | 0.347 | 0.350 | 1.00 | 0.538 | pCi/L | 05/10/17 11:13 | 05/24/17 10:55 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.4* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:55* | *1* |
| *Y Carrier* | *71.0* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:55* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.606** | | 0.353 | 0.357 | 5.00 | 0.538 | pCi/L | | 06/02/17 12:09 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-2

## Rad

### Prep Batch: 308112

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-127751-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-127751-2 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-127751-3 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-127751-4 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-127751-5 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-127751-6 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-127751-7 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-127751-8 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-127751-9 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-127751-10 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-127751-11 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-308112/1-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-308112/2-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-127751-1 DU | MW-01 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 308122

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-127751-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-127751-2 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-127751-3 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-127751-4 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-127751-5 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-127751-6 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-127751-7 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-127751-8 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-127751-9 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-127751-10 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-127751-11 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-308122/1-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-308122/2-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-127751-1 DU | MW-01 | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-308112/1-A**
**Matrix: Water**
**Analysis Batch: 311425**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 308112**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.007385 | U | 0.00615 | 0.00619 | 1.00 | 0.00889 | pCi/L | 05/10/17 10:51 | 06/01/17 08:08 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.3* | | *40 - 110* | *05/10/17 10:51* | *06/01/17 08:08* | *1* |

**Lab Sample ID: LCS 160-308112/2-A**
**Matrix: Water**
**Analysis Batch: 311425**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 308112**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 10.21 | | 1.07 | 1.00 | 0.0866 | pCi/L | 90 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *97.1* | | *40 - 110* |

**Lab Sample ID: 500-127751-1 DU**
**Matrix: Water**
**Analysis Batch: 311425**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 308112**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.195 | | | 0.1737 | | 0.0867 | 1.00 | 0.0906 | pCi/L | | | 0.12 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *86.1* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-308122/1-A**
**Matrix: Water**
**Analysis Batch: 310217**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 308122**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.03453 | U | 0.0271 | 0.0273 | 1.00 | 0.0429 | pCi/L | 05/10/17 11:13 | 05/24/17 10:51 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.3* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:51* | *1* |
| *Y Carrier* | *74.0* | | *40 - 110* | *05/10/17 11:13* | *05/24/17 10:51* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-308122/2-A**
**Matrix: Water**
**Analysis Batch: 310217**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 308122**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 13.4 | 15.03 | | 1.62 | 1.00 | 0.403 | pCi/L | 112 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *97.1* | | *40 - 110* |
| *Y Carrier* | *78.1* | | *40 - 110* |

**Lab Sample ID: 500-127751-1 DU**
**Matrix: Water**
**Analysis Batch: 310217**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 308122**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.378 | U | | 0.2705 | U | 0.233 | 1.00 | 0.366 | pCi/L | | | 0.22 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *86.1* | | *40 - 110* |
| *Y Carrier* | *78.1* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-2

## Client Sample ID: MW-01
**Date Collected: 05/03/17 09:48**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 308112 | 05/10/17 10:51 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 311425 | 06/01/17 08:10 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 308122 | 05/10/17 11:13 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 310217 | 05/24/17 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 311762 | 06/02/17 12:09 | RTM | TAL SL |

## Client Sample ID: MW-05
**Date Collected: 05/01/17 15:54**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 308112 | 05/10/17 10:51 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 311425 | 06/01/17 08:11 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 308122 | 05/10/17 11:13 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 310217 | 05/24/17 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 311762 | 06/02/17 12:09 | RTM | TAL SL |

## Client Sample ID: MW-08
**Date Collected: 05/02/17 13:25**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 308112 | 05/10/17 10:51 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 311425 | 06/01/17 08:11 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 308122 | 05/10/17 11:13 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 310217 | 05/24/17 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 311762 | 06/02/17 12:09 | RTM | TAL SL |

## Client Sample ID: MW-09
**Date Collected: 05/03/17 11:24**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 308112 | 05/10/17 10:51 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 311425 | 06/01/17 08:12 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 308122 | 05/10/17 11:13 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 310217 | 05/24/17 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 311762 | 06/02/17 12:09 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-2

## Client Sample ID: MW-11

**Date Collected: 05/03/17 13:37**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 308112 | 05/10/17 10:51 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 311425 | 06/01/17 08:12 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 308122 | 05/10/17 11:13 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 310217 | 05/24/17 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 311762 | 06/02/17 12:09 | RTM | TAL SL |

## Client Sample ID: MW-12

**Date Collected: 05/03/17 16:00**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 308112 | 05/10/17 10:51 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 311425 | 06/01/17 08:12 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 308122 | 05/10/17 11:13 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 310217 | 05/24/17 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 311762 | 06/02/17 12:09 | RTM | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 05/04/17 13:05**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 308112 | 05/10/17 10:51 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 311426 | 06/01/17 08:12 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 308122 | 05/10/17 11:13 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 310217 | 05/24/17 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 311762 | 06/02/17 12:09 | RTM | TAL SL |

## Client Sample ID: MW-17

**Date Collected: 05/04/17 15:47**
**Date Received: 05/05/17 17:30**

## Lab Sample ID: 500-127751-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 308112 | 05/10/17 10:51 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 311426 | 06/01/17 08:12 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 308122 | 05/10/17 11:13 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 310217 | 05/24/17 10:54 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 311762 | 06/02/17 12:09 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-2

## Client Sample ID: MW-18

**Lab Sample ID: 500-127751-9**

**Date Collected: 05/05/17 10:04**

**Matrix: Water**

**Date Received: 05/05/17 17:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 308112 | 05/10/17 10:51 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 311426 | 06/01/17 08:12 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 308122 | 05/10/17 11:13 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 310217 | 05/24/17 10:54 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 311762 | 06/02/17 12:09 | RTM | TAL SL |

## Client Sample ID: MW-19

**Lab Sample ID: 500-127751-10**

**Date Collected: 05/05/17 11:17**

**Matrix: Water**

**Date Received: 05/05/17 17:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 308112 | 05/10/17 10:51 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 311426 | 06/01/17 08:12 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 308122 | 05/10/17 11:13 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 310273 | 05/24/17 10:55 | ALD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 311762 | 06/02/17 12:09 | RTM | TAL SL |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-127751-11**

**Date Collected: 05/03/17 00:00**

**Matrix: Water**

**Date Received: 05/05/17 17:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 308112 | 05/10/17 10:51 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 311426 | 06/01/17 08:13 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 308122 | 05/10/17 11:13 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 310273 | 05/24/17 10:55 | ALD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 311762 | 06/02/17 12:09 | RTM | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc. TestAmerica Job ID: 500-127751-2
Project/Site: Powerton CCR

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-18 |

## Laboratory: TestAmerica St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200023 | 11-30-17 |

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chic**
2417 Bond St.
University Park, IL
708-534-5200
Fax. 708-534-5211 500-127751 COC

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-127751

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No N/A |

**Temperature °C of Cooler** 3.1-3.2, 2.6-2.7, 2.4-2.5

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No N/A |
| **pH Check OK** | **Res $CL_2$ Check OK** |
| Yes No | Yes No N/A |

Sample Labels and COC Agree: Yes No — COC not present

| Sampler Name: | COMPANY: | # / Cont. |
|---|---|---|
| Ian John Howieson | KPRG & Associates Inc. | Volume |
| **Project Name:** | **TestAmerica Project Number:** | Preserv. |
| Quarterly- Powerton CCR | 50011612 | |
| **Project Location:** | **TAT** | |
| Pekin, IL | 15 Days | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 5-3-17 | 09:48 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-05 | 5-1-17 | 15:54 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-08 | 5-2-17 | 13:25 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-09 | 5-3-17 | 11:24 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-11 | 5-3-17 | 13:37 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-12 | 5-3-17 | 16:00 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-15 | 5-4-17 | 13:05 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-17 | 5-4-17 | 15:47 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-18 | 5-5-17 | 10:04 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-19 | 5-5-17 | 11:17 | W | 5 | X | X | X | X | X | X | |
| 11 | | Duplicates | 5-3-17 | — | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 5-5-17 | 17:30 | | TALI | 05/05/17 | 1730 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**
WW = Wastewater; SE = Sediment; W = Water; SO = Solid; S = Soil; DL = Drum Liquid; SL = Sludge; DS = Drum Solid; MS = Miscellaneous; L = Leachate; OL = Oil; W = Wipe; A = Air; O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**eservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 05/05/17
Courier:
Hand Delivered [X]
Bill of Lading:

__1__of__1__

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

500-127751 Chain of Custody

testAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| | | | |
|---|---|---|---|
| **Client Information (Sub Contract Lab)** | Sampler: | Lab PM: Lang, Eric A. | C No: 500-86942.1 |
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | Page: Page 1 of 2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 6/5/2017 | | Job #: 500-127751-2 |
| City: Earth City | TAT Requested (days): | | |
| State, Zip: MO, 63045 | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | |
| Email: | WO #: | | |
| Project Name: Powerton CCR | Project #: 50011612 | | |
| Site: MWG - Powerton | SSOW#: | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Ra226Ra228_GFPC | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-127751-1) | 5/3/17 | 09:48 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-05 (500-127751-2) | 5/1/17 | 15:54 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-08 (500-127751-3) | 5/2/17 | 13:25 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-09 (500-127751-4) | 5/3/17 | 11:24 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-11 (500-127751-5) | 5/3/17 | 13:37 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-12 (500-127751-6) | 5/3/17 | 16:00 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-15 (500-127751-7) | 5/4/17 | 13:05 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-17 (500-127751-8) | 5/4/17 | 15:47 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-18 (500-127751-9) | 5/5/17 | 10:04 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| | |
|---|---|
| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Empty Kit Relinquished by: | | Date: | | Time: | | Method of Shipment: | |
| Relinquished by: | Date/Time: 05/08/17 @ 1300 | Company TA | Received by: | | Date/Time: 5-9-17 0905 | Company EASL | |
| Relinquished by: | Date/Time: | Company | Received by: | | Date/Time: | Company | |
| Relinquished by: | Date/Time: | Company | Received by: | | Date/Time: | Company | |

| | |
|---|---|
| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: |
| Cooler Temperature(s) °C and Other Remarks: | |

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-86942.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-127751-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 6/5/2017 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Ra226Ra228_GFPC | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-19 (500-127751-10) | 5/5/17 | 11:17 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| Duplicate (500-127751-11) | 5/3/17 | Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 05/08/17 @ 1300 | TA | [signature] | 5-9-17 0905 | TASL |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|



6/5/2017

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-127751-2

**Login Number: 127751**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.2,2.7,2.5 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-127751-2

**Login Number: 127751**
**List Number: 2**
**Creator: Taylor, Kristene N**

**List Source: TestAmerica St. Louis**
**List Creation: 05/09/17 01:21 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 18.0,18.0,18.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-127751-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) |
| 500-127751-1 | MW-01 | 87.6 |
| 500-127751-1 DU | MW-01 | 86.1 |
| 500-127751-2 | MW-05 | 85.3 |
| 500-127751-3 | MW-08 | 81.7 |
| 500-127751-4 | MW-09 | 88.2 |
| 500-127751-5 | MW-11 | 90.6 |
| 500-127751-6 | MW-12 | 89.4 |
| 500-127751-7 | MW-15 | 92.9 |
| 500-127751-8 | MW-17 | 87.0 |
| 500-127751-9 | MW-18 | 83.5 |
| 500-127751-10 | MW-19 | 91.4 |
| 500-127751-11 | Duplicate | 91.4 |
| LCS 160-308112/2-A | Lab Control Sample | 97.1 |
| MB 160-308112/1-A | Method Blank | 97.3 |

**Tracer/Carrier Legend**

Ba = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) | Y (40-110) |
| 500-127751-1 | MW-01 | 87.6 | 74.4 |
| 500-127751-1 DU | MW-01 | 86.1 | 78.1 |
| 500-127751-2 | MW-05 | 85.3 | 73.3 |
| 500-127751-3 | MW-08 | 81.7 | 74.4 |
| 500-127751-4 | MW-09 | 88.2 | 69.2 |
| 500-127751-5 | MW-11 | 90.6 | 70.7 |
| 500-127751-6 | MW-12 | 89.4 | 75.5 |
| 500-127751-7 | MW-15 | 92.9 | 70.3 |
| 500-127751-8 | MW-17 | 87.0 | 66.9 |
| 500-127751-9 | MW-18 | 83.5 | 75.1 |
| 500-127751-10 | MW-19 | 91.4 | 69.2 |
| 500-127751-11 | Duplicate | 91.4 | 71.0 |
| LCS 160-308122/2-A | Lab Control Sample | 97.1 | 78.1 |
| MB 160-308122/1-A | Method Blank | 97.3 | 74.0 |

**Tracer/Carrier Legend**

Ba = Ba Carrier
Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-133196-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*9/13/2017 4:07:46 PM*
Robin Kintz, Project Manager II
(708)534-5200
robin.kintz@testamericainc.com

Designee for

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

LINKS

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Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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## Job ID: 500-133196-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-133196-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/26/2017 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 9 coolers at receipt time were 2.4º C, 2.7º C, 2.8º C, 3.0º C, 3.1º C, 3.4º C, 3.7º C, 4.9º C and 5.8º C.

**Receipt Exceptions**

MW-14 (500-133196-11) was listed on the Chain of Custody (COC); however, no containers were received. Per past events, this well is not collected for this program.

**Metals**
Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-399960. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

## Client Sample ID: MW-02 — Lab Sample ID: 500-133196-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.062 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.3 | V | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 86 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 440 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 49 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.19 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 61 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-133196-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0010 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.066 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.40 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 79 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 430 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 52 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.28 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 52 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-133196-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0020 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.22 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.32 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 93 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0071 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0028 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0044 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 480 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 51 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.18 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 57 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-01 — Lab Sample ID: 500-133196-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.049 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-01 (Continued) — Lab Sample ID: 500-133196-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.56 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 86 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0059 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 490 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 41 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.18 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 63 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-133196-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.044 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.8 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 85 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.028 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0043 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 630 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 36 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.14 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 150 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-133196-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.028 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.73 | V | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 90 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.013 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 680 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 89 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.33 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 110 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-133196-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.064 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.62 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-05 (Continued) — Lab Sample ID: 500-133196-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 0.0085 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 870 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 120 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.33 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 210 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-133196-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.073 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.5 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 97 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.041 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0035 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 700 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 36 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.16 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 160 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-133196-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.012 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.65 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0050 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.53 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 310 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-133196-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.023 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0018 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.044 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.2 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

## Client Sample ID: MW-15 (Continued) — Lab Sample ID: 500-133196-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 190 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.032 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0092 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1800 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.53 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 540 | | 250 | | mg/L | 50 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-133196-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.017 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.21 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.2 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0026 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.016 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1100 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 83 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.52 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 310 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-133196-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.062 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 150 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.034 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 360 | | 50 | | mg/L | 25 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.47 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 300 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-133196-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-133196-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.020 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.095 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.78 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.024 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1400 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.52 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 520 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-133196-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.021 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.24 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.092 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.4 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 190 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00058 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.13 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Thallium | 0.0025 | | 0.0020 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1900 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 230 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.64 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 640 | | 250 | | mg/L | 50 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-133196-16

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.077 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.8 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 99 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.042 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0039 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 730 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 36 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.16 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |

This Detection Summary does not include radiochemical test results.

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

## Client Sample ID: Duplicate (Continued) — Lab Sample ID: 500-133196-16

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 150 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-133196-1 | MW-02 | Water | 08/23/17 12:55 | 08/26/17 08:00 |
| 500-133196-2 | MW-03 | Water | 08/23/17 16:08 | 08/26/17 08:00 |
| 500-133196-3 | MW-10 | Water | 08/24/17 15:38 | 08/26/17 08:00 |
| 500-133196-4 | MW-01 | Water | 08/25/17 10:20 | 08/26/17 08:00 |
| 500-133196-5 | MW-09 | Water | 08/25/17 12:18 | 08/26/17 08:00 |
| 500-133196-6 | MW-04 | Water | 08/28/17 14:15 | 08/30/17 12:50 |
| 500-133196-7 | MW-05 | Water | 08/28/17 15:30 | 08/30/17 12:50 |
| 500-133196-8 | MW-19 | Water | 08/28/17 16:30 | 08/30/17 12:50 |
| 500-133196-9 | MW-18 | Water | 08/28/17 17:30 | 08/30/17 12:50 |
| 500-133196-10 | MW-15 | Water | 08/29/17 10:00 | 08/30/17 12:50 |
| 500-133196-12 | MW-11 | Water | 08/29/17 12:30 | 08/30/17 12:50 |
| 500-133196-13 | MW-08 | Water | 08/29/17 13:55 | 08/30/17 12:50 |
| 500-133196-14 | MW-12 | Water | 08/29/17 15:30 | 08/30/17 12:50 |
| 500-133196-15 | MW-17 | Water | 08/29/17 17:30 | 08/30/17 12:50 |
| 500-133196-16 | Duplicate | Water | 08/29/17 10:00 | 08/30/17 12:50 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

**Client Sample ID: MW-02**
**Date Collected: 08/23/17 12:55**
**Date Received: 08/26/17 08:00**

**Lab Sample ID: 500-133196-1**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/30/17 14:43 | 09/01/17 01:08 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:35 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:35 | 1 |
| **Barium** | **0.062** | | 0.0025 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:35 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:35 | 1 |
| **Boron** | **1.3** | **V** | 0.050 | | mg/L | | 08/29/17 18:41 | 08/31/17 11:45 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:35 | 1 |
| **Calcium** | **86** | | 0.20 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:35 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:35 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:35 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:35 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:35 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:35 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:35 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/28/17 12:00 | 08/29/17 11:03 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **440** | | 10 | | mg/L | | | 08/27/17 22:12 | 1 |
| **Chloride** | **49** | | 2.0 | | mg/L | | | 09/03/17 17:48 | 1 |
| **Fluoride** | **0.19** | | 0.10 | | mg/L | | | 08/30/17 17:08 | 1 |
| **Sulfate** | **61** | | 20 | | mg/L | | | 09/06/17 06:17 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

**Client Sample ID: MW-03**
**Date Collected: 08/23/17 16:08**
**Date Received: 08/26/17 08:00**

**Lab Sample ID: 500-133196-2**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/30/17 14:43 | 09/01/17 01:20 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:01 | 1 |
| **Arsenic** | **0.0010** | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:01 | 1 |
| **Barium** | **0.066** | | 0.0025 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:01 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:01 | 1 |
| **Boron** | **0.40** | | 0.050 | | mg/L | | 08/29/17 18:41 | 08/31/17 12:19 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:01 | 1 |
| **Calcium** | **79** | | 0.20 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:01 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:01 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:01 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:01 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:01 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:01 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:01 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/28/17 12:00 | 08/29/17 11:05 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **430** | | 10 | | mg/L | | | 08/27/17 22:17 | 1 |
| **Chloride** | **52** | | 2.0 | | mg/L | | | 09/03/17 17:49 | 1 |
| **Fluoride** | **0.28** | | 0.10 | | mg/L | | | 08/30/17 17:11 | 1 |
| **Sulfate** | **52** | | 10 | | mg/L | | | 09/06/17 06:18 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

**Client Sample ID: MW-10**
**Date Collected: 08/24/17 15:38**
**Date Received: 08/26/17 08:00**

**Lab Sample ID: 500-133196-3**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/30/17 14:43 | 09/01/17 01:24 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:05 | 1 |
| **Arsenic** | **0.0020** | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:05 | 1 |
| **Barium** | **0.22** | | 0.0025 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:05 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:05 | 1 |
| **Boron** | **0.32** | | 0.050 | | mg/L | | 08/29/17 18:41 | 08/31/17 12:23 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:05 | 1 |
| **Calcium** | **93** | | 0.20 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:05 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:05 | 1 |
| **Cobalt** | **0.0071** | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:05 | 1 |
| **Lead** | **0.0028** | | 0.00050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:05 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:05 | 1 |
| **Selenium** | **0.0044** | | 0.0025 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:05 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:05 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/28/17 12:00 | 08/29/17 11:06 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **480** | | 10 | | mg/L | | | 08/27/17 22:20 | 1 |
| **Chloride** | **51** | | 2.0 | | mg/L | | | 09/03/17 17:50 | 1 |
| **Fluoride** | **0.18** | | 0.10 | | mg/L | | | 08/30/17 17:15 | 1 |
| **Sulfate** | **57** | | 20 | | mg/L | | | 09/06/17 06:19 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

**Client Sample ID: MW-01**
**Date Collected: 08/25/17 10:20**
**Date Received: 08/26/17 08:00**

**Lab Sample ID: 500-133196-4**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/30/17 14:43 | 09/01/17 01:28 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:09 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:09 | 1 |
| **Barium** | **0.049** | | 0.0025 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:09 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:09 | 1 |
| **Boron** | **0.56** | | 0.050 | | mg/L | | 08/29/17 18:41 | 08/31/17 12:27 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:09 | 1 |
| **Calcium** | **86** | | 0.20 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:09 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:09 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:09 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:09 | 1 |
| **Molybdenum** | **0.0059** | | 0.0050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:09 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:09 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:09 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/28/17 12:00 | 08/29/17 11:08 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **490** | | 10 | | mg/L | | | 08/27/17 22:22 | 1 |
| **Chloride** | **41** | | 2.0 | | mg/L | | | 09/03/17 17:51 | 1 |
| **Fluoride** | **0.18** | | 0.10 | | mg/L | | | 08/30/17 17:18 | 1 |
| **Sulfate** | **63** | | 25 | | mg/L | | | 09/06/17 06:20 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

**Client Sample ID: MW-09**
**Date Collected: 08/25/17 12:18**
**Date Received: 08/26/17 08:00**

**Lab Sample ID: 500-133196-5**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/30/17 14:43 | 09/01/17 01:32 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:12 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:12 | 1 |
| **Barium** | **0.044** | | 0.0025 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:12 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:12 | 1 |
| **Boron** | **3.8** | | 0.50 | | mg/L | | 08/29/17 18:41 | 08/31/17 12:30 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:12 | 1 |
| **Calcium** | **85** | | 0.20 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:12 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:12 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:12 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:12 | 1 |
| **Molybdenum** | **0.028** | | 0.0050 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:12 | 1 |
| **Selenium** | **0.0043** | | 0.0025 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:12 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/29/17 18:41 | 08/30/17 14:12 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/28/17 12:00 | 08/29/17 11:09 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **630** | | 10 | | mg/L | | | 08/27/17 22:25 | 1 |
| **Chloride** | **36** | | 2.0 | | mg/L | | | 09/03/17 17:52 | 1 |
| **Fluoride** | **0.14** | | 0.10 | | mg/L | | | 08/30/17 17:31 | 1 |
| **Sulfate** | **150** | | 50 | | mg/L | | | 09/06/17 06:21 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

**Client Sample ID: MW-04**
**Date Collected: 08/28/17 14:15**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-6**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/31/17 08:16 | 09/01/17 00:47 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:35 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:35 | 1 |
| **Barium** | **0.028** | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:35 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:35 | 1 |
| **Boron** | **0.73** | **V** | 0.050 | | mg/L | | 08/31/17 08:16 | 09/07/17 10:39 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:35 | 1 |
| **Calcium** | **90** | | 0.20 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:35 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:35 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:35 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:35 | 1 |
| **Molybdenum** | **0.013** | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:35 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:35 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:35 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/31/17 12:00 | 09/01/17 10:42 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **680** | | 10 | | mg/L | | | 08/31/17 03:12 | 1 |
| **Chloride** | **89** | | 10 | | mg/L | | | 09/03/17 18:24 | 5 |
| **Fluoride** | **0.33** | | 0.10 | | mg/L | | | 09/06/17 12:39 | 1 |
| **Sulfate** | **110** | | 50 | | mg/L | | | 09/06/17 06:22 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

**Client Sample ID: MW-05**
**Date Collected: 08/28/17 15:30**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-7**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/31/17 08:16 | 09/01/17 01:06 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:54 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:54 | 1 |
| **Barium** | **0.064** | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:54 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:54 | 1 |
| **Boron** | **0.62** | | 0.050 | | mg/L | | 08/31/17 08:16 | 09/07/17 10:58 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:54 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:54 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:54 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:54 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:54 | 1 |
| **Molybdenum** | **0.0085** | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:54 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:54 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:54 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/31/17 12:00 | 09/01/17 10:43 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **870** | | 10 | | mg/L | | | 08/31/17 03:20 | 1 |
| **Chloride** | **120** | | 10 | | mg/L | | | 09/03/17 18:24 | 5 |
| **Fluoride** | **0.33** | | 0.10 | | mg/L | | | 09/06/17 12:42 | 1 |
| **Sulfate** | **210** | | 50 | | mg/L | | | 09/06/17 06:23 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

**Client Sample ID: MW-19**
**Date Collected: 08/28/17 16:30**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-8**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/31/17 08:16 | 09/01/17 01:10 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:58 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:58 | 1 |
| **Barium** | **0.073** | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:58 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:58 | 1 |
| **Boron** | **3.5** | | 0.25 | | mg/L | | 08/31/17 08:16 | 09/07/17 11:01 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:58 | 1 |
| **Calcium** | **97** | | 0.20 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:58 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:58 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:58 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:58 | 1 |
| **Molybdenum** | **0.041** | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:58 | 1 |
| **Selenium** | **0.0035** | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:58 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:58 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/31/17 12:00 | 09/01/17 10:49 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **700** | | 10 | | mg/L | | | 08/31/17 03:22 | 1 |
| **Chloride** | **36** | | 2.0 | | mg/L | | | 09/03/17 17:59 | 1 |
| **Fluoride** | **0.16** | | 0.10 | | mg/L | | | 09/06/17 12:55 | 1 |
| **Sulfate** | **160** | | 50 | | mg/L | | | 09/07/17 07:54 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

**Client Sample ID: MW-18**
**Date Collected: 08/28/17 17:30**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-9**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.012** | | 0.010 | | mg/L | | 08/31/17 08:16 | 09/01/17 01:14 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:02 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:02 | 1 |
| **Barium** | **0.12** | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:02 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:02 | 1 |
| **Boron** | **0.65** | | 0.050 | | mg/L | | 08/31/17 08:16 | 09/07/17 11:26 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:02 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:02 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:02 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:02 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:02 | 1 |
| **Molybdenum** | **0.0050** | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:02 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:02 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:02 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/31/17 12:00 | 09/01/17 10:51 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1200** | | 10 | | mg/L | | | 08/31/17 03:25 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 09/03/17 17:59 | 5 |
| **Fluoride** | **0.53** | | 0.10 | | mg/L | | | 09/06/17 12:58 | 1 |
| **Sulfate** | **310** | | 100 | | mg/L | | | 09/07/17 07:57 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

**Client Sample ID: MW-15**
**Date Collected: 08/29/17 10:00**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-10**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.023** | | 0.010 | | mg/L | | 08/31/17 08:16 | 09/01/17 01:26 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:13 | 1 |
| **Arsenic** | **0.0018** | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:13 | 1 |
| **Barium** | **0.044** | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:13 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:13 | 1 |
| **Boron** | **2.2** | | 0.25 | | mg/L | | 08/31/17 08:16 | 09/07/17 11:30 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:13 | 1 |
| **Calcium** | **190** | | 0.20 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:13 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:13 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:13 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:13 | 1 |
| **Molybdenum** | **0.032** | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:13 | 1 |
| **Selenium** | **0.0092** | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:13 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:13 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/31/17 12:00 | 09/01/17 10:52 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1800** | | 10 | | mg/L | | | 08/31/17 03:27 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 09/03/17 18:00 | 5 |
| **Fluoride** | **0.53** | | 0.10 | | mg/L | | | 09/06/17 13:01 | 1 |
| **Sulfate** | **540** | | 250 | | mg/L | | | 09/07/17 07:58 | 50 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

## Client Sample ID: MW-11

**Date Collected: 08/29/17 12:30**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-12

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/31/17 08:16 | 09/01/17 01:30 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:17 | 1 |
| **Arsenic** | **0.017** | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:17 | 1 |
| **Barium** | **0.21** | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:17 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:17 | 1 |
| **Boron** | **2.2** | | 0.25 | | mg/L | | 08/31/17 08:16 | 09/07/17 11:34 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:17 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:17 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:17 | 1 |
| **Cobalt** | **0.0026** | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:17 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:17 | 1 |
| **Molybdenum** | **0.016** | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:17 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:17 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:17 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/31/17 12:00 | 09/01/17 10:54 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1100** | | 10 | | mg/L | | | 08/31/17 03:30 | 1 |
| **Chloride** | **83** | | 10 | | mg/L | | | 09/03/17 18:26 | 5 |
| **Fluoride** | **0.52** | | 0.10 | | mg/L | | | 09/06/17 13:05 | 1 |
| **Sulfate** | **310** | | 100 | | mg/L | | | 09/07/17 07:59 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

**Client Sample ID: MW-08**
**Date Collected: 08/29/17 13:55**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-13**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/31/17 08:16 | 09/01/17 01:34 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:20 | 1 |
| **Arsenic** | **0.0011** | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:20 | 1 |
| **Barium** | **0.062** | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:20 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:20 | 1 |
| **Boron** | **1.2** | | 0.050 | | mg/L | | 08/31/17 08:16 | 09/07/17 11:37 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:20 | 1 |
| **Calcium** | **150** | | 0.20 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:20 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:20 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:20 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:20 | 1 |
| **Molybdenum** | **0.034** | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:20 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:20 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:20 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/31/17 12:00 | 09/01/17 10:55 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 08/31/17 03:33 | 1 |
| **Chloride** | **360** | | 50 | | mg/L | | | 09/03/17 18:26 | 25 |
| **Fluoride** | **0.47** | | 0.10 | | mg/L | | | 09/06/17 13:08 | 1 |
| **Sulfate** | **300** | | 50 | | mg/L | | | 09/07/17 08:00 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

**Client Sample ID: MW-12**
**Date Collected: 08/29/17 15:30**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-14**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.014** | | 0.010 | | mg/L | | 08/31/17 08:16 | 09/01/17 01:39 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:24 | 1 |
| **Arsenic** | **0.020** | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:24 | 1 |
| **Barium** | **0.095** | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:24 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:24 | 1 |
| **Boron** | **0.78** | | 0.050 | | mg/L | | 08/31/17 08:16 | 09/07/17 11:41 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:24 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:24 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:24 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:24 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:24 | 1 |
| **Molybdenum** | **0.024** | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:24 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:24 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:24 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/31/17 12:00 | 09/01/17 11:00 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1400** | | 10 | | mg/L | | | 08/31/17 03:35 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 09/03/17 18:01 | 5 |
| **Fluoride** | **0.52** | | 0.10 | | mg/L | | | 09/06/17 13:11 | 1 |
| **Sulfate** | **520** | | 100 | | mg/L | | | 09/07/17 08:01 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

**Client Sample ID: MW-17**
**Date Collected: 08/29/17 17:30**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-15**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.021** | | 0.010 | | mg/L | | 08/31/17 08:16 | 09/01/17 01:43 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:28 | 1 |
| **Arsenic** | **0.24** | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:28 | 1 |
| **Barium** | **0.092** | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:28 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:28 | 1 |
| **Boron** | **1.4** | | 0.050 | | mg/L | | 08/31/17 08:16 | 09/07/17 11:45 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:28 | 1 |
| **Calcium** | **190** | | 0.20 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:28 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:28 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:28 | 1 |
| **Lead** | **0.00058** | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:28 | 1 |
| **Molybdenum** | **0.13** | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:28 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:28 | 1 |
| **Thallium** | **0.0025** | | 0.0020 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:28 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/31/17 12:00 | 09/01/17 11:01 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1900** | | 10 | | mg/L | | | 08/31/17 03:38 | 1 |
| **Chloride** | **230** | | 10 | | mg/L | | | 09/03/17 18:03 | 5 |
| **Fluoride** | **0.64** | | 0.10 | | mg/L | | | 09/06/17 13:14 | 1 |
| **Sulfate** | **640** | | 250 | | mg/L | | | 09/07/17 08:04 | 50 |

**Client Sample ID: Duplicate**
**Date Collected: 08/29/17 10:00**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-16**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/31/17 08:16 | 09/01/17 01:47 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:32 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:32 | 1 |
| **Barium** | **0.077** | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:32 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:32 | 1 |
| **Boron** | **3.8** | | 0.25 | | mg/L | | 08/31/17 08:16 | 09/07/17 11:49 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:32 | 1 |
| **Calcium** | **99** | | 0.20 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:32 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:32 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:32 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:32 | 1 |
| **Molybdenum** | **0.042** | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:32 | 1 |
| **Selenium** | **0.0039** | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:32 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/31/17 08:16 | 08/31/17 15:32 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/31/17 12:00 | 09/01/17 11:03 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **730** | | 10 | | mg/L | | | 08/31/17 03:40 | 1 |
| **Chloride** | **36** | | 2.0 | | mg/L | | | 09/03/17 18:04 | 1 |
| **Fluoride** | **0.16** | | 0.10 | | mg/L | | | 09/06/17 13:16 | 1 |
| **Sulfate** | **150** | | 50 | | mg/L | | | 09/07/17 08:05 | 10 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| V | Serial Dilution exceeds the control limits |
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 399300

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-1 | MW-02 | Total/NA | Water | 7470A | |
| 500-133196-2 | MW-03 | Total/NA | Water | 7470A | |
| 500-133196-3 | MW-10 | Total/NA | Water | 7470A | |
| 500-133196-4 | MW-01 | Total/NA | Water | 7470A | |
| 500-133196-5 | MW-09 | Total/NA | Water | 7470A | |
| MB 500-399300/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-399300/13-A | Lab Control Sample | Total/NA | Water | 7470A | |

### Analysis Batch: 399446

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-1 | MW-02 | Total/NA | Water | 7470A | 399300 |
| 500-133196-2 | MW-03 | Total/NA | Water | 7470A | 399300 |
| 500-133196-3 | MW-10 | Total/NA | Water | 7470A | 399300 |
| 500-133196-4 | MW-01 | Total/NA | Water | 7470A | 399300 |
| 500-133196-5 | MW-09 | Total/NA | Water | 7470A | 399300 |
| MB 500-399300/12-A | Method Blank | Total/NA | Water | 7470A | 399300 |
| LCS 500-399300/13-A | Lab Control Sample | Total/NA | Water | 7470A | 399300 |

### Prep Batch: 399532

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-1 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-133196-2 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-133196-3 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-133196-4 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-133196-5 | MW-09 | Total Recoverable | Water | 3005A | |
| MB 500-399532/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-399532/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-133196-1 MS | MW-02 | Total Recoverable | Water | 3005A | |
| 500-133196-1 MSD | MW-02 | Total Recoverable | Water | 3005A | |
| 500-133196-1 DU | MW-02 | Total Recoverable | Water | 3005A | |

### Prep Batch: 399684

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-1 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-133196-2 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-133196-3 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-133196-4 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-133196-5 | MW-09 | Total Recoverable | Water | 3005A | |
| MB 500-399684/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-399684/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Prep Batch: 399776

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-6 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-133196-7 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-133196-8 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-133196-9 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-133196-10 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-133196-12 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-133196-13 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-133196-14 | MW-12 | Total Recoverable | Water | 3005A | |

## Metals (Continued)

### Prep Batch: 399776 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-15 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-133196-16 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-399776/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-399776/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-133196-6 MS | MW-04 | Total Recoverable | Water | 3005A | |
| 500-133196-6 MSD | MW-04 | Total Recoverable | Water | 3005A | |
| 500-133196-6 DU | MW-04 | Total Recoverable | Water | 3005A | |

### Analysis Batch: 399786

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-1 | MW-02 | Total Recoverable | Water | 6020A | 399532 |
| 500-133196-2 | MW-03 | Total Recoverable | Water | 6020A | 399532 |
| 500-133196-3 | MW-10 | Total Recoverable | Water | 6020A | 399532 |
| 500-133196-4 | MW-01 | Total Recoverable | Water | 6020A | 399532 |
| 500-133196-5 | MW-09 | Total Recoverable | Water | 6020A | 399532 |
| MB 500-399532/1-A | Method Blank | Total Recoverable | Water | 6020A | 399532 |
| LCS 500-399532/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 399532 |
| 500-133196-1 MS | MW-02 | Total Recoverable | Water | 6020A | 399532 |
| 500-133196-1 MSD | MW-02 | Total Recoverable | Water | 6020A | 399532 |
| 500-133196-1 DU | MW-02 | Total Recoverable | Water | 6020A | 399532 |

### Analysis Batch: 399833

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-1 | MW-02 | Total Recoverable | Water | 6020A | 399532 |
| 500-133196-2 | MW-03 | Total Recoverable | Water | 6020A | 399532 |
| 500-133196-3 | MW-10 | Total Recoverable | Water | 6020A | 399532 |
| 500-133196-4 | MW-01 | Total Recoverable | Water | 6020A | 399532 |
| 500-133196-5 | MW-09 | Total Recoverable | Water | 6020A | 399532 |
| MB 500-399532/1-A | Method Blank | Total Recoverable | Water | 6020A | 399532 |
| LCS 500-399532/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 399532 |
| 500-133196-1 MS | MW-02 | Total Recoverable | Water | 6020A | 399532 |
| 500-133196-1 MSD | MW-02 | Total Recoverable | Water | 6020A | 399532 |
| 500-133196-1 DU | MW-02 | Total Recoverable | Water | 6020A | 399532 |

### Prep Batch: 399839

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-6 | MW-04 | Total/NA | Water | 7470A | |
| 500-133196-7 | MW-05 | Total/NA | Water | 7470A | |
| 500-133196-8 | MW-19 | Total/NA | Water | 7470A | |
| 500-133196-9 | MW-18 | Total/NA | Water | 7470A | |
| 500-133196-10 | MW-15 | Total/NA | Water | 7470A | |
| 500-133196-12 | MW-11 | Total/NA | Water | 7470A | |
| 500-133196-13 | MW-08 | Total/NA | Water | 7470A | |
| 500-133196-14 | MW-12 | Total/NA | Water | 7470A | |
| 500-133196-15 | MW-17 | Total/NA | Water | 7470A | |
| 500-133196-16 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-399839/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-399839/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-133196-7 MS | MW-05 | Total/NA | Water | 7470A | |
| 500-133196-7 MSD | MW-05 | Total/NA | Water | 7470A | |
| 500-133196-7 DU | MW-05 | Total/NA | Water | 7470A | |

## Analysis Batch: 399946

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-1 | MW-02 | Total Recoverable | Water | 6010C | 399684 |
| 500-133196-2 | MW-03 | Total Recoverable | Water | 6010C | 399684 |
| 500-133196-3 | MW-10 | Total Recoverable | Water | 6010C | 399684 |
| 500-133196-4 | MW-01 | Total Recoverable | Water | 6010C | 399684 |
| 500-133196-5 | MW-09 | Total Recoverable | Water | 6010C | 399684 |
| MB 500-399684/1-A | Method Blank | Total Recoverable | Water | 6010C | 399684 |
| LCS 500-399684/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 399684 |

## Analysis Batch: 399950

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-6 | MW-04 | Total Recoverable | Water | 6010C | 399776 |
| 500-133196-7 | MW-05 | Total Recoverable | Water | 6010C | 399776 |
| 500-133196-8 | MW-19 | Total Recoverable | Water | 6010C | 399776 |
| 500-133196-9 | MW-18 | Total Recoverable | Water | 6010C | 399776 |
| 500-133196-10 | MW-15 | Total Recoverable | Water | 6010C | 399776 |
| 500-133196-12 | MW-11 | Total Recoverable | Water | 6010C | 399776 |
| 500-133196-13 | MW-08 | Total Recoverable | Water | 6010C | 399776 |
| 500-133196-14 | MW-12 | Total Recoverable | Water | 6010C | 399776 |
| 500-133196-15 | MW-17 | Total Recoverable | Water | 6010C | 399776 |
| 500-133196-16 | Duplicate | Total Recoverable | Water | 6010C | 399776 |
| MB 500-399776/1-A | Method Blank | Total Recoverable | Water | 6010C | 399776 |
| LCS 500-399776/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 399776 |
| 500-133196-6 MS | MW-04 | Total Recoverable | Water | 6010C | 399776 |
| 500-133196-6 MSD | MW-04 | Total Recoverable | Water | 6010C | 399776 |
| 500-133196-6 DU | MW-04 | Total Recoverable | Water | 6010C | 399776 |

## Analysis Batch: 399960

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-6 | MW-04 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-7 | MW-05 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-8 | MW-19 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-9 | MW-18 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-10 | MW-15 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-12 | MW-11 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-13 | MW-08 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-14 | MW-12 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-15 | MW-17 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-16 | Duplicate | Total Recoverable | Water | 6020A | 399776 |
| MB 500-399776/1-A | Method Blank | Total Recoverable | Water | 6020A | 399776 |
| LCS 500-399776/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-6 MS | MW-04 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-6 MSD | MW-04 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-6 DU | MW-04 | Total Recoverable | Water | 6020A | 399776 |

## Analysis Batch: 399989

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-6 | MW-04 | Total/NA | Water | 7470A | 399839 |
| 500-133196-7 | MW-05 | Total/NA | Water | 7470A | 399839 |
| 500-133196-8 | MW-19 | Total/NA | Water | 7470A | 399839 |
| 500-133196-9 | MW-18 | Total/NA | Water | 7470A | 399839 |
| 500-133196-10 | MW-15 | Total/NA | Water | 7470A | 399839 |
| 500-133196-12 | MW-11 | Total/NA | Water | 7470A | 399839 |
| 500-133196-13 | MW-08 | Total/NA | Water | 7470A | 399839 |

## Metals (Continued)

### Analysis Batch: 399989 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-14 | MW-12 | Total/NA | Water | 7470A | 399839 |
| 500-133196-15 | MW-17 | Total/NA | Water | 7470A | 399839 |
| 500-133196-16 | Duplicate | Total/NA | Water | 7470A | 399839 |
| MB 500-399839/12-A | Method Blank | Total/NA | Water | 7470A | 399839 |
| LCS 500-399839/13-A | Lab Control Sample | Total/NA | Water | 7470A | 399839 |
| 500-133196-7 MS | MW-05 | Total/NA | Water | 7470A | 399839 |
| 500-133196-7 MSD | MW-05 | Total/NA | Water | 7470A | 399839 |
| 500-133196-7 DU | MW-05 | Total/NA | Water | 7470A | 399839 |

### Analysis Batch: 400595

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-6 | MW-04 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-7 | MW-05 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-8 | MW-19 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-9 | MW-18 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-10 | MW-15 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-12 | MW-11 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-13 | MW-08 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-14 | MW-12 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-15 | MW-17 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-16 | Duplicate | Total Recoverable | Water | 6020A | 399776 |
| MB 500-399776/1-A | Method Blank | Total Recoverable | Water | 6020A | 399776 |
| LCS 500-399776/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-6 MS | MW-04 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-6 MSD | MW-04 | Total Recoverable | Water | 6020A | 399776 |
| 500-133196-6 DU | MW-04 | Total Recoverable | Water | 6020A | 399776 |

## General Chemistry

### Analysis Batch: 399197

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-1 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-133196-2 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-133196-3 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-133196-4 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-133196-5 | MW-09 | Total/NA | Water | SM 2540C | |
| MB 500-399197/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-399197/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-133196-1 DU | MW-02 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 399736

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-6 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-133196-7 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-133196-8 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-133196-9 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-133196-10 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-133196-12 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-133196-13 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-133196-14 | MW-12 | Total/NA | Water | SM 2540C | |

## General Chemistry (Continued)

### Analysis Batch: 399736 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-15 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-133196-16 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-399736/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-399736/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-133196-6 MS | MW-04 | Total/NA | Water | SM 2540C | |
| 500-133196-6 DU | MW-04 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 399772

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-1 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-133196-2 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-133196-3 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-133196-4 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-133196-5 | MW-09 | Total/NA | Water | SM 4500 F C | |
| MB 500-399772/31 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-399772/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 400119

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-1 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-2 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-3 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-4 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-5 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-6 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-7 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-8 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-9 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-10 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-12 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-13 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-14 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-15 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-16 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-400119/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-400119/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-7 MS | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-133196-7 MSD | MW-05 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 400304

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-1 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-2 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-3 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-4 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-5 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-6 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-7 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-400304/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-400304/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

## General Chemistry (Continued)

### Analysis Batch: 400403

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-6 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-133196-7 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-133196-8 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-133196-9 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-133196-10 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-133196-12 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-133196-13 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-133196-14 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-133196-15 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-133196-16 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-400403/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-400403/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 400496

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-8 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-9 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-10 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-12 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-13 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-14 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-15 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-16 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-400496/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-400496/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-8 MS | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-133196-8 MSD | MW-19 | Total/NA | Water | SM 4500 SO4 E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-399684/1-A**
**Matrix: Water**
**Analysis Batch: 399946**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 399684**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/30/17 14:43 | 09/01/17 01:00 | 1 |

**Lab Sample ID: LCS 500-399684/2-A**
**Matrix: Water**
**Analysis Batch: 399946**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 399684**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.509 | | mg/L | | 102 | 80 - 120 |

**Lab Sample ID: MB 500-399776/1-A**
**Matrix: Water**
**Analysis Batch: 399950**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 399776**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/31/17 08:16 | 09/01/17 00:39 | 1 |

**Lab Sample ID: LCS 500-399776/2-A**
**Matrix: Water**
**Analysis Batch: 399950**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 399776**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.511 | | mg/L | | 102 | 80 - 120 |

**Lab Sample ID: 500-133196-6 MS**
**Matrix: Water**
**Analysis Batch: 399950**

**Client Sample ID: MW-04**
**Prep Type: Total Recoverable**
**Prep Batch: 399776**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.566 | | mg/L | | 113 | 75 - 125 |

**Lab Sample ID: 500-133196-6 MSD**
**Matrix: Water**
**Analysis Batch: 399950**

**Client Sample ID: MW-04**
**Prep Type: Total Recoverable**
**Prep Batch: 399776**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.546 | | mg/L | | 109 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-133196-6 DU**
**Matrix: Water**
**Analysis Batch: 399950**

**Client Sample ID: MW-04**
**Prep Type: Total Recoverable**
**Prep Batch: 399776**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | <0.010 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-399532/1-A**
**Matrix: Water**
**Analysis Batch: 399786**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 399532**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:27 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:27 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:27 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:27 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:27 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:27 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:27 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:27 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:27 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:27 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:27 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/29/17 18:41 | 08/30/17 13:27 | 1 |

**Lab Sample ID: MB 500-399532/1-A**
**Matrix: Water**
**Analysis Batch: 399833**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 399532**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 08/29/17 18:41 | 08/31/17 11:37 | 1 |

**Lab Sample ID: LCS 500-399532/2-A**
**Matrix: Water**
**Analysis Batch: 399786**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 399532**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.525 | | mg/L | | 105 | 80 - 120 |
| Arsenic | 0.100 | 0.105 | | mg/L | | 105 | 80 - 120 |
| Barium | 0.500 | 0.524 | | mg/L | | 105 | 80 - 120 |
| Beryllium | 0.0500 | 0.0516 | | mg/L | | 103 | 80 - 120 |
| Cadmium | 0.0500 | 0.0525 | | mg/L | | 105 | 80 - 120 |
| Calcium | 10.0 | 9.24 | | mg/L | | 92 | 80 - 120 |
| Chromium | 0.200 | 0.207 | | mg/L | | 103 | 80 - 120 |
| Cobalt | 0.500 | 0.520 | | mg/L | | 104 | 80 - 120 |
| Lead | 0.100 | 0.103 | | mg/L | | 103 | 80 - 120 |
| Molybdenum | 1.00 | 0.970 | | mg/L | | 97 | 80 - 120 |
| Selenium | 0.100 | 0.103 | | mg/L | | 103 | 80 - 120 |
| Thallium | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |

**Lab Sample ID: LCS 500-399532/2-A**
**Matrix: Water**
**Analysis Batch: 399833**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 399532**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 1.03 | | mg/L | | 103 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-133196-1 MS**
**Matrix: Water**
**Analysis Batch: 399786**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 399532**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.530 | | mg/L | | 106 | 75 - 125 |
| Arsenic | <0.0010 | | 0.100 | 0.108 | | mg/L | | 107 | 75 - 125 |
| Barium | 0.062 | | 0.500 | 0.578 | | mg/L | | 103 | 75 - 125 |
| Beryllium | <0.0010 | | 0.0500 | 0.0469 | | mg/L | | 94 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0521 | | mg/L | | 104 | 75 - 125 |
| Calcium | 86 | | 10.0 | 92.2 | 4 | mg/L | | 62 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.196 | | mg/L | | 98 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.481 | | mg/L | | 96 | 75 - 125 |
| Lead | <0.00050 | | 0.100 | 0.102 | | mg/L | | 102 | 75 - 125 |
| Molybdenum | <0.0050 | | 1.00 | 0.996 | | mg/L | | 99 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.106 | | mg/L | | 106 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.103 | | mg/L | | 103 | 75 - 125 |

**Lab Sample ID: 500-133196-1 MS**
**Matrix: Water**
**Analysis Batch: 399833**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 399532**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 1.3 | V | 1.00 | 2.31 | | mg/L | | 102 | 75 - 125 |

**Lab Sample ID: 500-133196-1 MSD**
**Matrix: Water**
**Analysis Batch: 399786**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 399532**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.533 | | mg/L | | 107 | 75 - 125 | 1 | 20 |
| Arsenic | <0.0010 | | 0.100 | 0.109 | | mg/L | | 108 | 75 - 125 | 1 | 20 |
| Barium | 0.062 | | 0.500 | 0.576 | | mg/L | | 103 | 75 - 125 | 0 | 20 |
| Beryllium | <0.0010 | | 0.0500 | 0.0497 | | mg/L | | 99 | 75 - 125 | 6 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0522 | | mg/L | | 104 | 75 - 125 | 0 | 20 |
| Calcium | 86 | | 10.0 | 94.5 | 4 | mg/L | | 86 | 75 - 125 | 3 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.197 | | mg/L | | 99 | 75 - 125 | 1 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.485 | | mg/L | | 97 | 75 - 125 | 1 | 20 |
| Lead | <0.00050 | | 0.100 | 0.101 | | mg/L | | 101 | 75 - 125 | 0 | 20 |
| Molybdenum | <0.0050 | | 1.00 | 0.993 | | mg/L | | 99 | 75 - 125 | 0 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.106 | | mg/L | | 106 | 75 - 125 | 1 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.103 | | mg/L | | 103 | 75 - 125 | 0 | 20 |

**Lab Sample ID: 500-133196-1 MSD**
**Matrix: Water**
**Analysis Batch: 399833**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 399532**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 1.3 | V | 1.00 | 2.34 | | mg/L | | 106 | 75 - 125 | 2 | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-133196-1 DU**
**Matrix: Water**
**Analysis Batch: 399786**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 399532**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | <0.0030 | | mg/L | | NC | 20 |
| Arsenic | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Barium | 0.062 | | 0.0623 | | mg/L | | 0.3 | 20 |
| Beryllium | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Cadmium | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Calcium | 86 | | 84.9 | | mg/L | | 1 | 20 |
| Chromium | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Cobalt | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Lead | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Molybdenum | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Selenium | <0.0025 | | <0.0025 | | mg/L | | NC | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | NC | 20 |

**Lab Sample ID: 500-133196-1 DU**
**Matrix: Water**
**Analysis Batch: 399833**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 399532**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Boron | 1.3 | V | 1.34 | | mg/L | | 4 | 20 |

**Lab Sample ID: MB 500-399776/1-A**
**Matrix: Water**
**Analysis Batch: 399960**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 399776**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:28 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:28 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:28 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:28 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:28 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:28 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:28 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:28 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:28 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:28 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:28 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/31/17 08:16 | 08/31/17 14:28 | 1 |

**Lab Sample ID: MB 500-399776/1-A**
**Matrix: Water**
**Analysis Batch: 400595**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 399776**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 08/31/17 08:16 | 09/07/17 10:31 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-399776/2-A**
**Matrix: Water**
**Analysis Batch: 399960**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 399776**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.473 | | mg/L | | 95 | 80 - 120 |
| Arsenic | 0.100 | 0.0912 | | mg/L | | 91 | 80 - 120 |
| Barium | 2.00 | 1.94 | | mg/L | | 97 | 80 - 120 |
| Beryllium | 0.0500 | 0.0542 | | mg/L | | 108 | 80 - 120 |
| Cadmium | 0.0500 | 0.0492 | | mg/L | | 98 | 80 - 120 |
| Calcium | 10.0 | 8.61 | | mg/L | | 86 | 80 - 120 |
| Chromium | 0.200 | 0.197 | | mg/L | | 98 | 80 - 120 |
| Cobalt | 0.500 | 0.507 | | mg/L | | 101 | 80 - 120 |
| Lead | 0.100 | 0.101 | | mg/L | | 101 | 80 - 120 |
| Molybdenum | 1.00 | 0.900 | | mg/L | | 90 | 80 - 120 |
| Selenium | 0.100 | 0.0914 | | mg/L | | 91 | 80 - 120 |
| Thallium | 0.100 | 0.101 | | mg/L | | 101 | 80 - 120 |

**Lab Sample ID: LCS 500-399776/2-A**
**Matrix: Water**
**Analysis Batch: 400595**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 399776**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 0.954 | | mg/L | | 95 | 80 - 120 |

**Lab Sample ID: 500-133196-6 MS**
**Matrix: Water**
**Analysis Batch: 399960**

**Client Sample ID: MW-04**
**Prep Type: Total Recoverable**
**Prep Batch: 399776**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.508 | | mg/L | | 102 | 75 - 125 |
| Arsenic | <0.0010 | | 0.100 | 0.0991 | | mg/L | | 98 | 75 - 125 |
| Barium | 0.028 | | 2.00 | 2.08 | | mg/L | | 102 | 75 - 125 |
| Beryllium | <0.0010 | | 0.0500 | 0.0516 | | mg/L | | 103 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0510 | | mg/L | | 102 | 75 - 125 |
| Calcium | 90 | | 10.0 | 94.1 | 4 | mg/L | | 45 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.193 | | mg/L | | 97 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.482 | | mg/L | | 96 | 75 - 125 |
| Lead | <0.00050 | | 0.100 | 0.105 | | mg/L | | 105 | 75 - 125 |
| Molybdenum | 0.013 | | 1.00 | 0.985 | | mg/L | | 97 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.0982 | | mg/L | | 98 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.106 | | mg/L | | 106 | 75 - 125 |

**Lab Sample ID: 500-133196-6 MS**
**Matrix: Water**
**Analysis Batch: 400595**

**Client Sample ID: MW-04**
**Prep Type: Total Recoverable**
**Prep Batch: 399776**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.73 | V | 1.00 | 1.73 | | mg/L | | 100 | 75 - 125 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-133196-6 MSD** — **Client Sample ID: MW-04**
**Matrix: Water** — **Prep Type: Total Recoverable**
**Analysis Batch: 399960** — **Prep Batch: 399776**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.499 | | mg/L | | 100 | 75 - 125 | 2 | 20 |
| Arsenic | <0.0010 | | 0.100 | 0.0975 | | mg/L | | 97 | 75 - 125 | 2 | 20 |
| Barium | 0.028 | | 2.00 | 2.05 | | mg/L | | 101 | 75 - 125 | 1 | 20 |
| Beryllium | <0.0010 | | 0.0500 | 0.0478 | | mg/L | | 96 | 75 - 125 | 8 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0501 | | mg/L | | 100 | 75 - 125 | 2 | 20 |
| Calcium | 90 | | 10.0 | 92.3 | 4 | mg/L | | 27 | 75 - 125 | 2 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.192 | | mg/L | | 96 | 75 - 125 | 1 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.480 | | mg/L | | 96 | 75 - 125 | 0 | 20 |
| Lead | <0.00050 | | 0.100 | 0.104 | | mg/L | | 104 | 75 - 125 | 1 | 20 |
| Molybdenum | 0.013 | | 1.00 | 0.969 | | mg/L | | 96 | 75 - 125 | 2 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.0970 | | mg/L | | 97 | 75 - 125 | 1 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.106 | | mg/L | | 106 | 75 - 125 | 0 | 20 |

**Lab Sample ID: 500-133196-6 MSD** — **Client Sample ID: MW-04**
**Matrix: Water** — **Prep Type: Total Recoverable**
**Analysis Batch: 400595** — **Prep Batch: 399776**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.73 | V | 1.00 | 1.68 | | mg/L | | 95 | 75 - 125 | 3 | 20 |

**Lab Sample ID: 500-133196-6 DU** — **Client Sample ID: MW-04**
**Matrix: Water** — **Prep Type: Total Recoverable**
**Analysis Batch: 399960** — **Prep Batch: 399776**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | | <0.0030 | | mg/L | | | | NC | 20 |
| Arsenic | <0.0010 | | | <0.0010 | | mg/L | | | | NC | 20 |
| Barium | 0.028 | | | 0.0270 | | mg/L | | | | 2 | 20 |
| Beryllium | <0.0010 | | | <0.0010 | | mg/L | | | | NC | 20 |
| Cadmium | <0.00050 | | | <0.00050 | | mg/L | | | | NC | 20 |
| Calcium | 90 | | | 87.5 | | mg/L | | | | 2 | 20 |
| Chromium | <0.0050 | | | <0.0050 | | mg/L | | | | NC | 20 |
| Cobalt | <0.0010 | | | <0.0010 | | mg/L | | | | NC | 20 |
| Lead | <0.00050 | | | <0.00050 | | mg/L | | | | NC | 20 |
| Molybdenum | 0.013 | | | 0.0122 | | mg/L | | | | 4 | 20 |
| Selenium | <0.0025 | | | <0.0025 | | mg/L | | | | NC | 20 |
| Thallium | <0.0020 | | | <0.0020 | | mg/L | | | | NC | 20 |

**Lab Sample ID: 500-133196-6 DU** — **Client Sample ID: MW-04**
**Matrix: Water** — **Prep Type: Total Recoverable**
**Analysis Batch: 400595** — **Prep Batch: 399776**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.73 | V | | 0.697 | | mg/L | | | | 4 | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-399300/12-A**
**Matrix: Water**
**Analysis Batch: 399446**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 399300**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/28/17 12:00 | 08/29/17 10:32 | 1 |

**Lab Sample ID: LCS 500-399300/13-A**
**Matrix: Water**
**Analysis Batch: 399446**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 399300**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00205 | | mg/L | | 103 | 80 - 120 |

**Lab Sample ID: MB 500-399839/12-A**
**Matrix: Water**
**Analysis Batch: 399989**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 399839**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/31/17 12:00 | 09/01/17 10:35 | 1 |

**Lab Sample ID: LCS 500-399839/13-A**
**Matrix: Water**
**Analysis Batch: 399989**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 399839**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00195 | | mg/L | | 98 | 80 - 120 |

**Lab Sample ID: 500-133196-7 MS**
**Matrix: Water**
**Analysis Batch: 399989**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**
**Prep Batch: 399839**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000997 | | mg/L | | 100 | 75 - 125 |

**Lab Sample ID: 500-133196-7 MSD**
**Matrix: Water**
**Analysis Batch: 399989**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**
**Prep Batch: 399839**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000880 | | mg/L | | 88 | 75 - 125 | 12 | 20 |

**Lab Sample ID: 500-133196-7 DU**
**Matrix: Water**
**Analysis Batch: 399989**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**
**Prep Batch: 399839**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-399197/1**
**Matrix: Water**
**Analysis Batch: 399197**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 08/27/17 21:39 | 1 |

**Lab Sample ID: LCS 500-399197/2**
**Matrix: Water**
**Analysis Batch: 399197**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 280 | | mg/L | | 112 | 80 - 120 |

**Lab Sample ID: 500-133196-1 DU**
**Matrix: Water**
**Analysis Batch: 399197**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 440 | | 444 | | mg/L | | 0.9 | 5 |

**Lab Sample ID: MB 500-399736/1**
**Matrix: Water**
**Analysis Batch: 399736**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 08/31/17 03:02 | 1 |

**Lab Sample ID: LCS 500-399736/2**
**Matrix: Water**
**Analysis Batch: 399736**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 284 | | mg/L | | 114 | 80 - 120 |

**Lab Sample ID: 500-133196-6 MS**
**Matrix: Water**
**Analysis Batch: 399736**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 680 | | 250 | 900 | | mg/L | | 90 | 75 - 125 |

**Lab Sample ID: 500-133196-6 DU**
**Matrix: Water**
**Analysis Batch: 399736**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 680 | | 658 | | mg/L | | 3 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-400119/4**
**Matrix: Water**
**Analysis Batch: 400119**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 09/03/17 17:46 | 1 |

**Lab Sample ID: LCS 500-400119/5**
**Matrix: Water**
**Analysis Batch: 400119**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 50.9 | | mg/L | | 102 | 85 - 115 |

**Lab Sample ID: 500-133196-7 MS**
**Matrix: Water**
**Analysis Batch: 400119**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 120 | | 50.0 | 161 | | mg/L | | 82 | 75 - 125 |

**Lab Sample ID: 500-133196-7 MSD**
**Matrix: Water**
**Analysis Batch: 400119**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 120 | | 50.0 | 167 | | mg/L | | 93 | 75 - 125 | 4 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-399772/31**
**Matrix: Water**
**Analysis Batch: 399772**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 08/30/17 16:21 | 1 |

**Lab Sample ID: LCS 500-399772/32**
**Matrix: Water**
**Analysis Batch: 399772**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.3 | | mg/L | | 103 | 80 - 120 |

**Lab Sample ID: MB 500-400403/3**
**Matrix: Water**
**Analysis Batch: 400403**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 09/06/17 12:13 | 1 |

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: LCS 500-400403/4**
**Matrix: Water**
**Analysis Batch: 400403**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.0 | | mg/L | | 100 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-400304/3**
**Matrix: Water**
**Analysis Batch: 400304**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 09/06/17 06:03 | 1 |

**Lab Sample ID: LCS 500-400304/4**
**Matrix: Water**
**Analysis Batch: 400304**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 20.4 | | mg/L | | 102 | 80 - 120 |

**Lab Sample ID: MB 500-400496/3**
**Matrix: Water**
**Analysis Batch: 400496**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 09/07/17 07:52 | 1 |

**Lab Sample ID: LCS 500-400496/4**
**Matrix: Water**
**Analysis Batch: 400496**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 18.9 | | mg/L | | 94 | 80 - 120 |

**Lab Sample ID: 500-133196-8 MS**
**Matrix: Water**
**Analysis Batch: 400496**

**Client Sample ID: MW-19**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 160 | | 400 | 551 | | mg/L | | 97 | 75 - 125 |

**Lab Sample ID: 500-133196-8 MSD**
**Matrix: Water**
**Analysis Batch: 400496**

**Client Sample ID: MW-19**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 160 | | 400 | 581 | | mg/L | | 104 | 75 - 125 | 5 | 20 |

## Client Sample ID: MW-02

**Date Collected: 08/23/17 12:55**
**Date Received: 08/26/17 08:00**

## Lab Sample ID: 500-133196-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399684 | 08/30/17 14:43 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399946 | 09/01/17 01:08 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399532 | 08/29/17 18:41 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399786 | 08/30/17 13:35 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399532 | 08/29/17 18:41 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399833 | 08/31/17 11:45 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 399300 | 08/28/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399446 | 08/29/17 11:03 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399197 | 08/27/17 22:12 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 400119 | 09/03/17 17:48 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 399772 | 08/30/17 17:08 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 400304 | | CLB | TAL CHI |
| | | | | | (Start) | 09/06/17 06:17 | | |
| | | | | | (End) | 09/06/17 06:18 | | |

## Client Sample ID: MW-03

**Date Collected: 08/23/17 16:08**
**Date Received: 08/26/17 08:00**

## Lab Sample ID: 500-133196-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399684 | 08/30/17 14:43 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399946 | 09/01/17 01:20 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399532 | 08/29/17 18:41 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399786 | 08/30/17 14:01 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399532 | 08/29/17 18:41 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399833 | 08/31/17 12:19 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 399300 | 08/28/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399446 | 08/29/17 11:05 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399197 | 08/27/17 22:17 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 400119 | 09/03/17 17:49 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 399772 | 08/30/17 17:11 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 400304 | | CLB | TAL CHI |
| | | | | | (Start) | 09/06/17 06:18 | | |
| | | | | | (End) | 09/06/17 06:19 | | |

## Client Sample ID: MW-10

**Date Collected: 08/24/17 15:38**
**Date Received: 08/26/17 08:00**

## Lab Sample ID: 500-133196-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399684 | 08/30/17 14:43 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399946 | 09/01/17 01:24 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399532 | 08/29/17 18:41 | BDE | TAL CHI |

## Client Sample ID: MW-10

**Lab Sample ID: 500-133196-3**

**Date Collected: 08/24/17 15:38**

**Matrix: Water**

**Date Received: 08/26/17 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 399786 | 08/30/17 14:05 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399532 | 08/29/17 18:41 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399833 | 08/31/17 12:23 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 399300 | 08/28/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399446 | 08/29/17 11:06 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399197 | 08/27/17 22:20 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 400119 | 09/03/17 17:50 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 399772 | 08/30/17 17:15 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 400304 | | CLB | TAL CHI |
| | | | | | (Start) | 09/06/17 06:19 | | |
| | | | | | (End) | 09/06/17 06:20 | | |

## Client Sample ID: MW-01

**Lab Sample ID: 500-133196-4**

**Date Collected: 08/25/17 10:20**

**Matrix: Water**

**Date Received: 08/26/17 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399684 | 08/30/17 14:43 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399946 | 09/01/17 01:28 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399532 | 08/29/17 18:41 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399786 | 08/30/17 14:09 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399532 | 08/29/17 18:41 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399833 | 08/31/17 12:27 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 399300 | 08/28/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399446 | 08/29/17 11:08 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399197 | 08/27/17 22:22 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 400119 | 09/03/17 17:51 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 399772 | 08/30/17 17:18 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 400304 | | CLB | TAL CHI |
| | | | | | (Start) | 09/06/17 06:20 | | |
| | | | | | (End) | 09/06/17 06:21 | | |

## Client Sample ID: MW-09

**Lab Sample ID: 500-133196-5**

**Date Collected: 08/25/17 12:18**

**Matrix: Water**

**Date Received: 08/26/17 08:00**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399684 | 08/30/17 14:43 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399946 | 09/01/17 01:32 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399532 | 08/29/17 18:41 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399786 | 08/30/17 14:12 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399532 | 08/29/17 18:41 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 399833 | 08/31/17 12:30 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

## Client Sample ID: MW-09

**Date Collected: 08/25/17 12:18**
**Date Received: 08/26/17 08:00**

## Lab Sample ID: 500-133196-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 399300 | 08/28/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399446 | 08/29/17 11:09 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399197 | 08/27/17 22:25 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 400119 | 09/03/17 17:52 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 399772 | 08/30/17 17:31 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 400304 | | CLB | TAL CHI |
| | | | | | (Start) | 09/06/17 06:21 | | |
| | | | | | (End) | 09/06/17 06:22 | | |

## Client Sample ID: MW-04

**Date Collected: 08/28/17 14:15**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399950 | 09/01/17 00:47 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399960 | 08/31/17 14:35 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 400595 | 09/07/17 10:39 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 399839 | 08/31/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399989 | 09/01/17 10:42 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399736 | 08/31/17 03:12 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 400119 | 09/03/17 18:24 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 400403 | 09/06/17 12:39 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 400304 | | CLB | TAL CHI |
| | | | | | (Start) | 09/06/17 06:22 | | |
| | | | | | (End) | 09/06/17 06:23 | | |

## Client Sample ID: MW-05

**Date Collected: 08/28/17 15:30**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399950 | 09/01/17 01:06 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399960 | 08/31/17 14:54 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 400595 | 09/07/17 10:58 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 399839 | 08/31/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399989 | 09/01/17 10:43 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399736 | 08/31/17 03:20 | CLB | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

## Client Sample ID: MW-05

**Date Collected: 08/28/17 15:30**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 400119 | 09/03/17 18:24 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 400403 | 09/06/17 12:42 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 400304 | | CLB | TAL CHI |
| | | | | | (Start) | 09/06/17 06:23 | | |
| | | | | | (End) | 09/06/17 06:24 | | |

## Client Sample ID: MW-19

**Date Collected: 08/28/17 16:30**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399950 | 09/01/17 01:10 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399960 | 08/31/17 14:58 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 400595 | 09/07/17 11:01 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 399839 | 08/31/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399989 | 09/01/17 10:49 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399736 | 08/31/17 03:22 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 400119 | 09/03/17 17:59 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 400403 | 09/06/17 12:55 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 400496 | | CLB | TAL CHI |
| | | | | | (Start) | 09/07/17 07:54 | | |
| | | | | | (End) | 09/07/17 07:55 | | |

## Client Sample ID: MW-18

**Date Collected: 08/28/17 17:30**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399950 | 09/01/17 01:14 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399960 | 08/31/17 15:02 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 400595 | 09/07/17 11:26 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 399839 | 08/31/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399989 | 09/01/17 10:51 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399736 | 08/31/17 03:25 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 400119 | 09/03/17 17:59 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 400403 | 09/06/17 12:58 | EAT | TAL CHI |

## Client Sample ID: MW-18

**Lab Sample ID: 500-133196-9**

**Date Collected: 08/28/17 17:30**

**Matrix: Water**

**Date Received: 08/30/17 12:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 400496 | | CLB | TAL CHI |
| | | | | | (Start) | 09/07/17 07:57 | | |
| | | | | | (End) | 09/07/17 07:58 | | |

## Client Sample ID: MW-15

**Lab Sample ID: 500-133196-10**

**Date Collected: 08/29/17 10:00**

**Matrix: Water**

**Date Received: 08/30/17 12:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399950 | 09/01/17 01:26 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399960 | 08/31/17 15:13 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 400595 | 09/07/17 11:30 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 399839 | 08/31/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399989 | 09/01/17 10:52 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399736 | 08/31/17 03:27 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 400119 | 09/03/17 18:00 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 400403 | 09/06/17 13:01 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 50 | 400496 | | CLB | TAL CHI |
| | | | | | (Start) | 09/07/17 07:58 | | |
| | | | | | (End) | 09/07/17 07:59 | | |

## Client Sample ID: MW-11

**Lab Sample ID: 500-133196-12**

**Date Collected: 08/29/17 12:30**

**Matrix: Water**

**Date Received: 08/30/17 12:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399950 | 09/01/17 01:30 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399960 | 08/31/17 15:17 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 400595 | 09/07/17 11:34 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 399839 | 08/31/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399989 | 09/01/17 10:54 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399736 | 08/31/17 03:30 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 400119 | 09/03/17 18:26 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 400403 | 09/06/17 13:05 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 400496 | | CLB | TAL CHI |
| | | | | | (Start) | 09/07/17 07:59 | | |
| | | | | | (End) | 09/07/17 08:00 | | |

## Client Sample ID: MW-08

**Date Collected: 08/29/17 13:55**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399950 | 09/01/17 01:34 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399960 | 08/31/17 15:20 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 400595 | 09/07/17 11:37 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 399839 | 08/31/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399989 | 09/01/17 10:55 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399736 | 08/31/17 03:33 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 25 | 400119 | 09/03/17 18:26 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 400403 | 09/06/17 13:08 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 400496 | | CLB | TAL CHI |
| | | | | | (Start) | 09/07/17 08:00 | | |
| | | | | | (End) | 09/07/17 08:01 | | |

## Client Sample ID: MW-12

**Date Collected: 08/29/17 15:30**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399950 | 09/01/17 01:39 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399960 | 08/31/17 15:24 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 400595 | 09/07/17 11:41 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 399839 | 08/31/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399989 | 09/01/17 11:00 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399736 | 08/31/17 03:35 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 400119 | 09/03/17 18:01 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 400403 | 09/06/17 13:11 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 400496 | | CLB | TAL CHI |
| | | | | | (Start) | 09/07/17 08:01 | | |
| | | | | | (End) | 09/07/17 08:02 | | |

## Client Sample ID: MW-17

**Date Collected: 08/29/17 17:30**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399950 | 09/01/17 01:43 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

## Client Sample ID: MW-17

**Date Collected: 08/29/17 17:30**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 399960 | 08/31/17 15:28 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 400595 | 09/07/17 11:45 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 399839 | 08/31/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399989 | 09/01/17 11:01 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399736 | 08/31/17 03:38 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 400119 | 09/03/17 18:03 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 400403 | 09/06/17 13:14 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 50 | 400496 | | CLB | TAL CHI |
| | | | | | (Start) | 09/07/17 08:04 | | |
| | | | | | (End) | 09/07/17 08:05 | | |

## Client Sample ID: Duplicate

**Date Collected: 08/29/17 10:00**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-16

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 399950 | 09/01/17 01:47 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 399960 | 08/31/17 15:32 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 399776 | 08/31/17 08:16 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 400595 | 09/07/17 11:49 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 399839 | 08/31/17 12:00 | MJD | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 399989 | 09/01/17 11:03 | MJD | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 399736 | 08/31/17 03:40 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 400119 | 09/03/17 18:04 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 400403 | 09/06/17 13:16 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 400496 | | CLB | TAL CHI |
| | | | | | (Start) | 09/07/17 08:05 | | |
| | | | | | (End) | 09/07/17 08:06 | | |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

## Chain of Custody Record

Lab Job #: 500-133196

Chain of Custody Number:

Page _____ of _____

Temperature °C of Cooler: 3.6, 3.7, 5.8, 4.9

| (optional) Report To | (optional) Bill To |
|---|---|
| Contact: | Contact: |
| Company: | Company: |
| Address: | Address: |
| Address: | Address: |
| Phone: | Phone: |
| Fax: | Fax: |
| E-Mail: | PO#/Reference# |

| | | | |
|---|---|---|---|
| Client: KPRG and Assoc. | Client Project # | Preservative | |
| Project Name: Powerton Station CCR | | Parameter | Radium 226/228; Total 6020A 6010C Metals; Cl, F, SO4, TDS |
| Project Location/State: Pekin, IL | Lab Project # | | |
| Sampler: Mark Wilson | Lab PM | | |

Preservative Key
1. HCL, Cool to 4°

500-133196 COC

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Radium 226/228 | Total 6020A 6010C Metals | Cl, F, SO4, TDS | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-02 | 8-23 | 1255 | | W | ✓ | ✓ | ✓ | |
| 2 | | MW-03 | 8-23 | 1608 | | W | ✓ | ✓ | ✓ | |
| 3 | | MW-10 | 8-24 | 1538 | | W | ✓ | ✓ | ✓ | |
| 4 | | MW-01 | 8-25 | 1020 | | W | ✓ | ✓ | ✓ | |
| 5 | | MW-09 | 8-25 | 1218 | | W | ✓ | ✓ | ✓ | |
| | | ~~Trip Blank~~ | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| Mark Wilson | KPRG | 8-25-17 | 1935 | Kathy Nelson | TA | 8/25/17 | 1944 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |

Lab Courier ☐
Shipped ☐
Hand Delivered ☒

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)



9/13/2017

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To Contact: Rick Gnat
Company: KPRG and Assoc.
Address:
Address:
Phone: 262-781-0475
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

500-133196 COC

## Chain of Custody Record

Lab Job #: 500-133196
Chain of Custody Number:
Page ____ of (1.4)(2.7)(3.1)
Temperature °C of Cooler: (3.4)(2.8)(3.0)

Client: KPRG and Assoc.
Client Project #
Project Name: NRG Powerton CCR
Project Location/State: Pekin, IL
Lab Project #
Sampler: Mark Wilson
Lab PM

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 8. None 9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Parameter: 904.0 Radium 226/228 | 6020A Total Recoverable Metals | SM4500 cl,F, SO4, 25ºC TDS | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | | MW-04 | 8-28 | 1915 | | W | X | X | X | | | | | | | |
| 7 | | MW-05 | 8-28 | 1530 | | W | X | X | X | | | | | | | |
| 8 | | MW-19 | 8-28 | 1630 | | W | X | X | X | | | | | | | |
| 9 | | MW-18 | 8-28 | 1730 | | W | X | X | X | | | | | | | |
| 10 | | MW-15 | 8-29 | 1000 | | W | X | X | X | | | | | | | |
| 11 | | MW-14 | 8-29 | 1130 | | W | X | X | X | | | | | | | |
| 12 | | MW-11 | 8-29 | 1230 | | W | X | X | X | | | | | | | |
| 13 | | MW-08 | 8-29 | 1355 | | W | X | X | X | | | | | | | |
| 14 | | MW-12 | 8-29 | 1530 | | W | X | X | X | | | | | | | |
| 15 | | MW-17 | 8-29 | 1730 | | W | X | X | X | | | | | | | |
| 16 | | Duplicate | 8-29 | 1000 | | W | X | X | X | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| Mark Wilson | KPRG | 8-30-17 | 1250 | Sherri Scott | TA-CHI | 8/30/17 | 1250 |
| | | | | | | | |
| | | | | | | | |

Lab Courier
Shipped
Hand Delivered ✓

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-133196-1

**Login Number: 133196**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 4.9, 5.8, 3.7,2.4,2.7,3.1,3.4,2.8,3.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-133196-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*9/28/2017 3:09:48 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-2

## Job ID: 500-133196-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-133196-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/26/2017 8:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 9 coolers at receipt time were 2.4º C, 2.7º C, 2.8º C, 3.0º C, 3.1º C, 3.4º C, 3.7º C, 4.9º C and 5.8º C.

**Receipt Exceptions**

Sample #11 (MW-14) was listed on the Chain of Custody (COC); however, no containers were received:. Per past events, this well is not collected for this program.

**RAD**
Method(s) PrecSep_0: Radium 228 Prep Batch 1660-325377
The following sample was reduced due to heavy amounts of sediment making sample murky and orange.

MW-17 (500-133196-15)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-325366
The following sample was reduced due to heavy amounts of sediment making sample murky and orange.

MW-17 (500-133196-15)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-133196-1 | MW-02 | Water | 08/23/17 12:55 | 08/26/17 08:00 |
| 500-133196-2 | MW-03 | Water | 08/23/17 16:08 | 08/26/17 08:00 |
| 500-133196-3 | MW-10 | Water | 08/24/17 15:38 | 08/26/17 08:00 |
| 500-133196-4 | MW-01 | Water | 08/25/17 10:20 | 08/26/17 08:00 |
| 500-133196-5 | MW-09 | Water | 08/25/17 12:18 | 08/26/17 08:00 |
| 500-133196-6 | MW-04 | Water | 08/28/17 14:15 | 08/30/17 12:50 |
| 500-133196-7 | MW-05 | Water | 08/28/17 15:30 | 08/30/17 12:50 |
| 500-133196-8 | MW-19 | Water | 08/28/17 16:30 | 08/30/17 12:50 |
| 500-133196-9 | MW-18 | Water | 08/28/17 17:30 | 08/30/17 12:50 |
| 500-133196-10 | MW-15 | Water | 08/29/17 10:00 | 08/30/17 12:50 |
| 500-133196-12 | MW-11 | Water | 08/29/17 12:30 | 08/30/17 12:50 |
| 500-133196-13 | MW-08 | Water | 08/29/17 13:55 | 08/30/17 12:50 |
| 500-133196-14 | MW-12 | Water | 08/29/17 15:30 | 08/30/17 12:50 |
| 500-133196-15 | MW-17 | Water | 08/29/17 17:30 | 08/30/17 12:50 |
| 500-133196-16 | Duplicate | Water | 08/29/17 10:00 | 08/30/17 12:50 |

## Client Sample ID: MW-02

**Date Collected: 08/23/17 12:55**
**Date Received: 08/26/17 08:00**

## Lab Sample ID: 500-133196-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0829 | | 0.0492 | 0.0498 | 1.00 | 0.0531 | pCi/L | 09/01/17 07:47 | 09/26/17 05:48 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:48* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.750 | | 0.261 | 0.270 | 1.00 | 0.350 | pCi/L | 09/01/17 08:21 | 09/11/17 13:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:12* | *1* |
| *Y Carrier* | *80.7* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:12* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.833 | | 0.265 | 0.274 | 5.00 | 0.350 | pCi/L | | 09/28/17 13:56 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-2

## Client Sample ID: MW-03

**Date Collected: 08/23/17 16:08**
**Date Received: 08/26/17 08:00**

## Lab Sample ID: 500-133196-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.00123 | U | 0.0288 | 0.0288 | 1.00 | 0.0649 | pCi/L | 09/01/17 07:47 | 09/26/17 05:49 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.1* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:49* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **1.20** | | 0.301 | 0.321 | 1.00 | 0.365 | pCi/L | 09/01/17 08:21 | 09/11/17 13:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.1* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:12* | *1* |
| *Y Carrier* | *80.0* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:12* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **1.20** | | 0.302 | 0.322 | 5.00 | 0.365 | pCi/L | | 09/28/17 13:56 | 1 |

## Client Sample ID: MW-10

**Date Collected: 08/24/17 15:38**
**Date Received: 08/26/17 08:00**

## Lab Sample ID: 500-133196-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.237** | | 0.0880 | 0.0906 | 1.00 | 0.0756 | pCi/L | 09/01/17 07:47 | 09/26/17 05:49 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.6* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:49* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.327 | U | 0.308 | 0.309 | 1.00 | 0.497 | pCi/L | 09/01/17 08:21 | 09/11/17 13:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.6* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:47* | *1* |
| *Y Carrier* | *74.0* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:47* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.564** | | 0.320 | 0.322 | 5.00 | 0.497 | pCi/L | | 09/28/17 13:56 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-2

## Client Sample ID: MW-01

**Date Collected: 08/25/17 10:20**
**Date Received: 08/26/17 08:00**

## Lab Sample ID: 500-133196-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0260 | U | 0.0351 | 0.0352 | 1.00 | 0.0580 | pCi/L | 09/01/17 07:47 | 09/26/17 05:49 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:49* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.749** | | 0.251 | 0.261 | 1.00 | 0.336 | pCi/L | 09/01/17 08:21 | 09/11/17 13:48 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |
| *Y Carrier* | *88.2* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.775** | | 0.254 | 0.263 | 5.00 | 0.336 | pCi/L | | 09/28/17 13:56 | 1 |

## Client Sample ID: MW-09

**Date Collected: 08/25/17 12:18**
**Date Received: 08/26/17 08:00**

## Lab Sample ID: 500-133196-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0101 | U | 0.0312 | 0.0312 | 1.00 | 0.0638 | pCi/L | 09/01/17 07:47 | 09/26/17 05:49 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:49* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.150 | U | 0.219 | 0.219 | 1.00 | 0.367 | pCi/L | 09/01/17 08:21 | 09/11/17 13:48 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |
| *Y Carrier* | *79.3* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.160 | U | 0.221 | 0.222 | 5.00 | 0.367 | pCi/L | | 09/28/17 13:56 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-2

**Client Sample ID: MW-04**
**Date Collected: 08/28/17 14:15**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-6**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0287 | U | 0.0405 | 0.0406 | 1.00 | 0.0687 | pCi/L | 09/01/17 07:47 | 09/26/17 05:49 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *98.8* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:49* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.217 | U | 0.250 | 0.251 | 1.00 | 0.411 | pCi/L | 09/01/17 08:21 | 09/11/17 13:48 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *98.8* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |
| *Y Carrier* | *80.7* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.246 | U | 0.253 | 0.254 | 5.00 | 0.411 | pCi/L | | 09/28/17 13:56 | 1 |

## Client Sample ID: MW-05

**Date Collected: 08/28/17 15:30**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0436 | U | 0.0438 | 0.0440 | 1.00 | 0.0650 | pCi/L | 09/01/17 07:47 | 09/26/17 05:49 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.7* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:49* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.337 | U | 0.244 | 0.246 | 1.00 | 0.381 | pCi/L | 09/01/17 08:21 | 09/11/17 13:48 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.7* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |
| *Y Carrier* | *81.5* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.381** | | 0.248 | 0.250 | 5.00 | 0.381 | pCi/L | | 09/28/17 13:56 | 1 |

## Client Sample ID: MW-19

**Date Collected: 08/28/17 16:30**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.108** | | 0.0601 | 0.0609 | 1.00 | 0.0712 | pCi/L | 09/01/17 07:47 | 09/26/17 05:39 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:39* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.262 | U | 0.223 | 0.225 | 1.00 | 0.356 | pCi/L | 09/01/17 08:21 | 09/11/17 13:48 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |
| *Y Carrier* | *81.9* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.370** | | 0.231 | 0.233 | 5.00 | 0.356 | pCi/L | | 09/28/17 13:56 | 1 |

## Client Sample ID: MW-18

**Date Collected: 08/28/17 17:30**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.205** | | 0.0777 | 0.0799 | 1.00 | 0.0726 | pCi/L | 09/01/17 07:47 | 09/26/17 05:39 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.7* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:39* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.293 | U | 0.227 | 0.228 | 1.00 | 0.357 | pCi/L | 09/01/17 08:21 | 09/11/17 13:48 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.7* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |
| *Y Carrier* | *82.6* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.498** | | 0.240 | 0.242 | 5.00 | 0.357 | pCi/L | | 09/28/17 13:56 | 1 |

## Client Sample ID: MW-15

**Date Collected: 08/29/17 10:00**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-10

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.0811** | | 0.0583 | 0.0588 | 1.00 | 0.0804 | pCi/L | 09/01/17 07:47 | 09/26/17 05:39 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *100* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:39* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.296 | U | 0.201 | 0.203 | 1.00 | 0.309 | pCi/L | 09/01/17 08:21 | 09/11/17 13:48 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *100* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.377** | | 0.209 | 0.211 | 5.00 | 0.309 | pCi/L | | 09/28/17 13:56 | 1 |

## Client Sample ID: MW-11

**Date Collected: 08/29/17 12:30**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-12

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.239** | | 0.0893 | 0.0919 | 1.00 | 0.0834 | pCi/L | 09/01/17 07:47 | 09/26/17 05:24 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.6* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:24* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0744 | U | 0.227 | 0.227 | 1.00 | 0.395 | pCi/L | 09/01/17 08:21 | 09/11/17 13:48 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.6* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |
| *Y Carrier* | *81.1* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.313 | U | 0.244 | 0.245 | 5.00 | 0.395 | pCi/L | | 09/28/17 13:56 | 1 |

## Client Sample ID: MW-08

**Date Collected: 08/29/17 13:55**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-13

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.147 | | 0.0772 | 0.0783 | 1.00 | 0.0900 | pCi/L | 09/01/17 07:47 | 09/26/17 05:24 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.9* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:24* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.552 | | 0.249 | 0.254 | 1.00 | 0.354 | pCi/L | 09/01/17 08:21 | 09/11/17 13:48 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.9* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |
| *Y Carrier* | *80.4* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.699 | | 0.261 | 0.266 | 5.00 | 0.354 | pCi/L | | 09/28/17 13:56 | 1 |

## Client Sample ID: MW-12

**Date Collected: 08/29/17 15:30**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-14

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.182 | | 0.0805 | 0.0821 | 1.00 | 0.0827 | pCi/L | 09/01/17 07:47 | 09/26/17 05:24 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.4* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:24* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.346 | | 0.202 | 0.205 | 1.00 | 0.302 | pCi/L | 09/01/17 08:21 | 09/11/17 13:48 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.4* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |
| *Y Carrier* | *89.0* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:48* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.529 | | 0.218 | 0.221 | 5.00 | 0.302 | pCi/L | | 09/28/17 13:56 | 1 |

## Client Sample ID: MW-17

**Date Collected: 08/29/17 17:30**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-15

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.788 | | 0.225 | 0.236 | 1.00 | 0.181 | pCi/L | 09/01/17 07:47 | 09/26/17 05:24 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:24* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 2.54 | | 0.618 | 0.660 | 1.00 | 0.738 | pCi/L | 09/01/17 08:21 | 09/11/17 13:49 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:49* | *1* |
| *Y Carrier* | *88.2* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:49* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 3.32 | | 0.657 | 0.701 | 5.00 | 0.738 | pCi/L | | 09/28/17 13:56 | 1 |

## Client Sample ID: Duplicate

**Date Collected: 08/29/17 10:00**
**Date Received: 08/30/17 12:50**

## Lab Sample ID: 500-133196-16

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0770 | | 0.0556 | 0.0560 | 1.00 | 0.0731 | pCi/L | 09/01/17 07:47 | 09/26/17 05:24 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.1* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:24* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.457 | | 0.241 | 0.244 | 1.00 | 0.358 | pCi/L | 09/01/17 08:21 | 09/11/17 13:49 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.1* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:49* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:49* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.534 | | 0.247 | 0.251 | 5.00 | 0.358 | pCi/L | | 09/28/17 13:56 | 1 |

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-2

## Rad

### Prep Batch: 325366

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-1 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-133196-2 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-133196-3 | MW-10 | Total/NA | Water | PrecSep-21 | |
| 500-133196-4 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-133196-5 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-133196-6 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-133196-7 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-133196-8 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-133196-9 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-133196-10 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-133196-12 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-133196-13 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-133196-14 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-133196-15 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-133196-16 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-325366/1-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-325366/2-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-133196-1 DU | MW-02 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 325377

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-133196-1 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-133196-2 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-133196-3 | MW-10 | Total/NA | Water | PrecSep_0 | |
| 500-133196-4 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-133196-5 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-133196-6 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-133196-7 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-133196-8 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-133196-9 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-133196-10 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-133196-12 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-133196-13 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-133196-14 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-133196-15 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-133196-16 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-325377/1-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-325377/2-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-133196-1 DU | MW-02 | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-325366/1-A**
**Matrix: Water**
**Analysis Batch: 328975**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 325366**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.01695 | U | 0.0362 | 0.0363 | 1.00 | 0.0673 | pCi/L | 09/01/17 07:47 | 09/26/17 05:48 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *105* | | *40 - 110* | *09/01/17 07:47* | *09/26/17 05:48* | *1* |

**Lab Sample ID: LCS 160-325366/2-A**
**Matrix: Water**
**Analysis Batch: 328975**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 325366**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 9.60 | 7.214 | | 0.769 | 1.00 | 0.0697 | pCi/L | 75 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* |

**Lab Sample ID: 500-133196-1 DU**
**Matrix: Water**
**Analysis Batch: 328975**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**
**Prep Batch: 325366**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0829 | | | 0.03972 | U | 0.0409 | 1.00 | 0.0616 | pCi/L | | | 0.48 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *99.7* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-325377/1-A**
**Matrix: Water**
**Analysis Batch: 326469**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 325377**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.4784 | | 0.261 | 0.265 | 1.00 | 0.393 | pCi/L | 09/01/17 08:21 | 09/11/17 13:12 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *105* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:12* | *1* |
| *Y Carrier* | *75.5* | | *40 - 110* | *09/01/17 08:21* | *09/11/17 13:12* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-325377/2-A**
**Matrix: Water**
**Analysis Batch: 326469**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 325377**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 12.9 | 16.86 | | 1.77 | 1.00 | 0.374 | pCi/L | 130 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* |
| *Y Carrier* | *79.6* | | *40 - 110* |

**Lab Sample ID: 500-133196-1 DU**
**Matrix: Water**
**Analysis Batch: 326469**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**
**Prep Batch: 325377**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.750 | | | 1.310 | | 0.308 | 1.00 | 0.322 | pCi/L | | | 0.97 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *99.7* | | *40 - 110* |
| *Y Carrier* | *87.9* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-2

## Client Sample ID: MW-02
**Date Collected: 08/23/17 12:55**
**Date Received: 08/26/17 08:00**

## Lab Sample ID: 500-133196-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 328975 | 09/26/17 05:48 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326469 | 09/11/17 13:12 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 08/23/17 16:08**
**Date Received: 08/26/17 08:00**

## Lab Sample ID: 500-133196-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 328975 | 09/26/17 05:49 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326469 | 09/11/17 13:12 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

## Client Sample ID: MW-10
**Date Collected: 08/24/17 15:38**
**Date Received: 08/26/17 08:00**

## Lab Sample ID: 500-133196-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 328975 | 09/26/17 05:49 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326638 | 09/11/17 13:47 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

## Client Sample ID: MW-01
**Date Collected: 08/25/17 10:20**
**Date Received: 08/26/17 08:00**

## Lab Sample ID: 500-133196-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 328975 | 09/26/17 05:49 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326638 | 09/11/17 13:48 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-2

## Client Sample ID: MW-09

**Date Collected: 08/25/17 12:18**
**Date Received: 08/26/17 08:00**

**Lab Sample ID: 500-133196-5**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 328975 | 09/26/17 05:49 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326638 | 09/11/17 13:48 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

## Client Sample ID: MW-04

**Date Collected: 08/28/17 14:15**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-6**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 328975 | 09/26/17 05:49 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326638 | 09/11/17 13:48 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

## Client Sample ID: MW-05

**Date Collected: 08/28/17 15:30**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-7**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 328975 | 09/26/17 05:49 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326638 | 09/11/17 13:48 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

## Client Sample ID: MW-19

**Date Collected: 08/28/17 16:30**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-8**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 328974 | 09/26/17 05:39 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326638 | 09/11/17 13:48 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-2

## Client Sample ID: MW-18

**Date Collected: 08/28/17 17:30**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-9**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 328974 | 09/26/17 05:39 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326638 | 09/11/17 13:48 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 08/29/17 10:00**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-10**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 328974 | 09/26/17 05:39 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326638 | 09/11/17 13:48 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

## Client Sample ID: MW-11

**Date Collected: 08/29/17 12:30**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-12**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 329007 | 09/26/17 05:24 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326638 | 09/11/17 13:48 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

## Client Sample ID: MW-08

**Date Collected: 08/29/17 13:55**
**Date Received: 08/30/17 12:50**

**Lab Sample ID: 500-133196-13**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 329007 | 09/26/17 05:24 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326638 | 09/11/17 13:48 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-2

## Client Sample ID: MW-12

**Lab Sample ID: 500-133196-14**

**Date Collected: 08/29/17 15:30**

**Matrix: Water**

**Date Received: 08/30/17 12:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 329007 | 09/26/17 05:24 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326638 | 09/11/17 13:48 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

## Client Sample ID: MW-17

**Lab Sample ID: 500-133196-15**

**Date Collected: 08/29/17 17:30**

**Matrix: Water**

**Date Received: 08/30/17 12:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 329007 | 09/26/17 05:24 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326638 | 09/11/17 13:49 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-133196-16**

**Date Collected: 08/29/17 10:00**

**Matrix: Water**

**Date Received: 08/30/17 12:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 325366 | 09/01/17 07:47 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 329007 | 09/26/17 05:24 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 325377 | 09/01/17 08:21 | LDE | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 326638 | 09/11/17 13:49 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 329508 | 09/28/17 13:56 | CAH | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc. TestAmerica Job ID: 500-133196-2
Project/Site: Powerton CCR

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

## Laboratory: TestAmerica St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200023 | 11-30-17 |

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

## Chain of Custody Record

Lab Job #: 500-133196

Chain of Custody Number:

Page _____ of _____

Temperature °C of Cooler: 3.6, 3.7, 5.8, 4.9

| (optional) Report To | | (optional) Bill To | |
|---|---|---|---|
| Contact: | | Contact: | |
| Company: | | Company: | |
| Address: | | Address: | |
| Address: | | Address: | |
| Phone: | | Phone: | |
| Fax: | | Fax: | |
| E-Mail: | | PO#/Reference# | |

| | | | |
|---|---|---|---|
| Client: KPRG and Assoc. | Client Project #: | Preservative: | |
| Project Name: Powerton Station CCR | | Parameter: | Radium 226/228; Total 6020A 6010C Metals; Cl, Fl, SO4 TDS |
| Project Location/State: Pekin, IL | Lab Project #: | | |
| Sampler: Mark Wilson | Lab PM: | | |

Preservative Key
1. HCL, Cool to 4°
4°

500-133196 COC

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Radium 226/228 | Total 6020A 6010C Metals | Cl, Fl, SO4 TDS | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-02 | 8-23 | 1255 | | W | ✓ | ✓ | ✓ | |
| 2 | | MW-03 | 8-23 | 1608 | | W | ✓ | ✓ | ✓ | |
| 3 | | MW-10 | 8-24 | 1538 | | W | ✓ | ✓ | ✓ | |
| 4 | | MW-01 | 8-25 | 1020 | | W | ✓ | ✓ | ✓ | |
| 5 | | MW-09 | 8-25 | 1218 | | W | ✓ | ✓ | ✓ | |
| | | ~~Trip Blank~~ | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| Mark Wilson | KPRG | 8-25-17 | 1935 | Kathy Nelson | TA | 8/25/17 | 1944 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |

Lab Courier ☐
Shipped ☐
Hand Delivered ☒

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)



9/28/2017

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To Contact: Rick Gnat
Company: KPRG and Assoc.
Address:
Address:
Phone: 262-781-0475
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

500-133196 COC

## Chain of Custody Record

Lab Job #: 500-133196
Chain of Custody Number:
Page ____ of (1.4)(2.7)(3.1)
Temperature °C of Cooler: (3.4)(2.8)(3.0)

Client: KPRG and Assoc.
Client Project #
Project Name: NRG Powerton CCR
Project Location/State: Pekin, IL
Lab Project #
Sampler: Mark Wilson
Lab PM

Preservative
Parameter

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | 904.0 Radium 226/228 | 6020A Total Ca/Fe/K/Na 7470A Metals | SM4500 Cl,F, SO4, 2540C TDS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | | MW-04 | 8-28 | 1915 | | W | X | X | X | | | | | | |
| 7 | | MW-05 | 8-28 | 1530 | | W | X | X | X | | | | | | |
| 8 | | MW-19 | 8-28 | 1630 | | W | X | X | X | | | | | | |
| 9 | | MW-18 | 8-28 | 1730 | | W | X | X | X | | | | | | |
| 10 | | MW-15 | 8-29 | 1000 | | W | X | X | X | | | | | | |
| 11 | | MW-14 | 8-29 | 1130 | | W | X | X | X | | | | | | |
| 12 | | MW-11 | 8-29 | 1230 | | W | X | X | X | | | | | | |
| 13 | | MW-08 | 8-29 | 1355 | | W | X | X | X | | | | | | |
| 14 | | MW-12 | 8-29 | 1530 | | W | X | X | X | | | | | | |
| 15 | | MW-17 | 8-29 | 1730 | | W | X | X | X | | | | | | |
| 16 | | Duplicate | 8-29 | 1000 | | W | X | X | X | | | | | | |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Comments

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| Mark Wilson | KPRG | 8-30-17 | 1250 | Sherri Scott | TA-CHI | 8/30/17 | 1250 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |

Lab Courier
Shipped
Hand Delivered ✓

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:



TAL-4124 (0709)

9/28/2017

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-92626.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-133196-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 9/26/2017 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Ra226Ra228_GFPC | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-02 (500-133196-1) | 8/23/17 | 12:55 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-03 (500-133196-2) | 8/23/17 | 16:08 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-10 (500-133196-3) | 8/24/17 | 15:38 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-01 (500-133196-4) | 8/25/17 | 10:20 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-09 (500-133196-5) | 8/25/17 | 12:18 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| ***Possible Hazard Identification*** | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** |
|---|---|
| *Unconfirmed* | ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 08/20/17 @ 1600 | TA | [signature] | 8/29/17 0920 | TA |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-92757.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-133196-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 9/8/2017 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Ra226Ra228_GFPC | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-04 (500-133196-6) | 8/28/17 | 14:15 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-05 (500-133196-7) | 8/28/17 | 15:30 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-19 (500-133196-8) | 8/28/17 | 16:30 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-18 (500-133196-9) | 8/28/17 | 17:30 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-15 (500-133196-10) | 8/29/17 | 10:00 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-11 (500-133196-12) | 8/29/17 | 12:30 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-08 (500-133196-13) | 8/29/17 | 13:55 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-12 (500-133196-14) | 8/29/17 | 15:30 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |
| MW-17 (500-133196-15) | 8/29/17 | 17:30 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |

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|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 08/30/17 @ 1600 | TA | [signature] | 8/31/17 0910 | |
| 2 | Relinquished by: [signature] | Date/Time: | Company | Received by: [signature] | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

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TestAmerica
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| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-92757.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-133196-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 9/8/2017 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | Ra226Ra228_GFPC | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| Duplicate (500-133196-16) | 8/29/17 | 10:00 Central | | Water | | | X | X | X | 3 | Batch QC must be performed (dup, spikes, etc) - no NCMs concerning limited volume; |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | | 08/30/17 @ 1600 | TA | | 8/31/17 0910 | |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-133196-2

**Login Number: 133196**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 4.9, 5.8, 3.7,2.4,2.7,3.1,3.4,2.8,3.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-133196-2

**Login Number: 133196**
**List Number: 2**
**Creator: Taylor, Kristene N**

**List Source: TestAmerica St. Louis**
**List Creation: 08/29/17 03:56 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 19.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-133196-2

**Login Number: 133196**
**List Number: 3**
**Creator: Taylor, Kristene N**

**List Source: TestAmerica St. Louis**
**List Creation: 08/31/17 03:20 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 17.0,17.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-133196-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) |
| 500-133196-1 | MW-02 | 103 |
| 500-133196-1 DU | MW-02 | 99.7 |
| 500-133196-2 | MW-03 | 99.1 |
| 500-133196-3 | MW-10 | 82.6 |
| 500-133196-4 | MW-01 | 102 |
| 500-133196-5 | MW-09 | 103 |
| 500-133196-6 | MW-04 | 98.8 |
| 500-133196-7 | MW-05 | 99.7 |
| 500-133196-8 | MW-19 | 102 |
| 500-133196-9 | MW-18 | 99.7 |
| 500-133196-10 | MW-15 | 100 |
| 500-133196-12 | MW-11 | 97.6 |
| 500-133196-13 | MW-08 | 97.9 |
| 500-133196-14 | MW-12 | 99.4 |
| 500-133196-15 | MW-17 | 93.8 |
| 500-133196-16 | Duplicate | 99.1 |
| LCS 160-325366/2-A | Lab Control Sample | 102 |
| MB 160-325366/1-A | Method Blank | 105 |

**Tracer/Carrier Legend**

Ba = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) | Y (40-110) |
| 500-133196-1 | MW-02 | 103 | 80.7 |
| 500-133196-1 DU | MW-02 | 99.7 | 87.9 |
| 500-133196-2 | MW-03 | 99.1 | 80.0 |
| 500-133196-3 | MW-10 | 82.6 | 74.0 |
| 500-133196-4 | MW-01 | 102 | 88.2 |
| 500-133196-5 | MW-09 | 103 | 79.3 |
| 500-133196-6 | MW-04 | 98.8 | 80.7 |
| 500-133196-7 | MW-05 | 99.7 | 81.5 |
| 500-133196-8 | MW-19 | 102 | 81.9 |
| 500-133196-9 | MW-18 | 99.7 | 82.6 |
| 500-133196-10 | MW-15 | 100 | 87.9 |
| 500-133196-12 | MW-11 | 97.6 | 81.1 |
| 500-133196-13 | MW-08 | 97.9 | 80.4 |
| 500-133196-14 | MW-12 | 99.4 | 89.0 |
| 500-133196-15 | MW-17 | 93.8 | 88.2 |
| 500-133196-16 | Duplicate | 99.1 | 87.9 |
| LCS 160-325377/2-A | Lab Control Sample | 102 | 79.6 |
| MB 160-325377/1-A | Method Blank | 105 | 75.5 |

**Tracer/Carrier Legend**

Ba = Ba Carrier
Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-137174-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*11/27/2017 3:37:08 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-137174-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-137174-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 11/10/2017 5:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 0.8º C, 1.6º C, 2.0º C, 2.4º C and 3.1º C.

**Metals**
Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-410045. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-137174-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.083 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.57 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 640 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 38 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.12 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 61 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-02 — Lab Sample ID: 500-137174-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.091 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.7 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 98 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0027 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 550 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 46 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 88 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-137174-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.068 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.31 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 79 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 460 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 62 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.26 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 61 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-137174-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.051 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.60 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

## Client Sample ID: MW-04 (Continued) — Lab Sample ID: 500-137174-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Selenium | 0.0092 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 650 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 94 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.24 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 130 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-137174-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.058 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.51 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 99 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 990 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 110 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.31 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 160 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-137174-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.019 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0027 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.10 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.68 | | 0.10 | | mg/L | 2 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.014 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 260 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.45 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 270 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-137174-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0012 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.048 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.0 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 89 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.026 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-09 (Continued) — Lab Sample ID: 500-137174-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 650 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 37 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 190 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-137174-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.22 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.36 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 98 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0035 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0034 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 48 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.18 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 64 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-137174-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.092 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.54 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.5 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0034 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.014 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 970 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 100 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.59 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 230 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-137174-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.018 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.50 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.45 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.94 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-137174-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cadmium | 0.0015 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00097 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.023 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 170 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.48 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 370 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-137174-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.025 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0063 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.046 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.6 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 170 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.020 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.016 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.63 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 530 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-137174-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.17 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.38 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.7 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Cadmium | 0.0022 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 190 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0015 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.019 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Thallium | 0.0075 | | 0.0020 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1800 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

## Client Sample ID: MW-17 (Continued) — Lab Sample ID: 500-137174-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 240 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.62 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 840 | | 200 | | mg/L | 40 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-137174-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.011 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.67 | | 0.10 | | mg/L | 2 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0057 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 190 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.57 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 400 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-137174-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.071 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.5 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 86 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.042 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 640 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 35 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 190 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-137174-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.011 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.13 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.71 | | 0.10 | | mg/L | 2 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0057 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1100 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 190 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.58 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |

This Detection Summary does not include radiochemical test results.

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

## Client Sample ID: Duplicate (Continued) — Lab Sample ID: 500-137174-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 320 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-137174-1 | MW-01 | Water | 11/08/17 09:36 | 11/10/17 17:45 |
| 500-137174-2 | MW-02 | Water | 11/07/17 09:10 | 11/10/17 17:45 |
| 500-137174-3 | MW-03 | Water | 11/07/17 10:41 | 11/10/17 17:45 |
| 500-137174-4 | MW-04 | Water | 11/07/17 12:13 | 11/10/17 17:45 |
| 500-137174-5 | MW-05 | Water | 11/07/17 13:48 | 11/10/17 17:45 |
| 500-137174-6 | MW-08 | Water | 11/08/17 13:33 | 11/10/17 17:45 |
| 500-137174-7 | MW-09 | Water | 11/08/17 14:54 | 11/10/17 17:45 |
| 500-137174-8 | MW-10 | Water | 11/09/17 09:04 | 11/10/17 17:45 |
| 500-137174-9 | MW-11 | Water | 11/09/17 10:58 | 11/10/17 17:45 |
| 500-137174-10 | MW-12 | Water | 11/10/17 11:53 | 11/10/17 17:45 |
| 500-137174-11 | MW-15 | Water | 11/10/17 09:54 | 11/10/17 17:45 |
| 500-137174-12 | MW-17 | Water | 11/06/17 12:19 | 11/10/17 17:45 |
| 500-137174-13 | MW-18 | Water | 11/06/17 13:49 | 11/10/17 17:45 |
| 500-137174-14 | MW-19 | Water | 11/06/17 15:16 | 11/10/17 17:45 |
| 500-137174-15 | Duplicate | Water | 11/06/17 00:00 | 11/10/17 17:45 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

## Client Sample ID: MW-01

**Date Collected: 11/08/17 09:36**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 21:29 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:06 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:06 | 1 |
| **Barium** | **0.083** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:06 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:06 | 1 |
| **Boron** | **0.57** | | 0.050 | | mg/L | | 11/14/17 07:18 | 11/15/17 16:05 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:06 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:06 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:06 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:06 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:06 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:06 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:06 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:06 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 14:40 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **640** | | 10 | | mg/L | | | 11/13/17 03:32 | 1 |
| **Chloride** | **38** | | 2.0 | | mg/L | | | 11/17/17 22:15 | 1 |
| **Fluoride** | **0.12** | | 0.10 | | mg/L | | | 11/16/17 18:56 | 1 |
| **Sulfate** | **61** | | 20 | | mg/L | | | 11/17/17 07:33 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

**Client Sample ID: MW-02**
**Date Collected: 11/07/17 09:10**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-2**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 21:49 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:25 | 1 |
| **Arsenic** | **0.0014** | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:25 | 1 |
| **Barium** | **0.091** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:25 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:25 | 1 |
| **Boron** | **3.7** | | 0.50 | | mg/L | | 11/14/17 07:18 | 11/15/17 16:24 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:25 | 1 |
| **Calcium** | **98** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:25 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:25 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:25 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:25 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:25 | 1 |
| **Selenium** | **0.0027** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:25 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:25 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 14:42 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **550** | | 10 | | mg/L | | | 11/13/17 03:35 | 1 |
| **Chloride** | **46** | | 2.0 | | mg/L | | | 11/17/17 22:16 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 11/16/17 19:04 | 1 |
| **Sulfate** | **88** | | 20 | | mg/L | | | 11/17/17 07:34 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

**Client Sample ID: MW-03**
**Date Collected: 11/07/17 10:41**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-3**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 21:53 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:36 | 1 |
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:36 | 1 |
| **Barium** | **0.068** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:36 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:36 | 1 |
| **Boron** | **0.31** | | 0.050 | | mg/L | | 11/14/17 07:18 | 11/15/17 16:28 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:36 | 1 |
| **Calcium** | **79** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:36 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:36 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:36 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:36 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:36 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:36 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:36 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 14:52 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **460** | | 10 | | mg/L | | | 11/13/17 03:38 | 1 |
| **Chloride** | **62** | | 2.0 | | mg/L | | | 11/17/17 22:17 | 1 |
| **Fluoride** | **0.26** | | 0.10 | | mg/L | | | 11/16/17 19:07 | 1 |
| **Sulfate** | **61** | | 20 | | mg/L | | | 11/17/17 07:35 | 4 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

**Client Sample ID: MW-04**
**Date Collected: 11/07/17 12:13**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-4**
**Matrix: Water**

## Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 21:57 | 1 |

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:40 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:40 | 1 |
| **Barium** | **0.051** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:40 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:40 | 1 |
| **Boron** | **0.60** | | 0.050 | | mg/L | | 11/14/17 07:18 | 11/15/17 16:40 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:40 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:40 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:40 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:40 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:40 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:40 | 1 |
| **Selenium** | **0.0092** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:40 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:40 | 1 |

## Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 14:54 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **650** | | 10 | | mg/L | | | 11/13/17 03:40 | 1 |
| **Chloride** | **94** | | 2.0 | | mg/L | | | 11/17/17 22:49 | 1 |
| **Fluoride** | **0.24** | | 0.10 | | mg/L | | | 11/16/17 19:11 | 1 |
| **Sulfate** | **130** | | 25 | | mg/L | | | 11/15/17 11:34 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

**Client Sample ID: MW-05**
**Date Collected: 11/07/17 13:48**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-5**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 22:09 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:44 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:44 | 1 |
| **Barium** | **0.058** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:44 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:44 | 1 |
| **Boron** | **0.51** | | 0.050 | | mg/L | | 11/14/17 07:18 | 11/15/17 16:44 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:44 | 1 |
| **Calcium** | **99** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:44 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:44 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:44 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:44 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:44 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:44 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:44 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 14:55 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **990** | | 10 | | mg/L | | | 11/13/17 03:43 | 1 |
| **Chloride** | **110** | | 10 | | mg/L | | | 11/17/17 22:19 | 5 |
| **Fluoride** | **0.31** | | 0.10 | | mg/L | | | 11/16/17 19:14 | 1 |
| **Sulfate** | **160** | | 50 | | mg/L | | | 11/15/17 11:37 | 10 |

## Client Sample ID: MW-08

**Date Collected: 11/08/17 13:33**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-6

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.019** | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 22:13 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:47 | 1 |
| **Arsenic** | **0.0027** | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:47 | 1 |
| **Barium** | **0.10** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:47 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:47 | 1 |
| **Boron** | **0.68** | | 0.10 | | mg/L | | 11/14/17 07:18 | 11/15/17 16:47 | 2 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:47 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:47 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:47 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:47 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:47 | 1 |
| **Molybdenum** | **0.014** | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:47 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:47 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:47 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 14:57 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1200** | | 10 | | mg/L | | | 11/13/17 03:45 | 1 |
| **Chloride** | **260** | | 10 | | mg/L | | | 11/17/17 22:20 | 5 |
| **Fluoride** | **0.45** | | 0.10 | | mg/L | | | 11/16/17 19:17 | 1 |
| **Sulfate** | **270** | | 50 | | mg/L | | | 11/15/17 11:38 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

**Client Sample ID: MW-09**
**Date Collected: 11/08/17 14:54**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-7**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 22:17 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:51 | 1 |
| **Arsenic** | **0.0012** | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:51 | 1 |
| **Barium** | **0.048** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:51 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:51 | 1 |
| **Boron** | **4.0** | | 0.50 | | mg/L | | 11/14/17 07:18 | 11/15/17 16:51 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:51 | 1 |
| **Calcium** | **89** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:51 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:51 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:51 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:51 | 1 |
| **Molybdenum** | **0.026** | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:51 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:51 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:51 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 14:58 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **650** | | 10 | | mg/L | | | 11/13/17 03:48 | 1 |
| **Chloride** | **37** | | 2.0 | | mg/L | | | 11/17/17 22:24 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 11/16/17 19:30 | 1 |
| **Sulfate** | **190** | | 50 | | mg/L | | | 11/15/17 11:39 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

**Client Sample ID: MW-10**
**Date Collected: 11/09/17 09:04**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-8**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 22:21 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:55 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:55 | 1 |
| **Barium** | **0.22** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:55 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:55 | 1 |
| **Boron** | **0.36** | | 0.050 | | mg/L | | 11/14/17 07:18 | 11/15/17 16:55 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:55 | 1 |
| **Calcium** | **98** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:55 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:55 | 1 |
| **Cobalt** | **0.0035** | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:55 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:55 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:55 | 1 |
| **Selenium** | **0.0034** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:55 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:55 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 15:00 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **500** | | 10 | | mg/L | | | 11/13/17 03:50 | 1 |
| **Chloride** | **48** | | 2.0 | | mg/L | | | 11/17/17 22:27 | 1 |
| **Fluoride** | **0.18** | | 0.10 | | mg/L | | | 11/16/17 19:33 | 1 |
| **Sulfate** | **64** | | 20 | | mg/L | | | 11/15/17 11:40 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

**Client Sample ID: MW-11**
**Date Collected: 11/09/17 10:58**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-9**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 22:25 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:59 | 1 |
| **Arsenic** | **0.092** | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:59 | 1 |
| **Barium** | **0.54** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:59 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:59 | 1 |
| **Boron** | **1.5** | | 0.25 | | mg/L | | 11/14/17 07:18 | 11/15/17 16:59 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:59 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:59 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:59 | 1 |
| **Cobalt** | **0.0034** | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:59 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:59 | 1 |
| **Molybdenum** | **0.014** | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/15/17 17:45 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:59 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 16:59 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 15:01 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **970** | | 10 | | mg/L | | | 11/13/17 03:53 | 1 |
| **Chloride** | **100** | | 10 | | mg/L | | | 11/17/17 22:28 | 5 |
| **Fluoride** | **0.59** | | 0.10 | | mg/L | | | 11/16/17 19:36 | 1 |
| **Sulfate** | **230** | | 50 | | mg/L | | | 11/15/17 11:43 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

**Client Sample ID: MW-12**
**Date Collected: 11/10/17 11:53**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-10**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.018** | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 22:29 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:03 | 1 |
| **Arsenic** | **0.50** | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:03 | 1 |
| **Barium** | **0.45** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:03 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:03 | 1 |
| **Boron** | **0.94** | | 0.25 | | mg/L | | 11/14/17 07:18 | 11/15/17 17:03 | 5 |
| **Cadmium** | **0.0015** | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:03 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:03 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:03 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:03 | 1 |
| **Lead** | **0.00097** | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:03 | 1 |
| **Molybdenum** | **0.023** | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/15/17 17:49 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:03 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:03 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 15:03 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1200** | | 10 | | mg/L | | | 11/13/17 03:56 | 1 |
| **Chloride** | **170** | | 10 | | mg/L | | | 11/17/17 22:28 | 5 |
| **Fluoride** | **0.48** | | 0.10 | | mg/L | | | 11/16/17 19:39 | 1 |
| **Sulfate** | **370** | | 100 | | mg/L | | | 11/15/17 11:44 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

**Client Sample ID: MW-15**
**Date Collected: 11/10/17 09:54**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-11**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.025** | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 22:34 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:14 | 1 |
| **Arsenic** | **0.0063** | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:14 | 1 |
| **Barium** | **0.046** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:14 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:14 | 1 |
| **Boron** | **1.6** | | 0.25 | | mg/L | | 11/14/17 07:18 | 11/15/17 17:14 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:14 | 1 |
| **Calcium** | **170** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:14 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:14 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:14 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:14 | 1 |
| **Molybdenum** | **0.020** | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:14 | 1 |
| **Selenium** | **0.016** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:14 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:14 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 15:08 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 11/13/17 03:58 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 11/17/17 22:29 | 5 |
| **Fluoride** | **0.63** | | 0.10 | | mg/L | | | 11/16/17 19:42 | 1 |
| **Sulfate** | **530** | | 100 | | mg/L | | | 11/15/17 11:45 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

**Client Sample ID: MW-17**
**Date Collected: 11/06/17 12:19**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-12**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 22:38 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:18 | 1 |
| **Arsenic** | **0.17** | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:18 | 1 |
| **Barium** | **0.38** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:18 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:18 | 1 |
| **Boron** | **1.7** | | 0.25 | | mg/L | | 11/14/17 07:18 | 11/15/17 17:18 | 5 |
| **Cadmium** | **0.0022** | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:18 | 1 |
| **Calcium** | **190** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:18 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:18 | 1 |
| **Cobalt** | **0.0015** | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:18 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:18 | 1 |
| **Molybdenum** | **0.019** | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/16/17 11:49 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:18 | 1 |
| **Thallium** | **0.0075** | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:18 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 15:10 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1800** | | 10 | | mg/L | | | 11/13/17 04:01 | 1 |
| **Chloride** | **240** | | 10 | | mg/L | | | 11/17/17 22:29 | 5 |
| **Fluoride** | **0.62** | | 0.10 | | mg/L | | | 11/16/17 19:46 | 1 |
| **Sulfate** | **840** | | 200 | | mg/L | | | 11/15/17 11:46 | 40 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

**Client Sample ID: MW-18**
**Date Collected: 11/06/17 13:49**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-13**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.011** | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 22:42 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:22 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:22 | 1 |
| **Barium** | **0.12** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:22 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:22 | 1 |
| **Boron** | **0.67** | | 0.10 | | mg/L | | 11/14/17 07:18 | 11/15/17 17:22 | 2 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:22 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:22 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:22 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:22 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:22 | 1 |
| **Molybdenum** | **0.0057** | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:22 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:22 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:22 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 15:11 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1200** | | 10 | | mg/L | | | 11/13/17 04:55 | 1 |
| **Chloride** | **190** | | 10 | | mg/L | | | 11/17/17 22:30 | 5 |
| **Fluoride** | **0.57** | | 0.10 | | mg/L | | | 11/16/17 19:48 | 1 |
| **Sulfate** | **400** | | 100 | | mg/L | | | 11/15/17 11:47 | 20 |

## Client Sample ID: MW-19

**Date Collected: 11/06/17 15:16**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-14

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 22:46 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:25 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:25 | 1 |
| **Barium** | **0.071** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:25 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:25 | 1 |
| **Boron** | **4.5** | | 1.0 | | mg/L | | 11/14/17 07:18 | 11/15/17 17:26 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:25 | 1 |
| **Calcium** | **86** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:25 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:25 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:25 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:25 | 1 |
| **Molybdenum** | **0.042** | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:25 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:25 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:25 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 15:13 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **640** | | 10 | | mg/L | | | 11/13/17 05:02 | 1 |
| **Chloride** | **35** | | 2.0 | | mg/L | | | 11/17/17 22:32 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 11/16/17 19:52 | 1 |
| **Sulfate** | **190** | | 50 | | mg/L | | | 11/15/17 11:48 | 10 |

## Client Sample ID: Duplicate

**Date Collected: 11/06/17 00:00**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-15

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.011** | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 22:58 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:29 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:29 | 1 |
| **Barium** | **0.13** | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:29 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:29 | 1 |
| **Boron** | **0.71** | | 0.10 | | mg/L | | 11/14/17 07:18 | 11/15/17 17:30 | 2 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:29 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:29 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:29 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:29 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:29 | 1 |
| **Molybdenum** | **0.0057** | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:29 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:29 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 17:29 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 15:14 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1100** | | 10 | | mg/L | | | 11/13/17 05:05 | 1 |
| **Chloride** | **190** | | 10 | | mg/L | | | 11/17/17 22:32 | 5 |
| **Fluoride** | **0.58** | | 0.10 | | mg/L | | | 11/16/17 19:55 | 1 |
| **Sulfate** | **320** | | 50 | | mg/L | | | 11/15/17 11:49 | 10 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 409817

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-137174-2 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-137174-3 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-137174-4 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-137174-5 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-137174-6 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-137174-7 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-137174-8 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-137174-9 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-137174-10 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-137174-11 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-137174-12 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-137174-13 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-137174-14 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-137174-15 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-409817/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-409817/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-137174-1 MS | MW-01 | Total Recoverable | Water | 3005A | |
| 500-137174-1 MSD | MW-01 | Total Recoverable | Water | 3005A | |
| 500-137174-1 DU | MW-01 | Total Recoverable | Water | 3005A | |

### Analysis Batch: 409998

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-1 | MW-01 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-2 | MW-02 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-3 | MW-03 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-4 | MW-04 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-5 | MW-05 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-6 | MW-08 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-7 | MW-09 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-8 | MW-10 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-9 | MW-11 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-10 | MW-12 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-11 | MW-15 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-12 | MW-17 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-13 | MW-18 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-14 | MW-19 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-15 | Duplicate | Total Recoverable | Water | 6010C | 409817 |
| MB 500-409817/1-A | Method Blank | Total Recoverable | Water | 6010C | 409817 |
| LCS 500-409817/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-1 MS | MW-01 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-1 MSD | MW-01 | Total Recoverable | Water | 6010C | 409817 |
| 500-137174-1 DU | MW-01 | Total Recoverable | Water | 6010C | 409817 |

### Analysis Batch: 410045

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-1 | MW-01 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-2 | MW-02 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-3 | MW-03 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-4 | MW-04 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-5 | MW-05 | Total Recoverable | Water | 6020A | 409817 |

## Metals (Continued)

### Analysis Batch: 410045 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-6 | MW-08 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-7 | MW-09 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-8 | MW-10 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-9 | MW-11 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-10 | MW-12 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-11 | MW-15 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-12 | MW-17 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-13 | MW-18 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-14 | MW-19 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-15 | Duplicate | Total Recoverable | Water | 6020A | 409817 |
| MB 500-409817/1-A | Method Blank | Total Recoverable | Water | 6020A | 409817 |
| LCS 500-409817/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-1 MS | MW-01 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-1 DU | MW-01 | Total Recoverable | Water | 6020A | 409817 |

### Analysis Batch: 410229

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-1 | MW-01 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-2 | MW-02 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-3 | MW-03 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-4 | MW-04 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-5 | MW-05 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-6 | MW-08 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-7 | MW-09 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-8 | MW-10 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-9 | MW-11 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-9 | MW-11 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-10 | MW-12 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-10 | MW-12 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-11 | MW-15 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-12 | MW-17 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-13 | MW-18 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-14 | MW-19 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-15 | Duplicate | Total Recoverable | Water | 6020A | 409817 |
| MB 500-409817/1-A | Method Blank | Total Recoverable | Water | 6020A | 409817 |
| LCS 500-409817/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-1 MS | MW-01 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 409817 |
| 500-137174-1 DU | MW-01 | Total Recoverable | Water | 6020A | 409817 |

### Analysis Batch: 410287

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-12 | MW-17 | Total Recoverable | Water | 6020A | 409817 |

### Prep Batch: 410978

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-137174-2 | MW-02 | Total/NA | Water | 7470A | |
| 500-137174-3 | MW-03 | Total/NA | Water | 7470A | |
| 500-137174-4 | MW-04 | Total/NA | Water | 7470A | |

## Metals (Continued)

### Prep Batch: 410978 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-5 | MW-05 | Total/NA | Water | 7470A | |
| 500-137174-6 | MW-08 | Total/NA | Water | 7470A | |
| 500-137174-7 | MW-09 | Total/NA | Water | 7470A | |
| 500-137174-8 | MW-10 | Total/NA | Water | 7470A | |
| 500-137174-9 | MW-11 | Total/NA | Water | 7470A | |
| 500-137174-10 | MW-12 | Total/NA | Water | 7470A | |
| 500-137174-11 | MW-15 | Total/NA | Water | 7470A | |
| 500-137174-12 | MW-17 | Total/NA | Water | 7470A | |
| 500-137174-13 | MW-18 | Total/NA | Water | 7470A | |
| 500-137174-14 | MW-19 | Total/NA | Water | 7470A | |
| 500-137174-15 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-410978/11-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-410978/12-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-137174-2 MS | MW-02 | Total/NA | Water | 7470A | |
| 500-137174-2 MSD | MW-02 | Total/NA | Water | 7470A | |
| 500-137174-2 DU | MW-02 | Total/NA | Water | 7470A | |

### Analysis Batch: 411222

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-1 | MW-01 | Total/NA | Water | 7470A | 410978 |
| 500-137174-2 | MW-02 | Total/NA | Water | 7470A | 410978 |
| 500-137174-3 | MW-03 | Total/NA | Water | 7470A | 410978 |
| 500-137174-4 | MW-04 | Total/NA | Water | 7470A | 410978 |
| 500-137174-5 | MW-05 | Total/NA | Water | 7470A | 410978 |
| 500-137174-6 | MW-08 | Total/NA | Water | 7470A | 410978 |
| 500-137174-7 | MW-09 | Total/NA | Water | 7470A | 410978 |
| 500-137174-8 | MW-10 | Total/NA | Water | 7470A | 410978 |
| 500-137174-9 | MW-11 | Total/NA | Water | 7470A | 410978 |
| 500-137174-10 | MW-12 | Total/NA | Water | 7470A | 410978 |
| 500-137174-11 | MW-15 | Total/NA | Water | 7470A | 410978 |
| 500-137174-12 | MW-17 | Total/NA | Water | 7470A | 410978 |
| 500-137174-13 | MW-18 | Total/NA | Water | 7470A | 410978 |
| 500-137174-14 | MW-19 | Total/NA | Water | 7470A | 410978 |
| 500-137174-15 | Duplicate | Total/NA | Water | 7470A | 410978 |
| MB 500-410978/11-A | Method Blank | Total/NA | Water | 7470A | 410978 |
| LCS 500-410978/12-A | Lab Control Sample | Total/NA | Water | 7470A | 410978 |
| 500-137174-2 MS | MW-02 | Total/NA | Water | 7470A | 410978 |
| 500-137174-2 MSD | MW-02 | Total/NA | Water | 7470A | 410978 |
| 500-137174-2 DU | MW-02 | Total/NA | Water | 7470A | 410978 |

## General Chemistry

### Analysis Batch: 409597

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-137174-2 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-137174-3 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-137174-4 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-137174-5 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-137174-6 | MW-08 | Total/NA | Water | SM 2540C | |

## General Chemistry (Continued)

### Analysis Batch: 409597 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-7 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-137174-8 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-137174-9 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-137174-10 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-137174-11 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-137174-12 | MW-17 | Total/NA | Water | SM 2540C | |
| MB 500-409597/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-409597/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 409598

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-13 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-137174-14 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-137174-15 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-409598/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-409598/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-137174-13 MS | MW-18 | Total/NA | Water | SM 2540C | |
| 500-137174-13 DU | MW-18 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 410071

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-4 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-5 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-6 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-7 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-8 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-9 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-10 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-11 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-12 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-13 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-14 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-15 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-410071/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-410071/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-4 MS | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-4 MSD | MW-04 | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 410385

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-137174-2 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-137174-3 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-137174-4 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-137174-5 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-137174-6 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-137174-7 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-137174-8 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-137174-9 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-137174-10 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-137174-11 | MW-15 | Total/NA | Water | SM 4500 F C | |

## General Chemistry (Continued)

### Analysis Batch: 410385 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-12 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-137174-13 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-137174-14 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-137174-15 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-410385/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-410385/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| 500-137174-1 MS | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-137174-1 MSD | MW-01 | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 410428

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-2 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-137174-3 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-410428/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-410428/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 410574

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-2 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-3 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-4 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-5 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-6 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-7 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-8 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-9 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-10 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-11 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-12 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-13 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-14 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-15 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-410574/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-410574/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-7 MS | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-137174-7 MSD | MW-09 | Total/NA | Water | SM 4500 Cl- E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-409817/1-A**
**Matrix: Water**
**Analysis Batch: 409998**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 409817**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/14/17 07:18 | 11/14/17 21:21 | 1 |

**Lab Sample ID: LCS 500-409817/2-A**
**Matrix: Water**
**Analysis Batch: 409998**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 409817**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | | | 0.500 | 0.516 | | mg/L | | 103 | 80 - 120 | | |

**Lab Sample ID: 500-137174-1 MS**
**Matrix: Water**
**Analysis Batch: 409998**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 409817**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.533 | | mg/L | | 107 | 75 - 125 | | |

**Lab Sample ID: 500-137174-1 MSD**
**Matrix: Water**
**Analysis Batch: 409998**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 409817**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.538 | | mg/L | | 108 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-137174-1 DU**
**Matrix: Water**
**Analysis Batch: 409998**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 409817**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | | <0.010 | | mg/L | | | | NC | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-409817/1-A**
**Matrix: Water**
**Analysis Batch: 410045**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 409817**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/14/17 07:18 | 11/14/17 15:58 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 15:58 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 15:58 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 15:58 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 15:58 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 11/14/17 07:18 | 11/14/17 15:58 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 15:58 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/14/17 07:18 | 11/14/17 15:58 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/14/17 07:18 | 11/14/17 15:58 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/14/17 07:18 | 11/14/17 15:58 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/14/17 07:18 | 11/14/17 15:58 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/14/17 07:18 | 11/14/17 15:58 | 1 |

**Lab Sample ID: MB 500-409817/1-A**
**Matrix: Water**
**Analysis Batch: 410229**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 409817**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 11/14/17 07:18 | 11/15/17 15:58 | 1 |

**Lab Sample ID: LCS 500-409817/2-A**
**Matrix: Water**
**Analysis Batch: 410045**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 409817**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.494 | | mg/L | | 99 | 80 - 120 |
| Arsenic | 0.100 | 0.103 | | mg/L | | 103 | 80 - 120 |
| Barium | 2.00 | 2.09 | | mg/L | | 105 | 80 - 120 |
| Beryllium | 0.0500 | 0.0505 | | mg/L | | 101 | 80 - 120 |
| Cadmium | 0.0500 | 0.0511 | | mg/L | | 102 | 80 - 120 |
| Calcium | 10.0 | 9.37 | | mg/L | | 94 | 80 - 120 |
| Chromium | 0.200 | 0.208 | | mg/L | | 104 | 80 - 120 |
| Cobalt | 0.500 | 0.504 | | mg/L | | 101 | 80 - 120 |
| Lead | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |
| Molybdenum | 1.00 | 0.987 | | mg/L | | 99 | 80 - 120 |
| Selenium | 0.100 | 0.0998 | | mg/L | | 100 | 80 - 120 |
| Thallium | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |

**Lab Sample ID: LCS 500-409817/2-A**
**Matrix: Water**
**Analysis Batch: 410229**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 409817**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 1.05 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: 500-137174-1 MS**
**Matrix: Water**
**Analysis Batch: 410045**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 409817**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.510 | | mg/L | | 102 | 75 - 125 |
| Arsenic | <0.0010 | | 0.100 | 0.107 | | mg/L | | 106 | 75 - 125 |
| Barium | 0.083 | | 2.00 | 2.18 | | mg/L | | 105 | 75 - 125 |
| Beryllium | <0.0010 | | 0.0500 | 0.0517 | | mg/L | | 103 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0512 | | mg/L | | 102 | 75 - 125 |
| Calcium | 130 | | 10.0 | 130 | 4 | mg/L | | 12 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.202 | | mg/L | | 101 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.483 | | mg/L | | 97 | 75 - 125 |
| Lead | <0.00050 | | 0.100 | 0.103 | | mg/L | | 103 | 75 - 125 |
| Molybdenum | <0.0050 | | 1.00 | 0.948 | | mg/L | | 94 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.104 | | mg/L | | 102 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.103 | | mg/L | | 103 | 75 - 125 |

**Lab Sample ID: 500-137174-1 MS**
**Matrix: Water**
**Analysis Batch: 410229**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 409817**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.57 | | 1.00 | 1.51 | | mg/L | | 95 | 75 - 125 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-137174-1 MSD** — **Client Sample ID: MW-01**
**Matrix: Water** — **Prep Type: Total Recoverable**
**Analysis Batch: 410045** — **Prep Batch: 409817**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.510 | | mg/L | | 102 | 75 - 125 | 0 | 20 |
| Arsenic | <0.0010 | | 0.100 | 0.107 | | mg/L | | 106 | 75 - 125 | 1 | 20 |
| Barium | 0.083 | | 2.00 | 2.15 | | mg/L | | 103 | 75 - 125 | 1 | 20 |
| Beryllium | <0.0010 | | 0.0500 | 0.0469 | | mg/L | | 94 | 75 - 125 | 10 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0507 | | mg/L | | 101 | 75 - 125 | 1 | 20 |
| Calcium | 130 | | 10.0 | 133 | 4 | mg/L | | 38 | 75 - 125 | 2 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.202 | | mg/L | | 101 | 75 - 125 | 0 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.478 | | mg/L | | 96 | 75 - 125 | 1 | 20 |
| Lead | <0.00050 | | 0.100 | 0.102 | | mg/L | | 102 | 75 - 125 | 1 | 20 |
| Molybdenum | <0.0050 | | 1.00 | 0.968 | | mg/L | | 96 | 75 - 125 | 2 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.104 | | mg/L | | 101 | 75 - 125 | 1 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.102 | | mg/L | | 102 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-137174-1 MSD** — **Client Sample ID: MW-01**
**Matrix: Water** — **Prep Type: Total Recoverable**
**Analysis Batch: 410229** — **Prep Batch: 409817**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.57 | | 1.00 | 1.56 | | mg/L | | 100 | 75 - 125 | 3 | 20 |

**Lab Sample ID: 500-137174-1 DU** — **Client Sample ID: MW-01**
**Matrix: Water** — **Prep Type: Total Recoverable**
**Analysis Batch: 410045** — **Prep Batch: 409817**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | | <0.0030 | | mg/L | | | | NC | 20 |
| Arsenic | <0.0010 | | | <0.0010 | | mg/L | | | | NC | 20 |
| Barium | 0.083 | | | 0.0797 | | mg/L | | | | 4 | 20 |
| Beryllium | <0.0010 | | | <0.0010 | | mg/L | | | | NC | 20 |
| Cadmium | <0.00050 | | | <0.00050 | | mg/L | | | | NC | 20 |
| Calcium | 130 | | | 126 | | mg/L | | | | 3 | 20 |
| Chromium | <0.0050 | | | <0.0050 | | mg/L | | | | NC | 20 |
| Cobalt | <0.0010 | | | <0.0010 | | mg/L | | | | NC | 20 |
| Lead | <0.00050 | | | <0.00050 | | mg/L | | | | NC | 20 |
| Molybdenum | <0.0050 | | | <0.0050 | | mg/L | | | | NC | 20 |
| Selenium | <0.0025 | | | 0.00252 | | mg/L | | | | NC | 20 |
| Thallium | <0.0020 | | | <0.0020 | | mg/L | | | | NC | 20 |

**Lab Sample ID: 500-137174-1 DU** — **Client Sample ID: MW-01**
**Matrix: Water** — **Prep Type: Total Recoverable**
**Analysis Batch: 410229** — **Prep Batch: 409817**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.57 | | | 0.550 | | mg/L | | | | 3 | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-410978/11-A**
**Matrix: Water**
**Analysis Batch: 411222**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 410978**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/21/17 14:30 | 11/22/17 14:37 | 1 |

**Lab Sample ID: LCS 500-410978/12-A**
**Matrix: Water**
**Analysis Batch: 411222**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 410978**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | | | 0.00200 | 0.00219 | | mg/L | | 110 | 80 - 120 | | |

**Lab Sample ID: 500-137174-2 MS**
**Matrix: Water**
**Analysis Batch: 411222**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**
**Prep Batch: 410978**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00106 | | mg/L | | 106 | 75 - 125 | | |

**Lab Sample ID: 500-137174-2 MSD**
**Matrix: Water**
**Analysis Batch: 411222**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**
**Prep Batch: 410978**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00102 | | mg/L | | 102 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-137174-2 DU**
**Matrix: Water**
**Analysis Batch: 411222**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**
**Prep Batch: 410978**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | | <0.00020 | | mg/L | | | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-409597/1**
**Matrix: Water**
**Analysis Batch: 409597**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 11/13/17 03:07 | 1 |

**Lab Sample ID: LCS 500-409597/2**
**Matrix: Water**
**Analysis Batch: 409597**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | | | 250 | 252 | | mg/L | | 101 | 80 - 120 | | |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: MB 500-409598/1**
**Matrix: Water**
**Analysis Batch: 409598**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 11/13/17 04:50 | 1 |

**Lab Sample ID: LCS 500-409598/2**
**Matrix: Water**
**Analysis Batch: 409598**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 262 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: 500-137174-13 MS**
**Matrix: Water**
**Analysis Batch: 409598**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1200 | | 250 | 1420 | 4 | mg/L | | 106 | 75 - 125 |

**Lab Sample ID: 500-137174-13 DU**
**Matrix: Water**
**Analysis Batch: 409598**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1200 | | 1130 | | mg/L | | 2 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-410574/4**
**Matrix: Water**
**Analysis Batch: 410574**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 11/17/17 22:13 | 1 |

**Lab Sample ID: LCS 500-410574/5**
**Matrix: Water**
**Analysis Batch: 410574**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 51.9 | | mg/L | | 104 | 85 - 115 |

**Lab Sample ID: 500-137174-7 MS**
**Matrix: Water**
**Analysis Batch: 410574**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 37 | | 50.0 | 81.7 | | mg/L | | 89 | 75 - 125 |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: 500-137174-7 MSD**
**Matrix: Water**
**Analysis Batch: 410574**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 37 | | 50.0 | 81.5 | | mg/L | | 89 | 75 - 125 | 0 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-410385/3**
**Matrix: Water**
**Analysis Batch: 410385**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 11/16/17 18:50 | 1 |

**Lab Sample ID: LCS 500-410385/4**
**Matrix: Water**
**Analysis Batch: 410385**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.4 | | mg/L | | 104 | 80 - 120 |

**Lab Sample ID: 500-137174-1 MS**
**Matrix: Water**
**Analysis Batch: 410385**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.12 | | 5.00 | 5.20 | | mg/L | | 102 | 75 - 125 |

**Lab Sample ID: 500-137174-1 MSD**
**Matrix: Water**
**Analysis Batch: 410385**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.12 | | 5.00 | 5.20 | | mg/L | | 102 | 75 - 125 | 0 | 20 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-410071/3**
**Matrix: Water**
**Analysis Batch: 410071**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 11/15/17 11:31 | 1 |

**Lab Sample ID: LCS 500-410071/4**
**Matrix: Water**
**Analysis Batch: 410071**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 21.4 | | mg/L | | 107 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: 500-137174-4 MS**
**Matrix: Water**
**Analysis Batch: 410071**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 130 | | 200 | 334 | | mg/L | | 99 | 75 - 125 |

**Lab Sample ID: 500-137174-4 MSD**
**Matrix: Water**
**Analysis Batch: 410071**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 130 | | 200 | 341 | | mg/L | | 103 | 75 - 125 | 2 | 20 |

**Lab Sample ID: MB 500-410428/3**
**Matrix: Water**
**Analysis Batch: 410428**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 11/17/17 07:15 | 1 |

**Lab Sample ID: LCS 500-410428/4**
**Matrix: Water**
**Analysis Batch: 410428**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 19.6 | | mg/L | | 98 | 80 - 120 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

## Client Sample ID: MW-01

**Date Collected: 11/08/17 09:36**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-1**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 21:29 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 16:06 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410229 | 11/15/17 16:05 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 14:40 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409597 | 11/13/17 03:32 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 410574 | 11/17/17 22:15 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 18:56 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 410428 | | CLB | TAL CHI |
| | | | | | (Start) | 11/17/17 07:33 | | |
| | | | | | (End) | 11/17/17 07:34 | | |

## Client Sample ID: MW-02

**Date Collected: 11/07/17 09:10**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-2**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 21:49 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 16:25 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 410229 | 11/15/17 16:24 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 14:42 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409597 | 11/13/17 03:35 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 410574 | 11/17/17 22:16 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 19:04 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 410428 | | CLB | TAL CHI |
| | | | | | (Start) | 11/17/17 07:34 | | |
| | | | | | (End) | 11/17/17 07:35 | | |

## Client Sample ID: MW-03

**Date Collected: 11/07/17 10:41**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-3**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 21:53 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

## Client Sample ID: MW-03

**Date Collected: 11/07/17 10:41**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 16:36 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410229 | 11/15/17 16:28 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 14:52 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409597 | 11/13/17 03:38 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 410574 | 11/17/17 22:17 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 19:07 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 410428 | | CLB | TAL CHI |
| | | | | | (Start) | 11/17/17 07:35 | | |
| | | | | | (End) | 11/17/17 07:36 | | |

## Client Sample ID: MW-04

**Date Collected: 11/07/17 12:13**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 21:57 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 16:40 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410229 | 11/15/17 16:40 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 14:54 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409597 | 11/13/17 03:40 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 410574 | 11/17/17 22:49 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 19:11 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 410071 | | CLB | TAL CHI |
| | | | | | (Start) | 11/15/17 11:34 | | |
| | | | | | (End) | 11/15/17 11:35 | | |

## Client Sample ID: MW-05

**Date Collected: 11/07/17 13:48**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 22:09 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 16:44 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410229 | 11/15/17 16:44 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

## Client Sample ID: MW-05

**Date Collected: 11/07/17 13:48**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 14:55 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409597 | 11/13/17 03:43 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 410574 | 11/17/17 22:19 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 19:14 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 410071 | | CLB | TAL CHI |
| | | | | | (Start) | 11/15/17 11:37 | | |
| | | | | | (End) | 11/15/17 11:38 | | |

## Client Sample ID: MW-08

**Date Collected: 11/08/17 13:33**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 22:13 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 16:47 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 2 | 410229 | 11/15/17 16:47 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 14:57 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409597 | 11/13/17 03:45 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 410574 | 11/17/17 22:20 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 19:17 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 410071 | | CLB | TAL CHI |
| | | | | | (Start) | 11/15/17 11:38 | | |
| | | | | | (End) | 11/15/17 11:39 | | |

## Client Sample ID: MW-09

**Date Collected: 11/08/17 14:54**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 22:17 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 16:51 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 410229 | 11/15/17 16:51 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 14:58 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409597 | 11/13/17 03:48 | CLB | TAL CHI |

## Client Sample ID: MW-09

**Date Collected: 11/08/17 14:54**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-7**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 410574 | 11/17/17 22:24 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 19:30 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 410071 | | CLB | TAL CHI |
| | | | | | (Start) | 11/15/17 11:39 | | |
| | | | | | (End) | 11/15/17 11:40 | | |

## Client Sample ID: MW-10

**Date Collected: 11/09/17 09:04**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-8**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 22:21 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 16:55 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410229 | 11/15/17 16:55 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 15:00 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409597 | 11/13/17 03:50 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 410574 | 11/17/17 22:27 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 19:33 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 410071 | | CLB | TAL CHI |
| | | | | | (Start) | 11/15/17 11:40 | | |
| | | | | | (End) | 11/15/17 11:41 | | |

## Client Sample ID: MW-11

**Date Collected: 11/09/17 10:58**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-9**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 22:25 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 16:59 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 410229 | 11/15/17 16:59 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410229 | 11/15/17 17:45 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 15:01 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409597 | 11/13/17 03:53 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 410574 | 11/17/17 22:28 | HMW | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

## Client Sample ID: MW-11

**Date Collected: 11/09/17 10:58**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 19:36 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 410071 | | CLB | TAL CHI |
| | | | | | (Start) | 11/15/17 11:43 | | |
| | | | | | (End) | 11/15/17 11:44 | | |

## Client Sample ID: MW-12

**Date Collected: 11/10/17 11:53**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 22:29 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 17:03 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 410229 | 11/15/17 17:03 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410229 | 11/15/17 17:49 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 15:03 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409597 | 11/13/17 03:56 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 410574 | 11/17/17 22:28 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 19:39 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 410071 | | CLB | TAL CHI |
| | | | | | (Start) | 11/15/17 11:44 | | |
| | | | | | (End) | 11/15/17 11:45 | | |

## Client Sample ID: MW-15

**Date Collected: 11/10/17 09:54**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-11

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 22:34 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 17:14 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 410229 | 11/15/17 17:14 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 15:08 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409597 | 11/13/17 03:58 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 410574 | 11/17/17 22:29 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 19:42 | EAT | TAL CHI |

## Client Sample ID: MW-15

**Date Collected: 11/10/17 09:54**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-11

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 410071 | | CLB | TAL CHI |
| | | | | | (Start) | 11/15/17 11:45 | | |
| | | | | | (End) | 11/15/17 11:46 | | |

## Client Sample ID: MW-17

**Date Collected: 11/06/17 12:19**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-12

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 22:38 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 17:18 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 410229 | 11/15/17 17:18 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410287 | 11/16/17 11:49 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 15:10 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409597 | 11/13/17 04:01 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 410574 | 11/17/17 22:29 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 19:46 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 40 | 410071 | | CLB | TAL CHI |
| | | | | | (Start) | 11/15/17 11:46 | | |
| | | | | | (End) | 11/15/17 11:47 | | |

## Client Sample ID: MW-18

**Date Collected: 11/06/17 13:49**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 22:42 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 17:22 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 2 | 410229 | 11/15/17 17:22 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 15:11 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409598 | 11/13/17 04:55 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 410574 | 11/17/17 22:30 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 19:48 | EAT | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

## Client Sample ID: MW-18

**Date Collected: 11/06/17 13:49**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 410071 | | CLB | TAL CHI |
| | | | | | (Start) | 11/15/17 11:47 | | |
| | | | | | (End) | 11/15/17 11:48 | | |

## Client Sample ID: MW-19

**Date Collected: 11/06/17 15:16**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 22:46 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 17:25 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 410229 | 11/15/17 17:26 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 15:13 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409598 | 11/13/17 05:02 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 410574 | 11/17/17 22:32 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 19:52 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 410071 | | CLB | TAL CHI |
| | | | | | (Start) | 11/15/17 11:48 | | |
| | | | | | (End) | 11/15/17 11:49 | | |

## Client Sample ID: Duplicate

**Date Collected: 11/06/17 00:00**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 409998 | 11/14/17 22:58 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 410045 | 11/14/17 17:29 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 409817 | 11/14/17 07:18 | JEF | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 2 | 410229 | 11/15/17 17:30 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 410978 | 11/21/17 14:30 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 411222 | 11/22/17 15:14 | PFK | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 409598 | 11/13/17 05:05 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 410574 | 11/17/17 22:32 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 410385 | 11/16/17 19:55 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 410071 | | CLB | TAL CHI |
| | | | | | (Start) | 11/15/17 11:49 | | |
| | | | | | (End) | 11/15/17 11:50 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-18 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING


**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211


| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-137174

| | |
|---|---|
| Package Sealed: (Yes) No | Samples Sealed: (Yes) No |
| Received on Ice: (Yes) No | Samples Intact: (Yes) No N/A |
| Temperature °C of Cooler: 3.1, 2.4, 1.6, 0.8, 2.0 | |
| Within Hold Time: (Yes) No | Preserv. Indicated: (Yes) No N/A |
| pH Check OK: (Yes) No | Res $CL_2$ Check OK: (Yes) No N/A |
| Sample Labels and COC Agree: (Yes) No | COC not present |

| | | | |
|---|---|---|---|
| **Sampler Name:** Ian John Howieson | **COMPANY:** KPRG & Associates Inc. | **# / Cont.** | |
| | | **Volume** | |
| **Project Name:** Quarterly- Powerton CCR | **TestAmerica Project Number:** 50011612 | **Preserv.** | |
| **Project Location:** Pekin, IL | **TAT** 15 Days | | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 11/08/17 | 09:36 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-02 | 11/07/17 | 09:10 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-03 | 11/07/17 | 10:41 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-04 | 11/07/17 | 12:13 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-05 | 11/07/17 | 13:48 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-08 | 11/08/17 | 13:33 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-09 | 11/08/17 | 14:54 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-10 | 11/09/17 | 09:04 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-11 | 11/09/17 | 10:58 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-12 | 11/10/17 | 11:53 | W | 5 | X | X | X | X | X | X | |
| 11 | | MW-15 | 11/10/17 | 09:54 | W | 5 | X | X | X | X | X | X | |

500-137174 COC

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| RELINQUISHED BY: IJH | COMPANY: KPRG | DATE: 11-10-17 | TIME: 17:45 | RECEIVED BY: | COMPANY: TALL | DATE: 11/10/17 | TIME: 1745 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

_____

**eservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 11,10,17
Courier:
Hand Delivered [X]
Bill of Lading:

__1__ of __2__

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500137174

| | |
|---|---|
| Package Sealed: (Yes) No | Samples Sealed: (Yes) No |
| Received on Ice: (Yes) No | Samples Intact: (Yes) No N/A |
| Temperature °C of Cooler: 3.1, 1.6, 2.4, 0.8, 2.0 | |
| Within Hold Time: (Yes) No | Preserv. Indicated: (Yes) No N/A |
| pH Check OK: (Yes) No | Res $Cl_2$ Check OK: (Yes) No N/A |
| Sample Labels and COC Agree: (Yes) No COC not present | |

| Sampler Name: | COMPANY: | # / Cont. |
|---|---|---|
| Ian John Howieson | KPRG & Associates Inc. | Volume |
| Project Name: | TestAmerica Project Number: | Preserv. |
| Quarterly- Powerton CCR | 50011612 | |
| Project Location: | TAT | |
| Pekin, IL | 15 Days | |
| Lab PM: Eric Lang | eric.lang@testamerica.com | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | | MW-17 | 11/06/17 | 12:19 | W | 5 | X | X | X | X | X | X | |
| 13 | | MW-18 | 11/06/17 | 13:49 | W | 5 | X | X | X | X | X | X | |
| 14 | | MW-19 | 11/06/17 | 15:16 | W | 5 | X | X | X | X | X | X | |
| 15 | | Duplicates | 11/06/17 | -- | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 11-10-17 | 17:45 | [signature] | TALLE | 11/10/17 | 1745 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**
WW = Wastewater, SE = Sediment
W = Water, SO = Solid
S = Soil, DL = Drum Liquid
SL = Sludge, DS = Drum Solid
MS = Miscellaneous, L = Leachate
OL = Oil, W = Wipe
A = Air, O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
_____

**eservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 11,10,17
Courier:
Hand Delivered [X]
Bill of Lading:

2 of 2

STL-8208 (0600)

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-137174-1

**Login Number: 137174**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.8, 1.6, 2.0, 2.4, 3.1 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica

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# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-137174-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*12/11/2017 10:08:50 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-137174-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-137174-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 11/10/2017 5:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 0.8º C, 1.6º C, 2.0º C, 2.4º C and 3.1º C.

**RAD**
Method(s) PrecSep_0: Radium 228 Prep Batch 160-337237
Sample has a small amount of sediment and is light brown in color. But, not enough to justify reducing the aliquot.

MW-12 (500-137174-10)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-337237
The following sample was reduced due to heavy amounts of sediment making sample murky.

MW-17 (500-137174-12)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-337221
Sample has a small amount of sediment and is light brown in color.

MW-12 (500-137174-10)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-337221
The following sample was reduced due to heavy amounts of sediment making sample murky.

MW-17 (500-137174-12)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-137174-1 | MW-01 | Water | 11/08/17 09:36 | 11/10/17 17:45 |
| 500-137174-2 | MW-02 | Water | 11/07/17 09:10 | 11/10/17 17:45 |
| 500-137174-3 | MW-03 | Water | 11/07/17 10:41 | 11/10/17 17:45 |
| 500-137174-4 | MW-04 | Water | 11/07/17 12:13 | 11/10/17 17:45 |
| 500-137174-5 | MW-05 | Water | 11/07/17 13:48 | 11/10/17 17:45 |
| 500-137174-6 | MW-08 | Water | 11/08/17 13:33 | 11/10/17 17:45 |
| 500-137174-7 | MW-09 | Water | 11/08/17 14:54 | 11/10/17 17:45 |
| 500-137174-8 | MW-10 | Water | 11/09/17 09:04 | 11/10/17 17:45 |
| 500-137174-9 | MW-11 | Water | 11/09/17 10:58 | 11/10/17 17:45 |
| 500-137174-10 | MW-12 | Water | 11/10/17 11:53 | 11/10/17 17:45 |
| 500-137174-11 | MW-15 | Water | 11/10/17 09:54 | 11/10/17 17:45 |
| 500-137174-12 | MW-17 | Water | 11/06/17 12:19 | 11/10/17 17:45 |
| 500-137174-13 | MW-18 | Water | 11/06/17 13:49 | 11/10/17 17:45 |
| 500-137174-14 | MW-19 | Water | 11/06/17 15:16 | 11/10/17 17:45 |
| 500-137174-15 | Duplicate | Water | 11/06/17 00:00 | 11/10/17 17:45 |

## Client Sample ID: MW-01

**Date Collected: 11/08/17 09:36**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0514 | U | 0.0592 | 0.0593 | 1.00 | 0.0962 | pCi/L | 11/15/17 09:01 | 12/07/17 05:56 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 05:56* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.291 | U | 0.209 | 0.211 | 1.00 | 0.327 | pCi/L | 11/15/17 09:40 | 11/22/17 13:32 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:32* | *1* |
| *Y Carrier* | *83.7* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:32* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.343** | | 0.217 | 0.219 | 5.00 | 0.327 | pCi/L | | 12/11/17 09:29 | 1 |

## Client Sample ID: MW-02

**Date Collected: 11/07/17 09:10**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0338 | U | 0.0418 | 0.0419 | 1.00 | 0.0682 | pCi/L | 11/15/17 09:01 | 12/07/17 05:59 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 05:59* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0147 | U | 0.173 | 0.173 | 1.00 | 0.309 | pCi/L | 11/15/17 09:40 | 11/22/17 13:37 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:37* | *1* |
| *Y Carrier* | *86.4* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:37* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.0485 | U | 0.178 | 0.178 | 5.00 | 0.309 | pCi/L | | 12/11/17 09:29 | 1 |

## Client Sample ID: MW-03

**Date Collected: 11/07/17 10:41**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0503 | U | 0.0528 | 0.0530 | 1.00 | 0.0833 | pCi/L | 11/15/17 09:01 | 12/07/17 05:59 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *105* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 05:59* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.538** | | 0.212 | 0.217 | 1.00 | 0.287 | pCi/L | 11/15/17 09:40 | 11/22/17 13:37 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *105* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:37* | *1* |
| *Y Carrier* | *85.2* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:37* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.588** | | 0.218 | 0.223 | 5.00 | 0.287 | pCi/L | | 12/11/17 09:29 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-2

**Client Sample ID: MW-04**
**Date Collected: 11/07/17 12:13**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-4**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0589 | U | 0.0523 | 0.0525 | 1.00 | 0.0768 | pCi/L | 11/15/17 09:01 | 12/07/17 05:59 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 05:59* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.0826 | U | 0.176 | 0.176 | 1.00 | 0.332 | pCi/L | 11/15/17 09:40 | 11/22/17 13:38 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:38* | *1* |
| *Y Carrier* | *86.0* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:38* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | -0.0238 | U | 0.184 | 0.184 | 5.00 | 0.332 | pCi/L | | 12/11/17 09:29 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-2

**Client Sample ID: MW-05**
**Date Collected: 11/07/17 13:48**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-5**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0506 | U | 0.0477 | 0.0479 | 1.00 | 0.0711 | pCi/L | 11/15/17 09:01 | 12/07/17 05:59 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 05:59* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0729 | U | 0.197 | 0.197 | 1.00 | 0.341 | pCi/L | 11/15/17 09:40 | 11/22/17 13:38 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:38* | *1* |
| *Y Carrier* | *85.2* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:38* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.123 | U | 0.203 | 0.203 | 5.00 | 0.341 | pCi/L | | 12/11/17 09:29 | 1 |

**Client Sample ID: MW-08**
**Date Collected: 11/08/17 13:33**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-6**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.138 | | 0.0652 | 0.0664 | 1.00 | 0.0672 | pCi/L | 11/15/17 09:01 | 12/07/17 06:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 06:00* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.668 | | 0.233 | 0.241 | 1.00 | 0.306 | pCi/L | 11/15/17 09:40 | 11/22/17 13:38 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:38* | *1* |
| *Y Carrier* | *85.6* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:38* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.806 | | 0.242 | 0.250 | 5.00 | 0.306 | pCi/L | | 12/11/17 09:29 | 1 |

## Client Sample ID: MW-09

**Date Collected: 11/08/17 14:54**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.0886** | | 0.0553 | 0.0559 | 1.00 | 0.0685 | pCi/L | 11/15/17 09:01 | 12/07/17 06:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *104* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 06:00* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.255 | U | 0.197 | 0.198 | 1.00 | 0.308 | pCi/L | 11/15/17 09:40 | 11/22/17 13:38 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *104* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:38* | *1* |
| *Y Carrier* | *82.6* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:38* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.344** | | 0.205 | 0.206 | 5.00 | 0.308 | pCi/L | | 12/11/17 09:29 | 1 |

## Client Sample ID: MW-10

**Date Collected: 11/09/17 09:04**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.342 | | 0.0965 | 0.101 | 1.00 | 0.0728 | pCi/L | 11/15/17 09:01 | 12/07/17 06:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *104* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 06:00* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.673 | | 0.241 | 0.249 | 1.00 | 0.328 | pCi/L | 11/15/17 09:40 | 11/22/17 13:38 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *104* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:38* | *1* |
| *Y Carrier* | *84.9* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:38* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.02 | | 0.260 | 0.269 | 5.00 | 0.328 | pCi/L | | 12/11/17 09:29 | 1 |

## Client Sample ID: MW-11

**Date Collected: 11/09/17 10:58**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.464 | | 0.110 | 0.118 | 1.00 | 0.0695 | pCi/L | 11/15/17 09:01 | 12/07/17 06:01 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 06:01* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.780 | | 0.253 | 0.263 | 1.00 | 0.334 | pCi/L | 11/15/17 09:40 | 11/22/17 13:39 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:39* | *1* |
| *Y Carrier* | *86.7* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:39* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.24 | | 0.276 | 0.288 | 5.00 | 0.334 | pCi/L | | 12/11/17 09:29 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-2

**Client Sample ID: MW-12**
**Date Collected: 11/10/17 11:53**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-10**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.968 | | 0.164 | 0.185 | 1.00 | 0.0789 | pCi/L | 11/15/17 09:01 | 12/07/17 06:01 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 06:01* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.700 | | 0.248 | 0.256 | 1.00 | 0.328 | pCi/L | 11/15/17 09:40 | 11/22/17 13:39 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:39* | *1* |
| *Y Carrier* | *84.5* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:39* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.67 | | 0.297 | 0.316 | 5.00 | 0.328 | pCi/L | | 12/11/17 09:29 | 1 |

## Client Sample ID: MW-15

**Date Collected: 11/10/17 09:54**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-11

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0525 | U | 0.0471 | 0.0473 | 1.00 | 0.0684 | pCi/L | 11/15/17 09:01 | 12/07/17 06:01 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 06:01* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.205 | U | 0.194 | 0.195 | 1.00 | 0.313 | pCi/L | 11/15/17 09:40 | 11/22/17 13:39 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:39* | *1* |
| *Y Carrier* | *84.9* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:39* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.258 | U | 0.200 | 0.201 | 5.00 | 0.313 | pCi/L | | 12/11/17 09:29 | 1 |

## Client Sample ID: MW-17

**Date Collected: 11/06/17 12:19**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-12

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.855 | | 0.182 | 0.197 | 1.00 | 0.124 | pCi/L | 11/15/17 09:01 | 12/07/17 06:01 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.5* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 06:01* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.69 | | 0.386 | 0.416 | 1.00 | 0.427 | pCi/L | 11/15/17 09:40 | 11/22/17 13:39 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.5* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:39* | *1* |
| *Y Carrier* | *83.7* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:39* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 2.54 | | 0.427 | 0.460 | 5.00 | 0.427 | pCi/L | | 12/11/17 09:29 | 1 |

## Client Sample ID: MW-18

**Date Collected: 11/06/17 13:49**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-13

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.159 | | 0.0709 | 0.0724 | 1.00 | 0.0737 | pCi/L | 11/15/17 09:01 | 12/07/17 06:02 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 06:02* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.595 | | 0.229 | 0.235 | 1.00 | 0.314 | pCi/L | 11/15/17 09:40 | 11/22/17 13:39 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:39* | *1* |
| *Y Carrier* | *86.7* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:39* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.755 | | 0.240 | 0.246 | 5.00 | 0.314 | pCi/L | | 12/11/17 09:29 | 1 |

## Client Sample ID: MW-19

**Date Collected: 11/06/17 15:16**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-14

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0751 | U | 0.0556 | 0.0560 | 1.00 | 0.0768 | pCi/L | 11/15/17 09:01 | 12/07/17 06:02 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 06:02* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.285 | U | 0.210 | 0.211 | 1.00 | 0.328 | pCi/L | 11/15/17 09:40 | 11/22/17 13:39 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:39* | *1* |
| *Y Carrier* | *86.4* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:39* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.360** | | 0.217 | 0.218 | 5.00 | 0.328 | pCi/L | | 12/11/17 09:29 | 1 |

## Client Sample ID: Duplicate

**Date Collected: 11/06/17 00:00**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-15

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.224 | | 0.0820 | 0.0844 | 1.00 | 0.0732 | pCi/L | 11/15/17 09:01 | 12/07/17 06:02 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 06:02* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.378 | | 0.204 | 0.207 | 1.00 | 0.301 | pCi/L | 11/15/17 09:40 | 11/22/17 13:39 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:39* | *1* |
| *Y Carrier* | *85.2* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:39* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.602 | | 0.220 | 0.224 | 5.00 | 0.301 | pCi/L | | 12/11/17 09:29 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-2

## Rad

### Prep Batch: 337221

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-137174-2 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-137174-3 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-137174-4 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-137174-5 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-137174-6 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-137174-7 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-137174-8 | MW-10 | Total/NA | Water | PrecSep-21 | |
| 500-137174-9 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-137174-10 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-137174-11 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-137174-12 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-137174-13 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-137174-14 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-137174-15 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-337221/1-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-337221/2-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-137174-1 DU | MW-01 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 337237

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-137174-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-137174-2 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-137174-3 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-137174-4 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-137174-5 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-137174-6 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-137174-7 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-137174-8 | MW-10 | Total/NA | Water | PrecSep_0 | |
| 500-137174-9 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-137174-10 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-137174-11 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-137174-12 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-137174-13 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-137174-14 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-137174-15 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-337237/1-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-337237/2-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-137174-1 DU | MW-01 | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-337221/1-A**
**Matrix: Water**
**Analysis Batch: 340904**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 337221**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.03412 | U | 0.0366 | 0.0367 | 1.00 | 0.0538 | pCi/L | 11/15/17 09:01 | 12/07/17 05:56 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *106* | | *40 - 110* | *11/15/17 09:01* | *12/07/17 05:56* | *1* |

**Lab Sample ID: LCS 160-337221/2-A**
**Matrix: Water**
**Analysis Batch: 340904**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 337221**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.8 | 9.816 | | 1.00 | 1.00 | 0.0620 | pCi/L | 83 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *104* | | *40 - 110* |

**Lab Sample ID: 500-137174-1 DU**
**Matrix: Water**
**Analysis Batch: 340904**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 337221**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0514 | U | | 0.1796 | | 0.0766 | 1.00 | 0.0595 | pCi/L | | | 0.94 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-337237/1-A**
**Matrix: Water**
**Analysis Batch: 338579**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 337237**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.2267 | U | 0.237 | 0.238 | 1.00 | 0.387 | pCi/L | 11/15/17 09:40 | 11/22/17 13:32 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *106* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:32* | *1* |
| *Y Carrier* | *81.1* | | *40 - 110* | *11/15/17 09:40* | *11/22/17 13:32* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-337237/2-A**
**Matrix: Water**
**Analysis Batch: 338579**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 337237**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 8.80 | 9.732 | | 1.10 | 1.00 | 0.348 | pCi/L | 111 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *104* | | *40 - 110* |
| *Y Carrier* | *83.7* | | *40 - 110* |

**Lab Sample ID: 500-137174-1 DU**
**Matrix: Water**
**Analysis Batch: 338579**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 337237**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.291 | U | | 0.08718 | U | 0.211 | 1.00 | 0.363 | pCi/L | | | 0.48 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* |
| *Y Carrier* | *84.1* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-2

## Client Sample ID: MW-01
**Date Collected: 11/08/17 09:36**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340904 | 12/07/17 05:56 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338579 | 11/22/17 13:32 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

## Client Sample ID: MW-02
**Date Collected: 11/07/17 09:10**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340905 | 12/07/17 05:59 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338580 | 11/22/17 13:37 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 11/07/17 10:41**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340905 | 12/07/17 05:59 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338580 | 11/22/17 13:37 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

## Client Sample ID: MW-04
**Date Collected: 11/07/17 12:13**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340905 | 12/07/17 05:59 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338580 | 11/22/17 13:38 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-2

## Client Sample ID: MW-05

**Date Collected: 11/07/17 13:48**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-5**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340905 | 12/07/17 05:59 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338580 | 11/22/17 13:38 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

## Client Sample ID: MW-08

**Date Collected: 11/08/17 13:33**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-6**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340905 | 12/07/17 06:00 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338580 | 11/22/17 13:38 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

## Client Sample ID: MW-09

**Date Collected: 11/08/17 14:54**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-7**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340905 | 12/07/17 06:00 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338580 | 11/22/17 13:38 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

## Client Sample ID: MW-10

**Date Collected: 11/09/17 09:04**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-8**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340905 | 12/07/17 06:00 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338580 | 11/22/17 13:38 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-2

## Client Sample ID: MW-11

**Date Collected: 11/09/17 10:58**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340905 | 12/07/17 06:01 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338580 | 11/22/17 13:39 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

## Client Sample ID: MW-12

**Date Collected: 11/10/17 11:53**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340905 | 12/07/17 06:01 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338580 | 11/22/17 13:39 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 11/10/17 09:54**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-11

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340905 | 12/07/17 06:01 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338580 | 11/22/17 13:39 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

## Client Sample ID: MW-17

**Date Collected: 11/06/17 12:19**
**Date Received: 11/10/17 17:45**

## Lab Sample ID: 500-137174-12

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340905 | 12/07/17 06:01 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338580 | 11/22/17 13:39 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-2

## Client Sample ID: MW-18

**Date Collected: 11/06/17 13:49**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-13**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340905 | 12/07/17 06:02 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338580 | 11/22/17 13:39 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

## Client Sample ID: MW-19

**Date Collected: 11/06/17 15:16**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-14**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340905 | 12/07/17 06:02 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338580 | 11/22/17 13:39 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

## Client Sample ID: Duplicate

**Date Collected: 11/06/17 00:00**
**Date Received: 11/10/17 17:45**

**Lab Sample ID: 500-137174-15**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 337221 | 11/15/17 09:01 | LDE | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 340905 | 12/07/17 06:02 | RTM | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 337237 | 11/15/17 09:40 | SJC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 338580 | 11/22/17 13:39 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 341354 | 12/11/17 09:29 | RTM | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc. TestAmerica Job ID: 500-137174-2
Project/Site: Powerton CCR

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-18 |

## Laboratory: TestAmerica St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200023 | 11-30-18 |

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING


**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211


| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-137174

| | |
|---|---|
| Package Sealed: (Yes) No | Samples Sealed: (Yes) No |
| Received on Ice: (Yes) No | Samples Intact: (Yes) No N/A |
| Temperature °C of Cooler: 3.1, 2.4, 1.6, 0.8, 2.0 | |
| Within Hold Time: (Yes) No | Preserv. Indicated: (Yes) No N/A |
| pH Check OK: (Yes) No | Res $CL_2$ Check OK: (Yes) No N/A |
| Sample Labels and COC Agree: (Yes) No COC not present | |

| | | | |
|---|---|---|---|
| **Sampler Name:** Ian John Howieson | **COMPANY:** KPRG & Associates Inc. | **# / Cont.** | |
| | | **Volume** | |
| **Project Name:** Quarterly- Powerton CCR | **TestAmerica Project Number:** 50011612 | **Preserv.** | |
| **Project Location:** Pekin, IL | **TAT** 15 Days | | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 11/08/17 | 09:36 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-02 | 11/07/17 | 09:10 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-03 | 11/07/17 | 10:41 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-04 | 11/07/17 | 12:13 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-05 | 11/07/17 | 13:48 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-08 | 11/08/17 | 13:33 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-09 | 11/08/17 | 14:54 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-10 | 11/09/17 | 09:04 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-11 | 11/09/17 | 10:58 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-12 | 11/10/17 | 11:53 | W | 5 | X | X | X | X | X | X | |
| 11 | | MW-15 | 11/10/17 | 09:54 | W | 5 | X | X | X | X | X | X | |

500-137174 COC

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| RELINQUISHED BY: IJH | COMPANY: KPRG | DATE: 11-10-17 | TIME: 17:45 | RECEIVED BY: | COMPANY: TALL | DATE: 11/10/17 | TIME: 1745 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

_____

**eservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 11,10,17
Courier:
Hand Delivered [X]
Bill of Lading:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING


**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211


| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500137174

| | |
|---|---|
| Package Sealed: (Yes) No | Samples Sealed: (Yes) No |
| Received on Ice: (Yes) No | Samples Intact: (Yes) No N/A |
| Temperature °C of Cooler: 3.1, 1.6, 2.4, 0.8, 2.0 | |
| Within Hold Time: (Yes) No | Preserv. Indicated: (Yes) No N/A |
| pH Check OK: (Yes) No | Res $Cl_2$ Check OK: (Yes) No N/A |
| Sample Labels and COC Agree: (Yes) No COC not present | |

| Sampler Name: | COMPANY: | # / Cont. |
|---|---|---|
| Ian John Howieson | KPRG & Associates Inc. | Volume |
| Project Name: | TestAmerica Project Number: | Preserv. |
| Quarterly- Powerton CCR | 50011612 | |
| Project Location: | TAT | |
| Pekin, IL | 15 Days | |
| Lab PM: Eric Lang | eric.lang@testamerica.com | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | | MW-17 | 11/06/17 | 12:19 | W | 5 | X | X | X | X | X | X | |
| 13 | | MW-18 | 11/06/17 | 13:49 | W | 5 | X | X | X | X | X | X | |
| 14 | | MW-19 | 11/06/17 | 15:16 | W | 5 | X | X | X | X | X | X | |
| 15 | | Duplicates | 11/06/17 | -- | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 11-10-17 | 17:45 | | TALLE | 11/10/17 | 1745 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**
WW = Wastewater, SE = Sediment
W = Water, SO = Solid
S = Soil, DL = Drum Liquid
SL = Sludge, DS = Drum Solid
MS = Miscellaneous, L = Leachate
OL = Oil, W = Wipe
A = Air, O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
_____

**eservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 11,10,17
Courier:
Hand Delivered X
Bill of Lading:

2 of 2

STL-8208 (0600)

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-95875.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-137174-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 12/11/2017 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-137174-1) | 11/8/17 | 09:36 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-02 (500-137174-2) | 11/7/17 | 09:10 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-137174-3) | 11/7/17 | 10:41 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-137174-4) | 11/7/17 | 12:13 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-137174-5) | 11/7/17 | 13:48 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-08 (500-137174-6) | 11/8/17 | 13:33 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-09 (500-137174-7) | 11/8/17 | 14:54 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-137174-8) | 11/9/17 | 09:04 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-11 (500-137174-9) | 11/9/17 | 10:58 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 11/13/17 @ 1600 | TA | [signature] | 11/14/17 1015 | TAST |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-95875.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-137174-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 12/11/2017 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-12 (500-137174-10) | 11/10/17 | 11:53 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-15 (500-137174-11) | 11/10/17 | 09:54 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-17 (500-137174-12) | 11/6/17 | 12:19 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-18 (500-137174-13) | 11/6/17 | 13:49 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-19 (500-137174-14) | 11/6/17 | 15:16 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-137174-15) | 11/6/17 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | | 11/13/17 @ 1600 | TA | | 11-14-17 1015 | TASL |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-137174-2

**Login Number: 137174**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.8, 1.6, 2.0, 2.4, 3.1 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-137174-2

**Login Number: 137174**
**List Number: 2**
**Creator: Taylor, Kristene N**

**List Source: TestAmerica St. Louis**
**List Creation: 11/14/17 04:13 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 20.0,20.0,20.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-137174-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) |
| 500-137174-1 | MW-01 | 103 |
| 500-137174-1 DU | MW-01 | 103 |
| 500-137174-2 | MW-02 | 103 |
| 500-137174-3 | MW-03 | 105 |
| 500-137174-4 | MW-04 | 102 |
| 500-137174-5 | MW-05 | 103 |
| 500-137174-6 | MW-08 | 101 |
| 500-137174-7 | MW-09 | 104 |
| 500-137174-8 | MW-10 | 104 |
| 500-137174-9 | MW-11 | 103 |
| 500-137174-10 | MW-12 | 95.0 |
| 500-137174-11 | MW-15 | 102 |
| 500-137174-12 | MW-17 | 93.5 |
| 500-137174-13 | MW-18 | 101 |
| 500-137174-14 | MW-19 | 101 |
| 500-137174-15 | Duplicate | 103 |
| LCS 160-337221/2-A | Lab Control Sample | 104 |
| MB 160-337221/1-A | Method Blank | 106 |

**Tracer/Carrier Legend**

Ba = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) | Y (40-110) |
| 500-137174-1 | MW-01 | 103 | 83.7 |
| 500-137174-1 DU | MW-01 | 103 | 84.1 |
| 500-137174-2 | MW-02 | 103 | 86.4 |
| 500-137174-3 | MW-03 | 105 | 85.2 |
| 500-137174-4 | MW-04 | 102 | 86.0 |
| 500-137174-5 | MW-05 | 103 | 85.2 |
| 500-137174-6 | MW-08 | 101 | 85.6 |
| 500-137174-7 | MW-09 | 104 | 82.6 |
| 500-137174-8 | MW-10 | 104 | 84.9 |
| 500-137174-9 | MW-11 | 103 | 86.7 |
| 500-137174-10 | MW-12 | 95.0 | 84.5 |
| 500-137174-11 | MW-15 | 102 | 84.9 |
| 500-137174-12 | MW-17 | 93.5 | 83.7 |
| 500-137174-13 | MW-18 | 101 | 86.7 |
| 500-137174-14 | MW-19 | 101 | 86.4 |
| 500-137174-15 | Duplicate | 103 | 85.2 |
| LCS 160-337237/2-A | Lab Control Sample | 104 | 83.7 |
| MB 160-337237/1-A | Method Blank | 106 | 81.1 |

**Tracer/Carrier Legend**

Ba = Ba Carrier
Y = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-145716-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*6/4/2018 4:41:01 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-145716-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-145716-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/18/2018 5:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.1º C, 2.8º C, 3.1º C, 3.9º C and 4.7º C.

**Metals**
Method(s) 6020A: The low level continuing calibration verification (CCVL) at line 58, associated with batch 500-433393 recovered above the upper control limit for Beryllium. The samples associated with this CCVL were non-detects for the affected analytes; therefore, the data have been reported

Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-433393. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-145716-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.045 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.15 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 88 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00068 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 540 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 50 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.12 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 48 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-02 — Lab Sample ID: 500-145716-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.065 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.22 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 80 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Mercury | 0.00040 | | 0.00020 | | mg/L | 1 | | 7470A | Total/NA |
| Total Dissolved Solids | 500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 45 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.23 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 54 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-145716-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0010 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.059 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.35 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 77 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 520 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 65 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.23 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 77 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-145716-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.037 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.68 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-04 (Continued) — Lab Sample ID: 500-145716-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 87 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 630 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 66 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.27 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 100 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-145716-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.062 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.61 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 910 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 89 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.29 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 210 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-145716-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0030 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.072 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.024 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.37 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-145716-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.038 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.1 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 89 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.031 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0060 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Mercury | 0.00029 | | 0.00020 | | mg/L | 1 | | 7470A | Total/NA |
| Total Dissolved Solids | 550 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-09 (Continued) — Lab Sample ID: 500-145716-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 36 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.15 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 180 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-145716-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0010 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.22 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.42 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 93 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.021 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0010 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0050 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 530 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 44 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.19 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 80 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-145716-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.089 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.47 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.0 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0041 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.014 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 88 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.61 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 270 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-145716-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.012 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.086 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-145716-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.10 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.46 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00052 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00067 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.021 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.47 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 720 | | 130 | | mg/L | 25 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-145716-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.029 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0081 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.050 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.3 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 200 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.030 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.077 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1800 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 160 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.50 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 680 | | 130 | | mg/L | 25 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-145716-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.42 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.17 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.6 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Cadmium | 0.0020 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 170 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-17 (Continued) — Lab Sample ID: 500-145716-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.0029 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0021 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.13 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Thallium | 0.0068 | | 0.0020 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1700 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 220 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.60 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 800 | | 130 | | mg/L | 25 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-145716-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.13 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.57 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0052 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.59 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 440 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-145716-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.079 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.1 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 96 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.043 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0044 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 820 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 35 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.16 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 180 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-145716-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.077 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: Duplicate (Continued) — Lab Sample ID: 500-145716-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 3.9 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 95 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.042 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0040 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 850 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 36 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.15 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 190 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-145716-1 | MW-01 | Water | 05/17/18 15:15 | 05/18/18 17:20 |
| 500-145716-2 | MW-02 | Water | 05/15/18 09:05 | 05/18/18 17:20 |
| 500-145716-3 | MW-03 | Water | 05/15/18 11:00 | 05/18/18 17:20 |
| 500-145716-4 | MW-04 | Water | 05/15/18 12:11 | 05/18/18 17:20 |
| 500-145716-5 | MW-05 | Water | 05/15/18 13:31 | 05/18/18 17:20 |
| 500-145716-6 | MW-08 | Water | 05/17/18 13:29 | 05/18/18 17:20 |
| 500-145716-7 | MW-09 | Water | 05/16/18 10:19 | 05/18/18 17:20 |
| 500-145716-8 | MW-10 | Water | 05/16/18 11:41 | 05/18/18 17:20 |
| 500-145716-9 | MW-11 | Water | 05/16/18 13:01 | 05/18/18 17:20 |
| 500-145716-10 | MW-12 | Water | 05/16/18 14:41 | 05/18/18 17:20 |
| 500-145716-11 | MW-15 | Water | 05/17/18 11:58 | 05/18/18 17:20 |
| 500-145716-12 | MW-17 | Water | 05/14/18 14:51 | 05/18/18 17:20 |
| 500-145716-13 | MW-18 | Water | 05/14/18 16:05 | 05/18/18 17:20 |
| 500-145716-14 | MW-19 | Water | 05/14/18 17:35 | 05/18/18 17:20 |
| 500-145716-15 | Duplicate | Water | 05/14/18 00:00 | 05/18/18 17:20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-01**
**Date Collected: 05/17/18 15:15**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-1**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 19:37 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| **Barium** | **0.045** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| **Boron** | **0.15** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:05 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| **Calcium** | **88** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| **Lead** | **0.00068** | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:05 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:04 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **540** | | 10 | | mg/L | | | 05/21/18 04:13 | 1 |
| **Chloride** | **50** | | 2.0 | | mg/L | | | 05/28/18 18:53 | 1 |
| **Fluoride** | **0.12** | | 0.10 | | mg/L | | | 05/26/18 14:30 | 1 |
| **Sulfate** | **48** | | 20 | | mg/L | | | 05/30/18 12:43 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-02**
**Date Collected: 05/15/18 09:05**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-2**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 19:56 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| **Barium** | **0.065** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| **Boron** | **0.22** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:24 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| **Calcium** | **80** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.00040** | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:06 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **500** | | 10 | | mg/L | | | 05/21/18 04:20 | 1 |
| **Chloride** | **45** | | 2.0 | | mg/L | | | 05/28/18 18:54 | 1 |
| **Fluoride** | **0.23** | | 0.10 | | mg/L | | | 05/26/18 14:38 | 1 |
| **Sulfate** | **54** | | 20 | | mg/L | | | 05/30/18 12:44 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-03**
**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-3**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:00 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| **Arsenic** | **0.0010** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| **Barium** | **0.059** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| **Boron** | **0.35** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:28 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| **Calcium** | **77** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:08 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **520** | | 10 | | mg/L | | | 05/21/18 04:26 | 1 |
| **Chloride** | **65** | | 2.0 | | mg/L | | | 05/28/18 18:55 | 1 |
| **Fluoride** | **0.23** | | 0.10 | | mg/L | | | 05/26/18 14:41 | 1 |
| **Sulfate** | **77** | | 20 | | mg/L | | | 06/04/18 12:51 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-04**
**Date Collected: 05/15/18 12:11**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-4**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:04 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| **Barium** | **0.037** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| **Boron** | **0.68** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:32 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| **Calcium** | **87** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:10 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **630** | | 10 | | mg/L | | | 05/21/18 04:28 | 1 |
| **Chloride** | **66** | | 2.0 | | mg/L | | | 05/28/18 18:56 | 1 |
| **Fluoride** | **0.27** | | 0.10 | | mg/L | | | 05/26/18 14:45 | 1 |
| **Sulfate** | **100** | | 25 | | mg/L | | | 06/04/18 12:52 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-05**
**Date Collected: 05/15/18 13:31**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-5**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:08 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| **Barium** | **0.062** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| **Boron** | **0.61** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:44 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:23 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **910** | | 10 | | mg/L | | | 05/21/18 04:31 | 1 |
| **Chloride** | **89** | | 10 | | mg/L | | | 05/28/18 18:57 | 5 |
| **Fluoride** | **0.29** | | 0.10 | | mg/L | | | 05/26/18 14:48 | 1 |
| **Sulfate** | **210** | | 50 | | mg/L | | | 06/04/18 12:55 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-08**
**Date Collected: 05/17/18 13:29**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-6**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:12 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Arsenic** | **0.0030** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Barium** | **0.072** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Boron** | **1.2** | | 0.25 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:47 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Molybdenum** | **0.024** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:26 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/21/18 04:33 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 05/28/18 18:58 | 5 |
| **Fluoride** | **0.37** | | 0.10 | | mg/L | | | 05/26/18 14:51 | 1 |
| **Sulfate** | **170** | | 50 | | mg/L | | | 06/04/18 12:56 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-09**
**Date Collected: 05/16/18 10:19**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-7**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:24 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Barium** | **0.038** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Boron** | **4.1** | | 1.0 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:51 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Calcium** | **89** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Molybdenum** | **0.031** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Selenium** | **0.0060** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.00029** | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:28 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **550** | | 10 | | mg/L | | | 05/21/18 04:36 | 1 |
| **Chloride** | **36** | | 2.0 | | mg/L | | | 05/28/18 19:01 | 1 |
| **Fluoride** | **0.15** | | 0.10 | | mg/L | | | 05/26/18 15:04 | 1 |
| **Sulfate** | **180** | | 50 | | mg/L | | | 06/04/18 12:57 | 10 |

## Client Sample ID: MW-10

**Date Collected: 05/16/18 11:41**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-8

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:28 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Arsenic** | **0.0010** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Barium** | **0.22** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Boron** | **0.42** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:55 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Calcium** | **93** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Cobalt** | **0.021** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Lead** | **0.0010** | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Selenium** | **0.0050** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:30 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **530** | | 10 | | mg/L | | | 05/21/18 04:39 | 1 |
| **Chloride** | **44** | | 2.0 | | mg/L | | | 05/28/18 19:02 | 1 |
| **Fluoride** | **0.19** | | 0.10 | | mg/L | | | 05/26/18 15:07 | 1 |
| **Sulfate** | **80** | | 20 | | mg/L | | | 06/04/18 12:58 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-11**
**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-9**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:32 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Arsenic** | **0.089** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Barium** | **0.47** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Boron** | **2.0** | | 0.50 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:59 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Cobalt** | **0.0041** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Molybdenum** | **0.014** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:33 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/21/18 04:41 | 1 |
| **Chloride** | **88** | | 10 | | mg/L | | | 05/28/18 19:03 | 5 |
| **Fluoride** | **0.61** | | 0.10 | | mg/L | | | 05/26/18 15:10 | 1 |
| **Sulfate** | **270** | | 50 | | mg/L | | | 06/04/18 13:01 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-12**
**Date Collected: 05/16/18 14:41**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-10**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.012** | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:36 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Arsenic** | **0.086** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Barium** | **0.10** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Boron** | **0.46** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:03 | 1 |
| **Cadmium** | **0.00052** | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Lead** | **0.00067** | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Molybdenum** | **0.021** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:35 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/21/18 04:44 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 05/28/18 19:21 | 5 |
| **Fluoride** | **0.47** | | 0.10 | | mg/L | | | 05/26/18 15:13 | 1 |
| **Sulfate** | **720** | | 130 | | mg/L | | | 06/04/18 13:02 | 25 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-15**
**Date Collected: 05/17/18 11:58**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-11**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.029 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:40 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Arsenic | 0.0081 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Barium | 0.050 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Boron | 2.3 | | 0.50 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:07 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Calcium | 200 | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Molybdenum | 0.030 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Selenium | 0.077 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:37 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1800 | | 10 | | mg/L | | | 05/21/18 04:46 | 1 |
| Chloride | 160 | | 10 | | mg/L | | | 05/28/18 19:04 | 5 |
| Fluoride | 0.50 | | 0.10 | | mg/L | | | 05/26/18 15:16 | 1 |
| Sulfate | 680 | | 130 | | mg/L | | | 06/04/18 13:03 | 25 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-17**
**Date Collected: 05/14/18 14:51**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-12**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:44 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Arsenic | 0.42 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Barium | 0.17 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Boron | 1.6 | | 0.50 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:11 | 10 |
| Cadmium | 0.0020 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Calcium | 170 | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Cobalt | 0.0029 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Lead | 0.0021 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Molybdenum | 0.13 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Thallium | 0.0068 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:44 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1700 | | 10 | | mg/L | | | 05/21/18 04:49 | 1 |
| Chloride | 220 | | 10 | | mg/L | | | 05/28/18 19:04 | 5 |
| Fluoride | 0.60 | | 0.10 | | mg/L | | | 05/26/18 15:19 | 1 |
| Sulfate | 800 | | 130 | | mg/L | | | 06/04/18 13:04 | 25 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-18**
**Date Collected: 05/14/18 16:05**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-13**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.013** | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:48 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| **Barium** | **0.13** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| **Boron** | **0.57** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:15 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| **Molybdenum** | **0.0052** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:46 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1200** | | 10 | | mg/L | | | 05/21/18 04:51 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 05/28/18 19:05 | 5 |
| **Fluoride** | **0.59** | | 0.10 | | mg/L | | | 05/26/18 15:22 | 1 |
| **Sulfate** | **440** | | 100 | | mg/L | | | 06/04/18 13:05 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-19**
**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-14**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:52 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Barium** | **0.079** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Boron** | **4.1** | | 1.0 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:18 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Calcium** | **96** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Molybdenum** | **0.043** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Selenium** | **0.0044** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:49 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **820** | | 10 | | mg/L | | | 05/21/18 04:54 | 1 |
| **Chloride** | **35** | | 2.0 | | mg/L | | | 05/28/18 19:07 | 1 |
| **Fluoride** | **0.16** | | 0.10 | | mg/L | | | 05/26/18 15:25 | 1 |
| **Sulfate** | **180** | | 50 | | mg/L | | | 06/04/18 13:06 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: Duplicate**
**Date Collected: 05/14/18 00:00**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-15**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:57 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Barium** | **0.077** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Boron** | **3.9** | | 1.0 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:33 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Calcium** | **95** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Molybdenum** | **0.042** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Selenium** | **0.0040** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:51 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **850** | | 10 | | mg/L | | | 05/21/18 04:57 | 1 |
| **Chloride** | **36** | | 2.0 | | mg/L | | | 05/28/18 19:22 | 1 |
| **Fluoride** | **0.15** | | 0.10 | | mg/L | | | 05/26/18 15:29 | 1 |
| **Sulfate** | **190** | | 50 | | mg/L | | | 06/04/18 13:07 | 10 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 433097

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-145716-2 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-145716-3 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-145716-4 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-145716-5 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-145716-6 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-145716-7 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-145716-8 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-145716-9 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-145716-10 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-145716-11 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-145716-12 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-145716-13 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-145716-14 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-145716-15 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-433097/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-433097/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-145716-1 MS | MW-01 | Total Recoverable | Water | 3005A | |
| 500-145716-1 MSD | MW-01 | Total Recoverable | Water | 3005A | |
| 500-145716-1 DU | MW-01 | Total Recoverable | Water | 3005A | |

### Analysis Batch: 433393

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-2 | MW-02 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-3 | MW-03 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-4 | MW-04 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-5 | MW-05 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-6 | MW-08 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-7 | MW-09 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-8 | MW-10 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-9 | MW-11 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-10 | MW-12 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-11 | MW-15 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-12 | MW-17 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-13 | MW-18 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-14 | MW-19 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-15 | Duplicate | Total Recoverable | Water | 6020A | 433097 |
| MB 500-433097/1-A | Method Blank | Total Recoverable | Water | 6020A | 433097 |
| LCS 500-433097/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 MS | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 DU | MW-01 | Total Recoverable | Water | 6020A | 433097 |

### Analysis Batch: 433534

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-2 | MW-02 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-3 | MW-03 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-4 | MW-04 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-5 | MW-05 | Total Recoverable | Water | 6010C | 433097 |

## Metals (Continued)

### Analysis Batch: 433534 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-6 | MW-08 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-7 | MW-09 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-8 | MW-10 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-9 | MW-11 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-10 | MW-12 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-11 | MW-15 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-12 | MW-17 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-13 | MW-18 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-14 | MW-19 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-15 | Duplicate | Total Recoverable | Water | 6010C | 433097 |
| MB 500-433097/1-A | Method Blank | Total Recoverable | Water | 6010C | 433097 |
| LCS 500-433097/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-1 MS | MW-01 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-1 MSD | MW-01 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-1 DU | MW-01 | Total Recoverable | Water | 6010C | 433097 |

### Analysis Batch: 433604

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-2 | MW-02 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-3 | MW-03 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-4 | MW-04 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-5 | MW-05 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-6 | MW-08 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-7 | MW-09 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-8 | MW-10 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-9 | MW-11 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-10 | MW-12 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-11 | MW-15 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-12 | MW-17 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-13 | MW-18 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-14 | MW-19 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-15 | Duplicate | Total Recoverable | Water | 6020A | 433097 |
| MB 500-433097/1-A | Method Blank | Total Recoverable | Water | 6020A | 433097 |
| LCS 500-433097/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 MS | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 DU | MW-01 | Total Recoverable | Water | 6020A | 433097 |

### Prep Batch: 434080

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-145716-2 | MW-02 | Total/NA | Water | 7470A | |
| 500-145716-3 | MW-03 | Total/NA | Water | 7470A | |
| 500-145716-4 | MW-04 | Total/NA | Water | 7470A | |
| 500-145716-5 | MW-05 | Total/NA | Water | 7470A | |
| 500-145716-6 | MW-08 | Total/NA | Water | 7470A | |
| 500-145716-7 | MW-09 | Total/NA | Water | 7470A | |
| 500-145716-8 | MW-10 | Total/NA | Water | 7470A | |
| 500-145716-9 | MW-11 | Total/NA | Water | 7470A | |
| 500-145716-10 | MW-12 | Total/NA | Water | 7470A | |

## Metals (Continued)

### Prep Batch: 434080 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-11 | MW-15 | Total/NA | Water | 7470A | |
| 500-145716-12 | MW-17 | Total/NA | Water | 7470A | |
| 500-145716-13 | MW-18 | Total/NA | Water | 7470A | |
| 500-145716-14 | MW-19 | Total/NA | Water | 7470A | |
| 500-145716-15 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-434080/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-434080/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-145716-4 MS | MW-04 | Total/NA | Water | 7470A | |
| 500-145716-4 MSD | MW-04 | Total/NA | Water | 7470A | |
| 500-145716-4 DU | MW-04 | Total/NA | Water | 7470A | |

### Analysis Batch: 434677

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | 7470A | 434080 |
| 500-145716-2 | MW-02 | Total/NA | Water | 7470A | 434080 |
| 500-145716-3 | MW-03 | Total/NA | Water | 7470A | 434080 |
| 500-145716-4 | MW-04 | Total/NA | Water | 7470A | 434080 |
| 500-145716-5 | MW-05 | Total/NA | Water | 7470A | 434080 |
| 500-145716-6 | MW-08 | Total/NA | Water | 7470A | 434080 |
| 500-145716-7 | MW-09 | Total/NA | Water | 7470A | 434080 |
| 500-145716-8 | MW-10 | Total/NA | Water | 7470A | 434080 |
| 500-145716-9 | MW-11 | Total/NA | Water | 7470A | 434080 |
| 500-145716-10 | MW-12 | Total/NA | Water | 7470A | 434080 |
| 500-145716-11 | MW-15 | Total/NA | Water | 7470A | 434080 |
| 500-145716-12 | MW-17 | Total/NA | Water | 7470A | 434080 |
| 500-145716-13 | MW-18 | Total/NA | Water | 7470A | 434080 |
| 500-145716-14 | MW-19 | Total/NA | Water | 7470A | 434080 |
| 500-145716-15 | Duplicate | Total/NA | Water | 7470A | 434080 |
| MB 500-434080/12-A | Method Blank | Total/NA | Water | 7470A | 434080 |
| LCS 500-434080/13-A | Lab Control Sample | Total/NA | Water | 7470A | 434080 |
| 500-145716-4 MS | MW-04 | Total/NA | Water | 7470A | 434080 |
| 500-145716-4 MSD | MW-04 | Total/NA | Water | 7470A | 434080 |
| 500-145716-4 DU | MW-04 | Total/NA | Water | 7470A | 434080 |

## General Chemistry

### Analysis Batch: 433168

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-145716-2 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-145716-3 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-145716-4 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-145716-5 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-145716-6 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-145716-7 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-145716-8 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-145716-9 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-145716-10 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-145716-11 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-145716-12 | MW-17 | Total/NA | Water | SM 2540C | |

## General Chemistry (Continued)

### Analysis Batch: 433168 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-13 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-145716-14 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-145716-15 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-433168/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-433168/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-145716-1 MS | MW-01 | Total/NA | Water | SM 2540C | |
| 500-145716-1 DU | MW-01 | Total/NA | Water | SM 2540C | |
| 500-145716-2 DU | MW-02 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 434275

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-145716-2 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-145716-3 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-145716-4 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-145716-5 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-145716-6 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-145716-7 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-145716-8 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-145716-9 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-145716-10 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-145716-11 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-145716-12 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-145716-13 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-145716-14 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-145716-15 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-434275/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-434275/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| 500-145716-1 MS | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-145716-1 MSD | MW-01 | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 434300

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-2 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-3 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-4 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-5 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-6 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-7 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-8 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-9 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-10 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-11 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-12 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-13 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-14 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-15 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-434300/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-434300/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-7 MS | MW-09 | Total/NA | Water | SM 4500 Cl- E | |

## General Chemistry (Continued)

### Analysis Batch: 434300 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-7 MSD | MW-09 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 434591

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-2 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-434591/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-434591/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 435221

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-3 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-4 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-5 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-6 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-7 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-8 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-9 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-10 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-11 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-12 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-13 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-14 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-15 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-435221/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-435221/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-4 MS | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-4 MSD | MW-04 | Total/NA | Water | SM 4500 SO4 E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-433097/1-A**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 19:21 | 1 |

**Lab Sample ID: LCS 500-433097/2-A**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.515 | | mg/L | | 103 | 80 - 120 |

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.545 | | mg/L | | 109 | 75 - 125 |

**Lab Sample ID: 500-145716-1 MSD**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.541 | | mg/L | | 108 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-145716-1 DU**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | <0.010 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-433097/1-A**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-433097/1-A**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 16:57 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 16:57 | 1 |

**Lab Sample ID: LCS 500-433097/2-A**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.508 | | mg/L | | 102 | 80 - 120 |
| Arsenic | 0.100 | 0.0952 | | mg/L | | 95 | 80 - 120 |
| Barium | 2.00 | 2.01 | | mg/L | | 100 | 80 - 120 |
| Beryllium | 0.0500 | 0.0518 | | mg/L | | 104 | 80 - 120 |
| Cadmium | 0.0500 | 0.0511 | | mg/L | | 102 | 80 - 120 |
| Calcium | 10.0 | 9.19 | | mg/L | | 92 | 80 - 120 |
| Chromium | 0.200 | 0.211 | | mg/L | | 105 | 80 - 120 |
| Cobalt | 0.500 | 0.533 | | mg/L | | 107 | 80 - 120 |
| Molybdenum | 1.00 | 0.940 | | mg/L | | 94 | 80 - 120 |
| Selenium | 0.100 | 0.0954 | | mg/L | | 95 | 80 - 120 |
| Thallium | 0.100 | 0.106 | | mg/L | | 106 | 80 - 120 |

**Lab Sample ID: LCS 500-433097/2-A**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 0.988 | | mg/L | | 99 | 80 - 120 |
| Lead | 0.100 | 0.109 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.521 | | mg/L | | 104 | 75 - 125 |
| Arsenic | <0.0010 | | 0.100 | 0.0994 | | mg/L | | 99 | 75 - 125 |
| Barium | 0.045 | | 2.00 | 2.06 | | mg/L | | 101 | 75 - 125 |
| Beryllium | <0.0010 | | 0.0500 | 0.0503 | | mg/L | | 101 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0516 | | mg/L | | 103 | 75 - 125 |
| Calcium | 88 | | 10.0 | 95.5 | 4 | mg/L | | 78 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.204 | | mg/L | | 102 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.506 | | mg/L | | 101 | 75 - 125 |
| Molybdenum | <0.0050 | | 1.00 | 0.974 | | mg/L | | 97 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.101 | | mg/L | | 98 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.105 | | mg/L | | 105 | 75 - 125 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.15 | | 1.00 | 1.14 | | mg/L | | 99 | 75 - 125 |
| Lead | 0.00068 | | 0.100 | 0.107 | | mg/L | | 107 | 75 - 125 |

**Lab Sample ID: 500-145716-1 MSD**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.523 | | mg/L | | 105 | 75 - 125 | 0 | 20 |
| Arsenic | <0.0010 | | 0.100 | 0.100 | | mg/L | | 99 | 75 - 125 | 1 | 20 |
| Barium | 0.045 | | 2.00 | 2.05 | | mg/L | | 100 | 75 - 125 | 0 | 20 |
| Beryllium | <0.0010 | | 0.0500 | 0.0494 | | mg/L | | 99 | 75 - 125 | 2 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0517 | | mg/L | | 103 | 75 - 125 | 0 | 20 |
| Calcium | 88 | | 10.0 | 97.1 | 4 | mg/L | | 94 | 75 - 125 | 2 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.206 | | mg/L | | 103 | 75 - 125 | 1 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.511 | | mg/L | | 102 | 75 - 125 | 1 | 20 |
| Molybdenum | <0.0050 | | 1.00 | 0.980 | | mg/L | | 98 | 75 - 125 | 1 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.101 | | mg/L | | 99 | 75 - 125 | 1 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.105 | | mg/L | | 105 | 75 - 125 | 0 | 20 |

**Lab Sample ID: 500-145716-1 MSD**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.15 | | 1.00 | 1.15 | | mg/L | | 101 | 75 - 125 | 1 | 20 |
| Lead | 0.00068 | | 0.100 | 0.109 | | mg/L | | 109 | 75 - 125 | 2 | 20 |

**Lab Sample ID: 500-145716-1 DU**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | <0.0030 | | mg/L | | NC | 20 |
| Arsenic | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Barium | 0.045 | | 0.0459 | | mg/L | | 1 | 20 |
| Beryllium | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Cadmium | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Calcium | 88 | | 89.6 | | mg/L | | 2 | 20 |
| Chromium | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Cobalt | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Molybdenum | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Selenium | <0.0025 | | <0.0025 | | mg/L | | NC | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-145716-1 DU**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Boron | 0.15 | | 0.141 | | mg/L | | 5 | 20 |
| Lead | 0.00068 | | 0.000683 | | mg/L | | 1 | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-434080/12-A**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 15:47 | 1 |

**Lab Sample ID: LCS 500-434080/13-A**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00221 | | mg/L | | 111 | 80 - 120 |

**Lab Sample ID: 500-145716-4 MS**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00110 | | mg/L | | 110 | 75 - 125 |

**Lab Sample ID: 500-145716-4 MSD**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000972 | | mg/L | | 97 | 75 - 125 | 12 | 20 |

**Lab Sample ID: 500-145716-4 DU**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-433168/1**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 05/21/18 04:08 | 1 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: LCS 500-433168/2**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | | | 250 | 296 | | mg/L | | 118 | 80 - 120 | | |

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 540 | | 250 | 788 | | mg/L | | 98 | 75 - 125 | | |

**Lab Sample ID: 500-145716-1 DU**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 540 | | | 554 | | mg/L | | | | 2 | 5 |

**Lab Sample ID: 500-145716-2 DU**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 500 | | | 508 | | mg/L | | | | 1 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-434300/4**
**Matrix: Water**
**Analysis Batch: 434300**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/28/18 18:51 | 1 |

**Lab Sample ID: LCS 500-434300/5**
**Matrix: Water**
**Analysis Batch: 434300**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 49.6 | | mg/L | | 99 | 85 - 115 | | |

**Lab Sample ID: 500-145716-7 MS**
**Matrix: Water**
**Analysis Batch: 434300**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 36 | | 50.0 | 81.0 | | mg/L | | 90 | 75 - 125 | | |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: 500-145716-7 MSD**
**Matrix: Water**
**Analysis Batch: 434300**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 36 | | 50.0 | 80.6 | | mg/L | | 89 | 75 - 125 | 1 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-434275/3**
**Matrix: Water**
**Analysis Batch: 434275**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/26/18 14:23 | 1 |

**Lab Sample ID: LCS 500-434275/4**
**Matrix: Water**
**Analysis Batch: 434275**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.4 | | mg/L | | 104 | 80 - 120 |

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 434275**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.12 | | 5.00 | 5.21 | | mg/L | | 102 | 75 - 125 |

**Lab Sample ID: 500-145716-1 MSD**
**Matrix: Water**
**Analysis Batch: 434275**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.12 | | 5.00 | 5.29 | | mg/L | | 103 | 75 - 125 | 2 | 20 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-434591/3**
**Matrix: Water**
**Analysis Batch: 434591**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/30/18 12:23 | 1 |

**Lab Sample ID: LCS 500-434591/4**
**Matrix: Water**
**Analysis Batch: 434591**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 20.3 | | mg/L | | 102 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: MB 500-435221/3**
**Matrix: Water**
**Analysis Batch: 435221**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 06/04/18 12:49 | 1 |

**Lab Sample ID: LCS 500-435221/4**
**Matrix: Water**
**Analysis Batch: 435221**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 20.0 | 19.6 | | mg/L | | 98 | 80 - 120 | | |

**Lab Sample ID: 500-145716-4 MS**
**Matrix: Water**
**Analysis Batch: 435221**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 100 | | 200 | 330 | | mg/L | | 113 | 75 - 125 | | |

**Lab Sample ID: 500-145716-4 MSD**
**Matrix: Water**
**Analysis Batch: 435221**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 100 | | 200 | 285 | | mg/L | | 90 | 75 - 125 | 15 | 20 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-01

**Date Collected: 05/17/18 15:15**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-1**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 19:37 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 22:46 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:05 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:04 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:13 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 18:53 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:30 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 434591 | | CLB | TAL CHI |
| | | | | | (Start) | 05/30/18 12:43 | | |
| | | | | | (End) | 05/30/18 12:44 | | |

## Client Sample ID: MW-02

**Date Collected: 05/15/18 09:05**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-2**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 19:56 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:12 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:24 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:06 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:20 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 18:54 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:38 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 434591 | | CLB | TAL CHI |
| | | | | | (Start) | 05/30/18 12:44 | | |
| | | | | | (End) | 05/30/18 12:45 | | |

## Client Sample ID: MW-03

**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-3**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:00 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-03

**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:16 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:28 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:08 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:26 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 18:55 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:41 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:51 | | |
| | | | | | (End) | 06/04/18 12:52 | | |

## Client Sample ID: MW-04

**Date Collected: 05/15/18 12:11**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:04 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:20 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:32 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:10 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:28 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 18:56 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:45 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:52 | | |
| | | | | | (End) | 06/04/18 12:53 | | |

## Client Sample ID: MW-05

**Date Collected: 05/15/18 13:31**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:08 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:24 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:44 | FXG | TAL CHI |

## Client Sample ID: MW-05

**Lab Sample ID: 500-145716-5**

**Date Collected: 05/15/18 13:31**

**Matrix: Water**

**Date Received: 05/18/18 17:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:23 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:31 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 18:57 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:48 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:55 | | |
| | | | | | (End) | 06/04/18 12:56 | | |

## Client Sample ID: MW-08

**Lab Sample ID: 500-145716-6**

**Date Collected: 05/17/18 13:29**

**Matrix: Water**

**Date Received: 05/18/18 17:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:12 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:27 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 433604 | 05/22/18 17:47 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:26 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:33 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 18:58 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:51 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:56 | | |
| | | | | | (End) | 06/04/18 12:57 | | |

## Client Sample ID: MW-09

**Lab Sample ID: 500-145716-7**

**Date Collected: 05/16/18 10:19**

**Matrix: Water**

**Date Received: 05/18/18 17:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:24 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:31 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 433604 | 05/22/18 17:51 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:28 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:36 | CLB | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-09

**Date Collected: 05/16/18 10:19**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 19:01 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:04 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:57 | | |
| | | | | | (End) | 06/04/18 12:58 | | |

## Client Sample ID: MW-10

**Date Collected: 05/16/18 11:41**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:28 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:35 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:55 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:30 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:39 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 19:02 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:07 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:58 | | |
| | | | | | (End) | 06/04/18 12:59 | | |

## Client Sample ID: MW-11

**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:32 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:39 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 433604 | 05/22/18 17:59 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:33 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:41 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:03 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:10 | EAT | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-11

**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:01 | | |
| | | | | | (End) | 06/04/18 13:02 | | |

## Client Sample ID: MW-12

**Date Collected: 05/16/18 14:41**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:36 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:43 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 18:03 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:35 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:44 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:21 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:13 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 25 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:02 | | |
| | | | | | (End) | 06/04/18 13:03 | | |

## Client Sample ID: MW-15

**Date Collected: 05/17/18 11:58**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-11

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:40 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:54 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 433604 | 05/22/18 18:07 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:37 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:46 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:04 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:16 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 25 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:03 | | |
| | | | | | (End) | 06/04/18 13:04 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-17

**Date Collected: 05/14/18 14:51**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-12

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:44 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:58 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 433604 | 05/22/18 18:11 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:44 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:49 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:04 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:19 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 25 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:04 | | |
| | | | | | (End) | 06/04/18 13:05 | | |

## Client Sample ID: MW-18

**Date Collected: 05/14/18 16:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:48 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/22/18 00:01 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 18:15 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:46 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:51 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:05 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:22 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:05 | | |
| | | | | | (End) | 06/04/18 13:06 | | |

## Client Sample ID: MW-19

**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:52 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-19

**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/22/18 00:05 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 433604 | 05/22/18 18:18 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:49 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:54 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 19:07 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:25 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:06 | | |
| | | | | | (End) | 06/04/18 13:07 | | |

## Client Sample ID: Duplicate

**Date Collected: 05/14/18 00:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:57 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/22/18 00:09 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 433604 | 05/22/18 18:33 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:51 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:57 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 19:22 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:29 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:07 | | |
| | | | | | (End) | 06/04/18 13:08 | | |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

**Report To:**

| | |
|---|---|
| Contact: | Richard Gnat |
| Company: | KPRG and Associates, Inc |
| Address: | 14665 W. Lisbon Rd., Suite 2B |
| | Brookfield, WI 53005 |
| Phone: | 262-781-0475 |
| Email: | richardg@kprginc.com |

**Bill To:**

| | |
|---|---|
| Contact: | |
| Company: | |
| Address: | |
| | |
| Phone: | |
| Email | |
| PO #: | |

500-145716 COC

**Lab Lot #** 500-145716

| | |
|---|---|
| Package Sealed: Yes / No | Samples Sealed: Yes / No |
| Received on Ice: Yes / No | Samples Intact: Yes / No / N/A |
| Temperature °C of Cooler: 3.9, 4.7, 3.1, 2.1, 2.8 | |
| Within Hold Time: Yes / No | Preserv. Indicated: Yes / No / N/A |
| pH Check OK: Yes / No | Res. $CL_2$ Check OK: Yes / No / N/A |
| Sample Labels and COC Agree: Yes / No / COC not present | |

| | | | |
|---|---|---|---|
| **Sampler Name:** Ian John Howieson | **COMPANY:** KPRG & Associates Inc. | # / Cont. | |
| | | Volume | |
| **Project Name:** Quarterly- Powerton CCR | **TestAmerica Project Number:** 50011612 | Preserv. | |
| **Project Location:** Pekin, IL | **TAT** 15 Days | | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 5-17-18 | 15:15 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-02 | 5-15-18 | 09:05 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-03 | 5-15-18 | 11:00 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-04 | 5-15-18 | 12:11 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-05 | 5-15-18 | 13:31 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-08 | 5-17-18 | 13:29 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-09 | 5-16-18 | 10:19 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-10 | 5-16-18 | 11:41 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-11 | 5-16-18 | 13:01 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-12 | 5-16-18 | 14:41 | W | 5 | X | X | X | X | X | X | |
| 11 | | MW-15 | 5-17-18 | 11:58 | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 5-18-18 | 17:20 | | TA | 5/18/18 | 1720 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received: 05, 18, 18
Courier:
Hand Delivered: X
Bill of Lading:

__1__of__2__

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500145716

| Package Sealed | Samples Sealed |
|---|---|
| (Yes) No | (Yes) No |
| **Received on Ice** | **Samples Intact** |
| (Yes) No | (Yes) No N/A |

**Temperature °C of Cooler** 2.8, 2.1, 3.1, 3.9, 4.7

| Within Hold Time | Preserv. Indicated |
|---|---|
| (Yes) No | (Yes) No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| (Yes) No | (Yes) No N/A |

Sample Labels and COC Agree: (Yes) No COC not present

| Sampler Name: | COMPANY: |
|---|---|
| Ian John Howieson | KPRG & Associates Inc. |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly- Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | | MW-17 | 5-14-18 | 14:51 | W | 5 | X | X | X | X | X | X | |
| 13 | | MW-18 | 5-14-18 | 16:05 | W | 5 | X | X | X | X | X | X | |
| 14 | | MW-19 | 5-14-18 | 17:35 | W | 5 | X | X | X | X | X | X | |
| 15 | | Duplicates | 5-14-18 | -- | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 5-18-18 | 17:20 | | TA | 5/18/18 | 1720 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**
WW = Wastewater, SE = Sediment, W = Water, SO = Solid, S = Soil, DL = Drum Liquid, SL = Sludge, DS = Drum Solid, MS = Miscellaneous, L = Leachate, OL = Oil, W = Wipe, A = Air, O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 05/18/18
Courier:
Hand Delivered [X]
Bill of Lading:

__2__of__2__

STL-8208 (0600)

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-1

**Login Number: 145716**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.1, 2.8, 3.1, 3.9, 4.7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-145716-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*6/28/2018 1:30:40 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-145716-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-145716-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/18/2018 5:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.1° C, 2.8° C, 3.1° C, 3.9° C and 4.7° C.

**RAD**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-145716-1 | MW-01 | Water | 05/17/18 15:15 | 05/18/18 17:20 |
| 500-145716-2 | MW-02 | Water | 05/15/18 09:05 | 05/18/18 17:20 |
| 500-145716-3 | MW-03 | Water | 05/15/18 11:00 | 05/18/18 17:20 |
| 500-145716-4 | MW-04 | Water | 05/15/18 12:11 | 05/18/18 17:20 |
| 500-145716-5 | MW-05 | Water | 05/15/18 13:31 | 05/18/18 17:20 |
| 500-145716-6 | MW-08 | Water | 05/17/18 13:29 | 05/18/18 17:20 |
| 500-145716-7 | MW-09 | Water | 05/16/18 10:19 | 05/18/18 17:20 |
| 500-145716-8 | MW-10 | Water | 05/16/18 11:41 | 05/18/18 17:20 |
| 500-145716-9 | MW-11 | Water | 05/16/18 13:01 | 05/18/18 17:20 |
| 500-145716-10 | MW-12 | Water | 05/16/18 14:41 | 05/18/18 17:20 |
| 500-145716-11 | MW-15 | Water | 05/17/18 11:58 | 05/18/18 17:20 |
| 500-145716-12 | MW-17 | Water | 05/14/18 14:51 | 05/18/18 17:20 |
| 500-145716-13 | MW-18 | Water | 05/14/18 16:05 | 05/18/18 17:20 |
| 500-145716-14 | MW-19 | Water | 05/14/18 17:35 | 05/18/18 17:20 |
| 500-145716-15 | Duplicate | Water | 05/14/18 00:00 | 05/18/18 17:20 |

## Client Sample ID: MW-01

**Date Collected: 05/17/18 15:15**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.109 | U | 0.143 | 0.143 | 1.00 | 0.238 | pCi/L | 05/29/18 11:58 | 06/20/18 10:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *98.2* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.244 | U | 0.243 | 0.244 | 1.00 | 0.396 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *98.2* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.353 | U | 0.282 | 0.283 | 5.00 | 0.396 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-02

**Date Collected: 05/15/18 09:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0490 | U | 0.132 | 0.132 | 1.00 | 0.244 | pCi/L | 05/29/18 11:58 | 06/20/18 10:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *100* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.0624 | U | 0.224 | 0.224 | 1.00 | 0.408 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *100* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *84.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | -0.0134 | U | 0.260 | 0.260 | 5.00 | 0.408 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-03

**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0740 | U | 0.146 | 0.146 | 1.00 | 0.262 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.5* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.326 | U | 0.302 | 0.303 | 1.00 | 0.489 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *80.7* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.400 | U | 0.335 | 0.336 | 5.00 | 0.489 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-04

**Date Collected: 05/15/18 12:11**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.243 | U | 0.188 | 0.190 | 1.00 | 0.273 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.2* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.418** | | 0.270 | 0.273 | 1.00 | 0.417 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.2* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *81.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.661** | | 0.329 | 0.333 | 5.00 | 0.417 | pCi/L | | 06/23/18 19:42 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

**Client Sample ID: MW-05**
**Date Collected: 05/15/18 13:31**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-5**
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0476 | U | 0.142 | 0.142 | 1.00 | 0.266 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.3* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.337 | U | 0.248 | 0.250 | 1.00 | 0.390 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.3* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *86.0* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.385 | U | 0.286 | 0.288 | 5.00 | 0.390 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-08

**Date Collected: 05/17/18 13:29**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.323** | | 0.210 | 0.212 | 1.00 | 0.285 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.5* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.333 | U | 0.265 | 0.267 | 1.00 | 0.420 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.655** | | 0.338 | 0.341 | 5.00 | 0.420 | pCi/L | | 06/23/18 19:42 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

**Client Sample ID: MW-09**
**Date Collected: 05/16/18 10:19**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-7**
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.103 | U | 0.141 | 0.142 | 1.00 | 0.238 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.235 | U | 0.259 | 0.260 | 1.00 | 0.424 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.338 | U | 0.295 | 0.296 | 5.00 | 0.424 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-10

**Date Collected: 05/16/18 11:41**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.780 | | 0.259 | 0.268 | 1.00 | 0.251 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.9* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.766 | | 0.289 | 0.297 | 1.00 | 0.400 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *83.0* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.55 | | 0.388 | 0.400 | 5.00 | 0.400 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-11

**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.625 | | 0.234 | 0.241 | 1.00 | 0.235 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.497 | | 0.263 | 0.267 | 1.00 | 0.395 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *88.6* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.12 | | 0.352 | 0.360 | 5.00 | 0.395 | pCi/L | | 06/23/18 19:42 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

**Client Sample ID: MW-12**
**Date Collected: 05/16/18 14:41**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-10**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.690** | | 0.255 | 0.263 | 1.00 | 0.263 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0505 | U | 0.229 | 0.229 | 1.00 | 0.401 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *88.2* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.741** | | 0.343 | 0.349 | 5.00 | 0.401 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-15

**Date Collected: 05/17/18 11:58**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-11

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.172 | U | 0.154 | 0.154 | 1.00 | 0.232 | pCi/L | 05/29/18 11:58 | 06/20/18 13:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.6* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 13:17* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.226 | U | 0.217 | 0.218 | 1.00 | 0.351 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.6* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *85.6* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.397** | | 0.266 | 0.267 | 5.00 | 0.351 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-17

**Date Collected: 05/14/18 14:51**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-12

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.27 | | 0.316 | 0.336 | 1.00 | 0.250 | pCi/L | 05/29/18 11:58 | 06/20/18 13:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 13:17* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.755 | | 0.284 | 0.292 | 1.00 | 0.398 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *92.3* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 2.03 | | 0.425 | 0.445 | 5.00 | 0.398 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-18

**Date Collected: 05/14/18 16:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-13

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.332** | | 0.189 | 0.192 | 1.00 | 0.244 | pCi/L | 05/29/18 11:58 | 06/20/18 12:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 12:47* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.309 | U | 0.206 | 0.208 | 1.00 | 0.317 | pCi/L | 05/29/18 13:22 | 06/19/18 10:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |
| *Y Carrier* | *87.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.641** | | 0.280 | 0.283 | 5.00 | 0.317 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-19

**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-14

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.235 | U | 0.173 | 0.174 | 1.00 | 0.246 | pCi/L | 05/29/18 11:58 | 06/20/18 12:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *104* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 12:47* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.326** | | 0.193 | 0.195 | 1.00 | 0.288 | pCi/L | 05/29/18 13:22 | 06/19/18 10:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *104* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |
| *Y Carrier* | *88.2* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.562** | | 0.259 | 0.261 | 5.00 | 0.288 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: Duplicate

**Date Collected: 05/14/18 00:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-15

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.193 | U | 0.166 | 0.166 | 1.00 | 0.249 | pCi/L | 05/29/18 11:58 | 06/20/18 12:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 12:47* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.404** | | 0.210 | 0.213 | 1.00 | 0.307 | pCi/L | 05/29/18 13:22 | 06/19/18 10:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |
| *Y Carrier* | *87.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.597** | | 0.268 | 0.270 | 5.00 | 0.307 | pCi/L | | 06/23/18 19:42 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Rad

### Prep Batch: 367843

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-145716-2 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-145716-3 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-145716-4 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-145716-5 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-145716-6 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-145716-7 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-145716-8 | MW-10 | Total/NA | Water | PrecSep-21 | |
| 500-145716-9 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-145716-10 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-145716-11 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-145716-12 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-145716-13 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-145716-14 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-145716-15 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-367843/23-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-367843/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-145716-10 DU | MW-12 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 367857

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-145716-2 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-145716-3 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-145716-4 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-145716-5 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-145716-6 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-145716-7 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-145716-8 | MW-10 | Total/NA | Water | PrecSep_0 | |
| 500-145716-9 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-145716-10 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-145716-11 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-145716-12 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-145716-13 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-145716-14 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-145716-15 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-367857/23-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-367857/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-145716-10 DU | MW-12 | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-367843/23-A**
**Matrix: Water**
**Analysis Batch: 371317**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 367843**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.1840 | U | 0.137 | 0.138 | 1.00 | 0.195 | pCi/L | 05/29/18 11:58 | 06/20/18 12:44 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 12:44* | *1* |

**Lab Sample ID: LCS 160-367843/1-A**
**Matrix: Water**
**Analysis Batch: 371320**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 367843**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.8 | 11.82 | | 1.37 | 1.00 | 0.215 | pCi/L | 100 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *107* | | *40 - 110* |

**Lab Sample ID: 500-145716-10 DU**
**Matrix: Water**
**Analysis Batch: 371320**

**Client Sample ID: MW-12**
**Prep Type: Total/NA**
**Prep Batch: 367843**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.690 | | | 0.4100 | | 0.198 | 1.00 | 0.223 | pCi/L | | | 0.61 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *97.1* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-367857/23-A**
**Matrix: Water**
**Analysis Batch: 371107**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 367857**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.05875 | U | 0.188 | 0.188 | 1.00 | 0.328 | pCi/L | 05/29/18 13:22 | 06/19/18 10:59 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:59* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:59* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-367857/1-A**
**Matrix: Water**
**Analysis Batch: 371219**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 367857**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 8.21 | 7.721 | | 0.925 | 1.00 | 0.422 | pCi/L | 94 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *107* | | *40 - 110* |
| *Y Carrier* | *84.5* | | *40 - 110* |

**Lab Sample ID: 500-145716-10 DU**
**Matrix: Water**
**Analysis Batch: 371219**

**Client Sample ID: MW-12**
**Prep Type: Total/NA**
**Prep Batch: 367857**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0505 | U | | 0.1106 | U | 0.228 | 1.00 | 0.388 | pCi/L | | | 0.13 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *97.1* | | *40 - 110* |
| *Y Carrier* | *82.6* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Client Sample ID: MW-01
**Date Collected: 05/17/18 15:15**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:42 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-02
**Date Collected: 05/15/18 09:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:42 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-04
**Date Collected: 05/15/18 12:11**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Client Sample ID: MW-05

**Date Collected: 05/15/18 13:31**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-5**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-08

**Date Collected: 05/17/18 13:29**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-6**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-09

**Date Collected: 05/16/18 10:19**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-7**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-10

**Date Collected: 05/16/18 11:41**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-8**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Client Sample ID: MW-11

**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-12

**Date Collected: 05/16/18 14:41**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 05/17/18 11:58**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-11

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 13:17 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-17

**Date Collected: 05/14/18 14:51**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-12

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 13:17 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Client Sample ID: MW-18

**Date Collected: 05/14/18 16:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 12:47 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371132 | 06/19/18 10:57 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-19

**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 12:47 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371132 | 06/19/18 10:57 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: Duplicate

**Date Collected: 05/14/18 00:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 12:47 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371132 | 06/19/18 10:57 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc. TestAmerica Job ID: 500-145716-2
Project/Site: Powerton CCR

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

## Laboratory: TestAmerica St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200023 | 11-30-18 |

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

**Report To:**

| | |
|---|---|
| Contact: | Richard Gnat |
| Company: | KPRG and Associates, Inc |
| Address: | 14665 W. Lisbon Rd., Suite 2B |
| | Brookfield, WI 53005 |
| Phone: | 262-781-0475 |
| Email: | richardg@kprginc.com |

**Bill To:**

| | |
|---|---|
| Contact: | |
| Company: | |
| Address: | |
| | |
| Phone: | |
| Email | |
| PO #: | |

500-145716 COC

**Lab Lot #** 500-145716

| | |
|---|---|
| Package Sealed: Yes / No | Samples Sealed: Yes / No |
| Received on Ice: Yes / No | Samples Intact: Yes / No / N/A |
| Temperature °C of Cooler: 3.9, 4.7, 3.1, 2.1, 2.8 | |
| Within Hold Time: Yes / No | Preserv. Indicated: Yes / No / N/A |
| pH Check OK: Yes / No | Res. $CL_2$ Check OK: Yes / No / N/A |
| Sample Labels and COC Agree: Yes / No / COC not present | |

| | | | |
|---|---|---|---|
| **Sampler Name:** Ian John Howieson | **COMPANY:** KPRG & Associates Inc. | # / Cont. | |
| | | Volume | |
| **Project Name:** Quarterly- Powerton CCR | **TestAmerica Project Number:** 50011612 | Preserv. | |
| **Project Location:** Pekin, IL | **TAT** 15 Days | | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 5-17-18 | 15:15 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-02 | 5-15-18 | 09:05 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-03 | 5-15-18 | 11:00 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-04 | 5-15-18 | 12:11 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-05 | 5-15-18 | 13:31 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-08 | 5-17-18 | 13:29 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-09 | 5-16-18 | 10:19 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-10 | 5-16-18 | 11:41 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-11 | 5-16-18 | 13:01 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-12 | 5-16-18 | 14:41 | W | 5 | X | X | X | X | X | X | |
| 11 | | MW-15 | 5-17-18 | 11:58 | W | 5 | X | X | X | X | X | X | |

| | COMPANY: | DATE: | TIME: | | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| RELINQUISHED BY: IJH | KPRG | 5-18-18 | 17:20 | RECEIVED BY: | TA | 5/18/18 | 1720 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received: 05/18/18
Courier:
Hand Delivered: X
Bill of Lading:

__1__of__2__

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-145716

| Package Sealed | Samples Sealed |
|---|---|
| (Yes) No | (Yes) No |
| **Received on Ice** | **Samples Intact** |
| (Yes) No | (Yes) No N/A |

**Temperature °C of Cooler** 2.8, 2.1, 3.1, 3.9, 4.7

| Within Hold Time | Preserv. Indicated |
|---|---|
| (Yes) No | (Yes) No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| (Yes) No | (Yes) No N/A |

Sample Labels and COC Agree: (Yes) No — COC not present

| Sampler Name: | COMPANY: | # / Cont. |
|---|---|---|
| Ian John Howieson | KPRG & Associates Inc. | Volume |
| **Project Name:** | **TestAmerica Project Number:** | Preserv. |
| Quarterly- Powerton CCR | 50011612 | |
| **Project Location:** | **TAT** | |
| Pekin, IL | 15 Days | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | | MW-17 | 5-14-18 | 14:51 | W | 5 | X | X | X | X | X | X | |
| 13 | | MW-18 | 5-14-18 | 16:05 | W | 5 | X | X | X | X | X | X | |
| 14 | | MW-19 | 5-14-18 | 17:35 | W | 5 | X | X | X | X | X | X | |
| 15 | | Duplicates | 5-14-18 | -- | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 5-18-18 | 17:20 | | TA | 5/18/18 | 1720 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
_____

**Preservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 05/18/18
Courier:
Hand Delivered [X]
Bill of Lading:

__2__of__2__

STL-8208 (0600)

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-104744.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-145716-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 6/19/2018 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-145716-1) | 5/17/18 | 15:15 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-02 (500-145716-2) | 5/15/18 | 09:05 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-145716-3) | 5/15/18 | 11:00 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-145716-4) | 5/15/18 | 12:11 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-145716-5) | 5/15/18 | 13:31 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-08 (500-145716-6) | 5/17/18 | 13:29 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-09 (500-145716-7) | 5/16/18 | 10:19 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-145716-8) | 5/16/18 | 11:41 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-11 (500-145716-9) | 5/16/18 | 13:01 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Relinquished by: | 5/21/18 1315 | TA | Overnight Prem | 05-22-18 0850 | TASTL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-104744.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-145716-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 6/19/2018 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-12 (500-145716-10) | 5/16/18 | 14:41 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-15 (500-145716-11) | 5/17/18 | 11:58 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-17 (500-145716-12) | 5/14/18 | 14:51 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-18 (500-145716-13) | 5/14/18 | 16:05 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-19 (500-145716-14) | 5/14/18 | 17:35 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-145716-15) | 5/14/18 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| *Possible Hazard Identification* | *Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)* |
|---|---|
| *Unconfirmed* | ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 5/21/18 1315 | TA | [signature] | 05-22-18 0850 | TAL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-2

**Login Number: 145716**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.1, 2.8, 3.1, 3.9, 4.7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-2

**Login Number: 145716**
**List Number: 2**
**Creator: Press, Nicholas B**

**List Source: TestAmerica St. Louis**
**List Creation: 05/22/18 11:08 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 12 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-2

**Login Number: 145716**
**List Number: 3**
**Creator: Press, Nicholas B**

**List Source: TestAmerica St. Louis**
**List Creation: 05/22/18 11:23 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 12 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) |
| 500-145716-1 | MW-01 | 98.2 |
| 500-145716-2 | MW-02 | 100 |
| 500-145716-3 | MW-03 | 96.5 |
| 500-145716-4 | MW-04 | 93.2 |
| 500-145716-5 | MW-05 | 95.3 |
| 500-145716-6 | MW-08 | 85.5 |
| 500-145716-7 | MW-09 | 92.9 |
| 500-145716-8 | MW-10 | 95.9 |
| 500-145716-9 | MW-11 | 95.0 |
| 500-145716-10 | MW-12 | 93.8 |
| 500-145716-10 DU | MW-12 | 97.1 |
| 500-145716-11 | MW-15 | 97.6 |
| 500-145716-12 | MW-17 | 92.9 |
| 500-145716-13 | MW-18 | 103 |
| 500-145716-14 | MW-19 | 104 |
| 500-145716-15 | Duplicate | 101 |
| LCS 160-367843/1-A | Lab Control Sample | 107 |
| MB 160-367843/23-A | Method Blank | 103 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) | Y Carrier (40-110) |
| 500-145716-1 | MW-01 | 98.2 | 87.1 |
| 500-145716-2 | MW-02 | 100 | 84.5 |
| 500-145716-3 | MW-03 | 96.5 | 80.7 |
| 500-145716-4 | MW-04 | 93.2 | 81.5 |
| 500-145716-5 | MW-05 | 95.3 | 86.0 |
| 500-145716-6 | MW-08 | 85.5 | 87.9 |
| 500-145716-7 | MW-09 | 92.9 | 87.1 |
| 500-145716-8 | MW-10 | 95.9 | 83.0 |
| 500-145716-9 | MW-11 | 95.0 | 88.6 |
| 500-145716-10 | MW-12 | 93.8 | 88.2 |
| 500-145716-10 DU | MW-12 | 97.1 | 82.6 |
| 500-145716-11 | MW-15 | 97.6 | 85.6 |
| 500-145716-12 | MW-17 | 92.9 | 92.3 |
| 500-145716-13 | MW-18 | 103 | 87.5 |
| 500-145716-14 | MW-19 | 104 | 88.2 |
| 500-145716-15 | Duplicate | 101 | 87.5 |
| LCS 160-367857/1-A | Lab Control Sample | 107 | 84.5 |
| MB 160-367857/23-A | Method Blank | 103 | 87.9 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier
Y Carrier = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-145716-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*6/4/2018 4:41:01 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-145716-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-145716-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/18/2018 5:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.1º C, 2.8º C, 3.1º C, 3.9º C and 4.7º C.

**Metals**
Method(s) 6020A: The low level continuing calibration verification (CCVL) at line 58, associated with batch 500-433393 recovered above the upper control limit for Beryllium. The samples associated with this CCVL were non-detects for the affected analytes; therefore, the data have been reported

Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-433393. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-145716-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.045 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.15 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 88 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00068 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 540 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 50 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.12 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 48 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-02 — Lab Sample ID: 500-145716-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.065 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.22 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 80 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Mercury | 0.00040 | | 0.00020 | | mg/L | 1 | | 7470A | Total/NA |
| Total Dissolved Solids | 500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 45 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.23 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 54 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-145716-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0010 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.059 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.35 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 77 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 520 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 65 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.23 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 77 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-145716-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.037 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.68 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-04 (Continued) — Lab Sample ID: 500-145716-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 87 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 630 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 66 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.27 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 100 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-145716-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.062 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.61 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 910 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 89 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.29 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 210 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-145716-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0030 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.072 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.024 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.37 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-145716-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.038 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.1 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 89 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.031 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0060 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Mercury | 0.00029 | | 0.00020 | | mg/L | 1 | | 7470A | Total/NA |
| Total Dissolved Solids | 550 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-09 (Continued) — Lab Sample ID: 500-145716-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 36 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.15 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 180 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-145716-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0010 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.22 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.42 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 93 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.021 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0010 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0050 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 530 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 44 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.19 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 80 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-145716-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.089 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.47 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.0 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0041 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.014 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 88 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.61 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 270 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-145716-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.012 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.086 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-145716-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.10 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.46 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00052 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00067 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.021 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.47 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 720 | | 130 | | mg/L | 25 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-145716-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.029 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0081 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.050 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.3 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 200 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.030 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.077 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1800 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 160 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.50 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 680 | | 130 | | mg/L | 25 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-145716-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.42 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.17 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.6 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Cadmium | 0.0020 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 170 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-17 (Continued) — Lab Sample ID: 500-145716-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.0029 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0021 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.13 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Thallium | 0.0068 | | 0.0020 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1700 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 220 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.60 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 800 | | 130 | | mg/L | 25 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-145716-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.13 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.57 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0052 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.59 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 440 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-145716-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.079 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.1 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 96 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.043 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0044 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 820 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 35 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.16 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 180 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-145716-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.077 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: Duplicate (Continued) — Lab Sample ID: 500-145716-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 3.9 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 95 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.042 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0040 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 850 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 36 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.15 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 190 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-145716-1 | MW-01 | Water | 05/17/18 15:15 | 05/18/18 17:20 |
| 500-145716-2 | MW-02 | Water | 05/15/18 09:05 | 05/18/18 17:20 |
| 500-145716-3 | MW-03 | Water | 05/15/18 11:00 | 05/18/18 17:20 |
| 500-145716-4 | MW-04 | Water | 05/15/18 12:11 | 05/18/18 17:20 |
| 500-145716-5 | MW-05 | Water | 05/15/18 13:31 | 05/18/18 17:20 |
| 500-145716-6 | MW-08 | Water | 05/17/18 13:29 | 05/18/18 17:20 |
| 500-145716-7 | MW-09 | Water | 05/16/18 10:19 | 05/18/18 17:20 |
| 500-145716-8 | MW-10 | Water | 05/16/18 11:41 | 05/18/18 17:20 |
| 500-145716-9 | MW-11 | Water | 05/16/18 13:01 | 05/18/18 17:20 |
| 500-145716-10 | MW-12 | Water | 05/16/18 14:41 | 05/18/18 17:20 |
| 500-145716-11 | MW-15 | Water | 05/17/18 11:58 | 05/18/18 17:20 |
| 500-145716-12 | MW-17 | Water | 05/14/18 14:51 | 05/18/18 17:20 |
| 500-145716-13 | MW-18 | Water | 05/14/18 16:05 | 05/18/18 17:20 |
| 500-145716-14 | MW-19 | Water | 05/14/18 17:35 | 05/18/18 17:20 |
| 500-145716-15 | Duplicate | Water | 05/14/18 00:00 | 05/18/18 17:20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-01**
**Date Collected: 05/17/18 15:15**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-1**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 19:37 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| **Barium** | **0.045** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| **Boron** | **0.15** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:05 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| **Calcium** | **88** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| **Lead** | **0.00068** | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:05 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:04 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **540** | | 10 | | mg/L | | | 05/21/18 04:13 | 1 |
| **Chloride** | **50** | | 2.0 | | mg/L | | | 05/28/18 18:53 | 1 |
| **Fluoride** | **0.12** | | 0.10 | | mg/L | | | 05/26/18 14:30 | 1 |
| **Sulfate** | **48** | | 20 | | mg/L | | | 05/30/18 12:43 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-02**
**Date Collected: 05/15/18 09:05**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-2**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 19:56 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| **Barium** | **0.065** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| **Boron** | **0.22** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:24 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| **Calcium** | **80** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.00040** | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:06 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **500** | | 10 | | mg/L | | | 05/21/18 04:20 | 1 |
| **Chloride** | **45** | | 2.0 | | mg/L | | | 05/28/18 18:54 | 1 |
| **Fluoride** | **0.23** | | 0.10 | | mg/L | | | 05/26/18 14:38 | 1 |
| **Sulfate** | **54** | | 20 | | mg/L | | | 05/30/18 12:44 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-03**
**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-3**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:00 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| **Arsenic** | **0.0010** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| **Barium** | **0.059** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| **Boron** | **0.35** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:28 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| **Calcium** | **77** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:08 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **520** | | 10 | | mg/L | | | 05/21/18 04:26 | 1 |
| **Chloride** | **65** | | 2.0 | | mg/L | | | 05/28/18 18:55 | 1 |
| **Fluoride** | **0.23** | | 0.10 | | mg/L | | | 05/26/18 14:41 | 1 |
| **Sulfate** | **77** | | 20 | | mg/L | | | 06/04/18 12:51 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-04**
**Date Collected: 05/15/18 12:11**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-4**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:04 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| **Barium** | **0.037** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| **Boron** | **0.68** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:32 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| **Calcium** | **87** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:10 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **630** | | 10 | | mg/L | | | 05/21/18 04:28 | 1 |
| **Chloride** | **66** | | 2.0 | | mg/L | | | 05/28/18 18:56 | 1 |
| **Fluoride** | **0.27** | | 0.10 | | mg/L | | | 05/26/18 14:45 | 1 |
| **Sulfate** | **100** | | 25 | | mg/L | | | 06/04/18 12:52 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-05**
**Date Collected: 05/15/18 13:31**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-5**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:08 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| **Barium** | **0.062** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| **Boron** | **0.61** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:44 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:23 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **910** | | 10 | | mg/L | | | 05/21/18 04:31 | 1 |
| **Chloride** | **89** | | 10 | | mg/L | | | 05/28/18 18:57 | 5 |
| **Fluoride** | **0.29** | | 0.10 | | mg/L | | | 05/26/18 14:48 | 1 |
| **Sulfate** | **210** | | 50 | | mg/L | | | 06/04/18 12:55 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-08**
**Date Collected: 05/17/18 13:29**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-6**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:12 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Arsenic** | **0.0030** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Barium** | **0.072** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Boron** | **1.2** | | 0.25 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:47 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Molybdenum** | **0.024** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:26 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/21/18 04:33 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 05/28/18 18:58 | 5 |
| **Fluoride** | **0.37** | | 0.10 | | mg/L | | | 05/26/18 14:51 | 1 |
| **Sulfate** | **170** | | 50 | | mg/L | | | 06/04/18 12:56 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-09**
**Date Collected: 05/16/18 10:19**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-7**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:24 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Barium** | **0.038** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Boron** | **4.1** | | 1.0 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:51 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Calcium** | **89** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Molybdenum** | **0.031** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Selenium** | **0.0060** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.00029** | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:28 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **550** | | 10 | | mg/L | | | 05/21/18 04:36 | 1 |
| **Chloride** | **36** | | 2.0 | | mg/L | | | 05/28/18 19:01 | 1 |
| **Fluoride** | **0.15** | | 0.10 | | mg/L | | | 05/26/18 15:04 | 1 |
| **Sulfate** | **180** | | 50 | | mg/L | | | 06/04/18 12:57 | 10 |

## Client Sample ID: MW-10

**Date Collected: 05/16/18 11:41**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-8

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:28 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Arsenic** | **0.0010** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Barium** | **0.22** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Boron** | **0.42** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:55 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Calcium** | **93** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Cobalt** | **0.021** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Lead** | **0.0010** | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Selenium** | **0.0050** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:30 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **530** | | 10 | | mg/L | | | 05/21/18 04:39 | 1 |
| **Chloride** | **44** | | 2.0 | | mg/L | | | 05/28/18 19:02 | 1 |
| **Fluoride** | **0.19** | | 0.10 | | mg/L | | | 05/26/18 15:07 | 1 |
| **Sulfate** | **80** | | 20 | | mg/L | | | 06/04/18 12:58 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-11**
**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-9**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:32 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Arsenic** | **0.089** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Barium** | **0.47** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Boron** | **2.0** | | 0.50 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:59 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Cobalt** | **0.0041** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Molybdenum** | **0.014** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:33 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/21/18 04:41 | 1 |
| **Chloride** | **88** | | 10 | | mg/L | | | 05/28/18 19:03 | 5 |
| **Fluoride** | **0.61** | | 0.10 | | mg/L | | | 05/26/18 15:10 | 1 |
| **Sulfate** | **270** | | 50 | | mg/L | | | 06/04/18 13:01 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-12**
**Date Collected: 05/16/18 14:41**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-10**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.012** | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:36 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Arsenic** | **0.086** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Barium** | **0.10** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Boron** | **0.46** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:03 | 1 |
| **Cadmium** | **0.00052** | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Lead** | **0.00067** | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Molybdenum** | **0.021** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:35 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/21/18 04:44 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 05/28/18 19:21 | 5 |
| **Fluoride** | **0.47** | | 0.10 | | mg/L | | | 05/26/18 15:13 | 1 |
| **Sulfate** | **720** | | 130 | | mg/L | | | 06/04/18 13:02 | 25 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-15**
**Date Collected: 05/17/18 11:58**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-11**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.029 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:40 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Arsenic | 0.0081 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Barium | 0.050 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Boron | 2.3 | | 0.50 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:07 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Calcium | 200 | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Molybdenum | 0.030 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Selenium | 0.077 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:37 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1800 | | 10 | | mg/L | | | 05/21/18 04:46 | 1 |
| Chloride | 160 | | 10 | | mg/L | | | 05/28/18 19:04 | 5 |
| Fluoride | 0.50 | | 0.10 | | mg/L | | | 05/26/18 15:16 | 1 |
| Sulfate | 680 | | 130 | | mg/L | | | 06/04/18 13:03 | 25 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-17**
**Date Collected: 05/14/18 14:51**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-12**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:44 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Arsenic | 0.42 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Barium | 0.17 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Boron | 1.6 | | 0.50 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:11 | 10 |
| Cadmium | 0.0020 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Calcium | 170 | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Cobalt | 0.0029 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Lead | 0.0021 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Molybdenum | 0.13 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Thallium | 0.0068 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:44 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1700 | | 10 | | mg/L | | | 05/21/18 04:49 | 1 |
| Chloride | 220 | | 10 | | mg/L | | | 05/28/18 19:04 | 5 |
| Fluoride | 0.60 | | 0.10 | | mg/L | | | 05/26/18 15:19 | 1 |
| Sulfate | 800 | | 130 | | mg/L | | | 06/04/18 13:04 | 25 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-18**
**Date Collected: 05/14/18 16:05**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-13**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.013** | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:48 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| **Barium** | **0.13** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| **Boron** | **0.57** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:15 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| **Molybdenum** | **0.0052** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:46 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1200** | | 10 | | mg/L | | | 05/21/18 04:51 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 05/28/18 19:05 | 5 |
| **Fluoride** | **0.59** | | 0.10 | | mg/L | | | 05/26/18 15:22 | 1 |
| **Sulfate** | **440** | | 100 | | mg/L | | | 06/04/18 13:05 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-19**
**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-14**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:52 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Barium** | **0.079** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Boron** | **4.1** | | 1.0 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:18 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Calcium** | **96** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Molybdenum** | **0.043** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Selenium** | **0.0044** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:49 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **820** | | 10 | | mg/L | | | 05/21/18 04:54 | 1 |
| **Chloride** | **35** | | 2.0 | | mg/L | | | 05/28/18 19:07 | 1 |
| **Fluoride** | **0.16** | | 0.10 | | mg/L | | | 05/26/18 15:25 | 1 |
| **Sulfate** | **180** | | 50 | | mg/L | | | 06/04/18 13:06 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: Duplicate**
**Date Collected: 05/14/18 00:00**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-15**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:57 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Barium** | **0.077** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Boron** | **3.9** | | 1.0 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:33 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Calcium** | **95** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Molybdenum** | **0.042** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Selenium** | **0.0040** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:51 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **850** | | 10 | | mg/L | | | 05/21/18 04:57 | 1 |
| **Chloride** | **36** | | 2.0 | | mg/L | | | 05/28/18 19:22 | 1 |
| **Fluoride** | **0.15** | | 0.10 | | mg/L | | | 05/26/18 15:29 | 1 |
| **Sulfate** | **190** | | 50 | | mg/L | | | 06/04/18 13:07 | 10 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 433097

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-145716-2 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-145716-3 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-145716-4 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-145716-5 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-145716-6 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-145716-7 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-145716-8 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-145716-9 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-145716-10 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-145716-11 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-145716-12 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-145716-13 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-145716-14 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-145716-15 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-433097/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-433097/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-145716-1 MS | MW-01 | Total Recoverable | Water | 3005A | |
| 500-145716-1 MSD | MW-01 | Total Recoverable | Water | 3005A | |
| 500-145716-1 DU | MW-01 | Total Recoverable | Water | 3005A | |

### Analysis Batch: 433393

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-2 | MW-02 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-3 | MW-03 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-4 | MW-04 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-5 | MW-05 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-6 | MW-08 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-7 | MW-09 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-8 | MW-10 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-9 | MW-11 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-10 | MW-12 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-11 | MW-15 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-12 | MW-17 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-13 | MW-18 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-14 | MW-19 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-15 | Duplicate | Total Recoverable | Water | 6020A | 433097 |
| MB 500-433097/1-A | Method Blank | Total Recoverable | Water | 6020A | 433097 |
| LCS 500-433097/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 MS | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 DU | MW-01 | Total Recoverable | Water | 6020A | 433097 |

### Analysis Batch: 433534

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-2 | MW-02 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-3 | MW-03 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-4 | MW-04 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-5 | MW-05 | Total Recoverable | Water | 6010C | 433097 |

## Metals (Continued)

### Analysis Batch: 433534 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-6 | MW-08 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-7 | MW-09 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-8 | MW-10 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-9 | MW-11 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-10 | MW-12 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-11 | MW-15 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-12 | MW-17 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-13 | MW-18 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-14 | MW-19 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-15 | Duplicate | Total Recoverable | Water | 6010C | 433097 |
| MB 500-433097/1-A | Method Blank | Total Recoverable | Water | 6010C | 433097 |
| LCS 500-433097/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-1 MS | MW-01 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-1 MSD | MW-01 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-1 DU | MW-01 | Total Recoverable | Water | 6010C | 433097 |

### Analysis Batch: 433604

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-2 | MW-02 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-3 | MW-03 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-4 | MW-04 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-5 | MW-05 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-6 | MW-08 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-7 | MW-09 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-8 | MW-10 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-9 | MW-11 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-10 | MW-12 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-11 | MW-15 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-12 | MW-17 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-13 | MW-18 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-14 | MW-19 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-15 | Duplicate | Total Recoverable | Water | 6020A | 433097 |
| MB 500-433097/1-A | Method Blank | Total Recoverable | Water | 6020A | 433097 |
| LCS 500-433097/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 MS | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 DU | MW-01 | Total Recoverable | Water | 6020A | 433097 |

### Prep Batch: 434080

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-145716-2 | MW-02 | Total/NA | Water | 7470A | |
| 500-145716-3 | MW-03 | Total/NA | Water | 7470A | |
| 500-145716-4 | MW-04 | Total/NA | Water | 7470A | |
| 500-145716-5 | MW-05 | Total/NA | Water | 7470A | |
| 500-145716-6 | MW-08 | Total/NA | Water | 7470A | |
| 500-145716-7 | MW-09 | Total/NA | Water | 7470A | |
| 500-145716-8 | MW-10 | Total/NA | Water | 7470A | |
| 500-145716-9 | MW-11 | Total/NA | Water | 7470A | |
| 500-145716-10 | MW-12 | Total/NA | Water | 7470A | |

## Metals (Continued)

### Prep Batch: 434080 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-11 | MW-15 | Total/NA | Water | 7470A | |
| 500-145716-12 | MW-17 | Total/NA | Water | 7470A | |
| 500-145716-13 | MW-18 | Total/NA | Water | 7470A | |
| 500-145716-14 | MW-19 | Total/NA | Water | 7470A | |
| 500-145716-15 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-434080/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-434080/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-145716-4 MS | MW-04 | Total/NA | Water | 7470A | |
| 500-145716-4 MSD | MW-04 | Total/NA | Water | 7470A | |
| 500-145716-4 DU | MW-04 | Total/NA | Water | 7470A | |

### Analysis Batch: 434677

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | 7470A | 434080 |
| 500-145716-2 | MW-02 | Total/NA | Water | 7470A | 434080 |
| 500-145716-3 | MW-03 | Total/NA | Water | 7470A | 434080 |
| 500-145716-4 | MW-04 | Total/NA | Water | 7470A | 434080 |
| 500-145716-5 | MW-05 | Total/NA | Water | 7470A | 434080 |
| 500-145716-6 | MW-08 | Total/NA | Water | 7470A | 434080 |
| 500-145716-7 | MW-09 | Total/NA | Water | 7470A | 434080 |
| 500-145716-8 | MW-10 | Total/NA | Water | 7470A | 434080 |
| 500-145716-9 | MW-11 | Total/NA | Water | 7470A | 434080 |
| 500-145716-10 | MW-12 | Total/NA | Water | 7470A | 434080 |
| 500-145716-11 | MW-15 | Total/NA | Water | 7470A | 434080 |
| 500-145716-12 | MW-17 | Total/NA | Water | 7470A | 434080 |
| 500-145716-13 | MW-18 | Total/NA | Water | 7470A | 434080 |
| 500-145716-14 | MW-19 | Total/NA | Water | 7470A | 434080 |
| 500-145716-15 | Duplicate | Total/NA | Water | 7470A | 434080 |
| MB 500-434080/12-A | Method Blank | Total/NA | Water | 7470A | 434080 |
| LCS 500-434080/13-A | Lab Control Sample | Total/NA | Water | 7470A | 434080 |
| 500-145716-4 MS | MW-04 | Total/NA | Water | 7470A | 434080 |
| 500-145716-4 MSD | MW-04 | Total/NA | Water | 7470A | 434080 |
| 500-145716-4 DU | MW-04 | Total/NA | Water | 7470A | 434080 |

## General Chemistry

### Analysis Batch: 433168

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-145716-2 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-145716-3 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-145716-4 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-145716-5 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-145716-6 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-145716-7 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-145716-8 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-145716-9 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-145716-10 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-145716-11 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-145716-12 | MW-17 | Total/NA | Water | SM 2540C | |

## General Chemistry (Continued)

### Analysis Batch: 433168 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-13 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-145716-14 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-145716-15 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-433168/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-433168/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-145716-1 MS | MW-01 | Total/NA | Water | SM 2540C | |
| 500-145716-1 DU | MW-01 | Total/NA | Water | SM 2540C | |
| 500-145716-2 DU | MW-02 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 434275

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-145716-2 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-145716-3 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-145716-4 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-145716-5 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-145716-6 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-145716-7 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-145716-8 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-145716-9 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-145716-10 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-145716-11 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-145716-12 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-145716-13 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-145716-14 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-145716-15 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-434275/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-434275/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| 500-145716-1 MS | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-145716-1 MSD | MW-01 | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 434300

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-2 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-3 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-4 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-5 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-6 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-7 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-8 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-9 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-10 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-11 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-12 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-13 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-14 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-15 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-434300/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-434300/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-7 MS | MW-09 | Total/NA | Water | SM 4500 Cl- E | |

## General Chemistry (Continued)

### Analysis Batch: 434300 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-7 MSD | MW-09 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 434591

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-2 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-434591/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-434591/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 435221

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-3 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-4 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-5 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-6 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-7 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-8 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-9 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-10 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-11 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-12 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-13 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-14 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-15 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-435221/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-435221/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-4 MS | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-4 MSD | MW-04 | Total/NA | Water | SM 4500 SO4 E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-433097/1-A**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 19:21 | 1 |

**Lab Sample ID: LCS 500-433097/2-A**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.515 | | mg/L | | 103 | 80 - 120 |

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.545 | | mg/L | | 109 | 75 - 125 |

**Lab Sample ID: 500-145716-1 MSD**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.541 | | mg/L | | 108 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-145716-1 DU**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | <0.010 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-433097/1-A**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-433097/1-A**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 16:57 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 16:57 | 1 |

**Lab Sample ID: LCS 500-433097/2-A**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.508 | | mg/L | | 102 | 80 - 120 |
| Arsenic | 0.100 | 0.0952 | | mg/L | | 95 | 80 - 120 |
| Barium | 2.00 | 2.01 | | mg/L | | 100 | 80 - 120 |
| Beryllium | 0.0500 | 0.0518 | | mg/L | | 104 | 80 - 120 |
| Cadmium | 0.0500 | 0.0511 | | mg/L | | 102 | 80 - 120 |
| Calcium | 10.0 | 9.19 | | mg/L | | 92 | 80 - 120 |
| Chromium | 0.200 | 0.211 | | mg/L | | 105 | 80 - 120 |
| Cobalt | 0.500 | 0.533 | | mg/L | | 107 | 80 - 120 |
| Molybdenum | 1.00 | 0.940 | | mg/L | | 94 | 80 - 120 |
| Selenium | 0.100 | 0.0954 | | mg/L | | 95 | 80 - 120 |
| Thallium | 0.100 | 0.106 | | mg/L | | 106 | 80 - 120 |

**Lab Sample ID: LCS 500-433097/2-A**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 0.988 | | mg/L | | 99 | 80 - 120 |
| Lead | 0.100 | 0.109 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.521 | | mg/L | | 104 | 75 - 125 |
| Arsenic | <0.0010 | | 0.100 | 0.0994 | | mg/L | | 99 | 75 - 125 |
| Barium | 0.045 | | 2.00 | 2.06 | | mg/L | | 101 | 75 - 125 |
| Beryllium | <0.0010 | | 0.0500 | 0.0503 | | mg/L | | 101 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0516 | | mg/L | | 103 | 75 - 125 |
| Calcium | 88 | | 10.0 | 95.5 | 4 | mg/L | | 78 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.204 | | mg/L | | 102 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.506 | | mg/L | | 101 | 75 - 125 |
| Molybdenum | <0.0050 | | 1.00 | 0.974 | | mg/L | | 97 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.101 | | mg/L | | 98 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.105 | | mg/L | | 105 | 75 - 125 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.15 | | 1.00 | 1.14 | | mg/L | | 99 | 75 - 125 |
| Lead | 0.00068 | | 0.100 | 0.107 | | mg/L | | 107 | 75 - 125 |

**Lab Sample ID: 500-145716-1 MSD**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.523 | | mg/L | | 105 | 75 - 125 | 0 | 20 |
| Arsenic | <0.0010 | | 0.100 | 0.100 | | mg/L | | 99 | 75 - 125 | 1 | 20 |
| Barium | 0.045 | | 2.00 | 2.05 | | mg/L | | 100 | 75 - 125 | 0 | 20 |
| Beryllium | <0.0010 | | 0.0500 | 0.0494 | | mg/L | | 99 | 75 - 125 | 2 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0517 | | mg/L | | 103 | 75 - 125 | 0 | 20 |
| Calcium | 88 | | 10.0 | 97.1 | 4 | mg/L | | 94 | 75 - 125 | 2 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.206 | | mg/L | | 103 | 75 - 125 | 1 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.511 | | mg/L | | 102 | 75 - 125 | 1 | 20 |
| Molybdenum | <0.0050 | | 1.00 | 0.980 | | mg/L | | 98 | 75 - 125 | 1 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.101 | | mg/L | | 99 | 75 - 125 | 1 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.105 | | mg/L | | 105 | 75 - 125 | 0 | 20 |

**Lab Sample ID: 500-145716-1 MSD**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.15 | | 1.00 | 1.15 | | mg/L | | 101 | 75 - 125 | 1 | 20 |
| Lead | 0.00068 | | 0.100 | 0.109 | | mg/L | | 109 | 75 - 125 | 2 | 20 |

**Lab Sample ID: 500-145716-1 DU**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | <0.0030 | | mg/L | | NC | 20 |
| Arsenic | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Barium | 0.045 | | 0.0459 | | mg/L | | 1 | 20 |
| Beryllium | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Cadmium | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Calcium | 88 | | 89.6 | | mg/L | | 2 | 20 |
| Chromium | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Cobalt | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Molybdenum | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Selenium | <0.0025 | | <0.0025 | | mg/L | | NC | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-145716-1 DU**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Boron | 0.15 | | 0.141 | | mg/L | | 5 | 20 |
| Lead | 0.00068 | | 0.000683 | | mg/L | | 1 | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-434080/12-A**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 15:47 | 1 |

**Lab Sample ID: LCS 500-434080/13-A**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00221 | | mg/L | | 111 | 80 - 120 |

**Lab Sample ID: 500-145716-4 MS**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00110 | | mg/L | | 110 | 75 - 125 |

**Lab Sample ID: 500-145716-4 MSD**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000972 | | mg/L | | 97 | 75 - 125 | 12 | 20 |

**Lab Sample ID: 500-145716-4 DU**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-433168/1**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 05/21/18 04:08 | 1 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: LCS 500-433168/2**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | | | 250 | 296 | | mg/L | | 118 | 80 - 120 | | |

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 540 | | 250 | 788 | | mg/L | | 98 | 75 - 125 | | |

**Lab Sample ID: 500-145716-1 DU**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 540 | | | 554 | | mg/L | | | | 2 | 5 |

**Lab Sample ID: 500-145716-2 DU**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 500 | | | 508 | | mg/L | | | | 1 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-434300/4**
**Matrix: Water**
**Analysis Batch: 434300**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/28/18 18:51 | 1 |

**Lab Sample ID: LCS 500-434300/5**
**Matrix: Water**
**Analysis Batch: 434300**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 49.6 | | mg/L | | 99 | 85 - 115 | | |

**Lab Sample ID: 500-145716-7 MS**
**Matrix: Water**
**Analysis Batch: 434300**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 36 | | 50.0 | 81.0 | | mg/L | | 90 | 75 - 125 | | |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: 500-145716-7 MSD**
**Matrix: Water**
**Analysis Batch: 434300**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 36 | | 50.0 | 80.6 | | mg/L | | 89 | 75 - 125 | 1 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-434275/3**
**Matrix: Water**
**Analysis Batch: 434275**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/26/18 14:23 | 1 |

**Lab Sample ID: LCS 500-434275/4**
**Matrix: Water**
**Analysis Batch: 434275**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.4 | | mg/L | | 104 | 80 - 120 |

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 434275**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.12 | | 5.00 | 5.21 | | mg/L | | 102 | 75 - 125 |

**Lab Sample ID: 500-145716-1 MSD**
**Matrix: Water**
**Analysis Batch: 434275**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.12 | | 5.00 | 5.29 | | mg/L | | 103 | 75 - 125 | 2 | 20 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-434591/3**
**Matrix: Water**
**Analysis Batch: 434591**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/30/18 12:23 | 1 |

**Lab Sample ID: LCS 500-434591/4**
**Matrix: Water**
**Analysis Batch: 434591**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 20.3 | | mg/L | | 102 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: MB 500-435221/3**
**Matrix: Water**
**Analysis Batch: 435221**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 06/04/18 12:49 | 1 |

**Lab Sample ID: LCS 500-435221/4**
**Matrix: Water**
**Analysis Batch: 435221**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 20.0 | 19.6 | | mg/L | | 98 | 80 - 120 | | |

**Lab Sample ID: 500-145716-4 MS**
**Matrix: Water**
**Analysis Batch: 435221**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 100 | | 200 | 330 | | mg/L | | 113 | 75 - 125 | | |

**Lab Sample ID: 500-145716-4 MSD**
**Matrix: Water**
**Analysis Batch: 435221**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 100 | | 200 | 285 | | mg/L | | 90 | 75 - 125 | 15 | 20 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-01

**Date Collected: 05/17/18 15:15**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-1**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 19:37 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 22:46 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:05 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:04 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:13 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 18:53 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:30 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 434591 | | CLB | TAL CHI |
| | | | | | (Start) | 05/30/18 12:43 | | |
| | | | | | (End) | 05/30/18 12:44 | | |

## Client Sample ID: MW-02

**Date Collected: 05/15/18 09:05**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-2**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 19:56 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:12 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:24 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:06 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:20 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 18:54 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:38 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 434591 | | CLB | TAL CHI |
| | | | | | (Start) | 05/30/18 12:44 | | |
| | | | | | (End) | 05/30/18 12:45 | | |

## Client Sample ID: MW-03

**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-3**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:00 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-03

**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:16 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:28 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:08 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:26 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 18:55 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:41 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:51 | | |
| | | | | | (End) | 06/04/18 12:52 | | |

## Client Sample ID: MW-04

**Date Collected: 05/15/18 12:11**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:04 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:20 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:32 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:10 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:28 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 18:56 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:45 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:52 | | |
| | | | | | (End) | 06/04/18 12:53 | | |

## Client Sample ID: MW-05

**Date Collected: 05/15/18 13:31**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:08 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:24 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:44 | FXG | TAL CHI |

## Client Sample ID: MW-05

**Lab Sample ID: 500-145716-5**

**Date Collected: 05/15/18 13:31**

**Matrix: Water**

**Date Received: 05/18/18 17:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:23 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:31 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 18:57 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:48 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:55 | | |
| | | | | | (End) | 06/04/18 12:56 | | |

## Client Sample ID: MW-08

**Lab Sample ID: 500-145716-6**

**Date Collected: 05/17/18 13:29**

**Matrix: Water**

**Date Received: 05/18/18 17:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:12 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:27 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 433604 | 05/22/18 17:47 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:26 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:33 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 18:58 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:51 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:56 | | |
| | | | | | (End) | 06/04/18 12:57 | | |

## Client Sample ID: MW-09

**Lab Sample ID: 500-145716-7**

**Date Collected: 05/16/18 10:19**

**Matrix: Water**

**Date Received: 05/18/18 17:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:24 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:31 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 433604 | 05/22/18 17:51 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:28 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:36 | CLB | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-09

**Date Collected: 05/16/18 10:19**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 19:01 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:04 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:57 | | |
| | | | | | (End) | 06/04/18 12:58 | | |

## Client Sample ID: MW-10

**Date Collected: 05/16/18 11:41**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:28 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:35 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:55 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:30 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:39 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 19:02 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:07 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:58 | | |
| | | | | | (End) | 06/04/18 12:59 | | |

## Client Sample ID: MW-11

**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:32 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:39 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 433604 | 05/22/18 17:59 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:33 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:41 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:03 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:10 | EAT | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-11

**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:01 | | |
| | | | | | (End) | 06/04/18 13:02 | | |

## Client Sample ID: MW-12

**Date Collected: 05/16/18 14:41**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:36 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:43 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 18:03 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:35 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:44 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:21 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:13 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 25 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:02 | | |
| | | | | | (End) | 06/04/18 13:03 | | |

## Client Sample ID: MW-15

**Date Collected: 05/17/18 11:58**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-11

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:40 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:54 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 433604 | 05/22/18 18:07 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:37 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:46 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:04 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:16 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 25 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:03 | | |
| | | | | | (End) | 06/04/18 13:04 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-17

**Date Collected: 05/14/18 14:51**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-12

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:44 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:58 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 433604 | 05/22/18 18:11 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:44 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:49 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:04 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:19 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 25 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:04 | | |
| | | | | | (End) | 06/04/18 13:05 | | |

## Client Sample ID: MW-18

**Date Collected: 05/14/18 16:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:48 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/22/18 00:01 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 18:15 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:46 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:51 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:05 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:22 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:05 | | |
| | | | | | (End) | 06/04/18 13:06 | | |

## Client Sample ID: MW-19

**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:52 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-19

**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/22/18 00:05 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 433604 | 05/22/18 18:18 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:49 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:54 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 19:07 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:25 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:06 | | |
| | | | | | (End) | 06/04/18 13:07 | | |

## Client Sample ID: Duplicate

**Date Collected: 05/14/18 00:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:57 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/22/18 00:09 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 433604 | 05/22/18 18:33 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:51 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:57 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 19:22 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:29 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:07 | | |
| | | | | | (End) | 06/04/18 13:08 | | |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

**Report To:**

| | |
|---|---|
| Contact: | Richard Gnat |
| Company: | KPRG and Associates, Inc |
| Address: | 14665 W. Lisbon Rd., Suite 2B |
| | Brookfield, WI 53005 |
| Phone: | 262-781-0475 |
| Email: | richardg@kprginc.com |

**Bill To:**

| | |
|---|---|
| Contact: | |
| Company: | |
| Address: | |
| | |
| Phone: | |
| Email | |
| PO #: | |

500-145716 COC

**Lab Lot #** 500-145716

| | |
|---|---|
| Package Sealed: Yes / No | Samples Sealed: Yes / No |
| Received on Ice: Yes / No | Samples Intact: Yes / No / N/A |
| Temperature °C of Cooler: 3.9, 4.7, 3.1, 2.1, 2.8 | |
| Within Hold Time: Yes / No | Preserv. Indicated: Yes / No / N/A |
| pH Check OK: Yes / No | Res. $CL_2$ Check OK: Yes / No / N/A |
| Sample Labels and COC Agree: Yes / No / COC not present | |

| | | | |
|---|---|---|---|
| **Sampler Name:** Ian John Howieson | **COMPANY:** KPRG & Associates Inc. | # / Cont. | |
| | | Volume | |
| **Project Name:** Quarterly- Powerton CCR | **TestAmerica Project Number:** 50011612 | Preserv. | |
| **Project Location:** Pekin, IL | **TAT** 15 Days | | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 5-17-18 | 15:15 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-02 | 5-15-18 | 09:05 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-03 | 5-15-18 | 11:00 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-04 | 5-15-18 | 12:11 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-05 | 5-15-18 | 13:31 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-08 | 5-17-18 | 13:29 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-09 | 5-16-18 | 10:19 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-10 | 5-16-18 | 11:41 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-11 | 5-16-18 | 13:01 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-12 | 5-16-18 | 14:41 | W | 5 | X | X | X | X | X | X | |
| 11 | | MW-15 | 5-17-18 | 11:58 | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 5-18-18 | 17:20 | | TA | 5/18/18 | 1720 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received: 05, 18, 18
Courier:
Hand Delivered: X
Bill of Lading:

__1__of__2__

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500145716

| Package Sealed | Samples Sealed |
|---|---|
| (Yes) No | (Yes) No |
| **Received on Ice** | **Samples Intact** |
| (Yes) No | (Yes) No N/A |

**Temperature °C of Cooler** 2.8, 2.1, 3.1, 3.9, 4.7

| Within Hold Time | Preserv. Indicated |
|---|---|
| (Yes) No | (Yes) No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| (Yes) No | (Yes) No N/A |

Sample Labels and COC Agree: (Yes) No COC not present

| Sampler Name: | COMPANY: |
|---|---|
| Ian John Howieson | KPRG & Associates Inc. |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly- Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | | MW-17 | 5-14-18 | 14:51 | W | 5 | X | X | X | X | X | X | |
| 13 | | MW-18 | 5-14-18 | 16:05 | W | 5 | X | X | X | X | X | X | |
| 14 | | MW-19 | 5-14-18 | 17:35 | W | 5 | X | X | X | X | X | X | |
| 15 | | Duplicates | 5-14-18 | -- | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 5-18-18 | 17:20 | | TA | 5/18/18 | 1720 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**
WW = Wastewater, SE = Sediment, W = Water, SO = Solid, S = Soil, DL = Drum Liquid, SL = Sludge, DS = Drum Solid, MS = Miscellaneous, L = Leachate, OL = Oil, W = Wipe, A = Air, O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 05/18/18
Courier:
Hand Delivered [X]
Bill of Lading:

__2__of__2__

STL-8208 (0600)

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-1

**Login Number: 145716**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.1, 2.8, 3.1, 3.9, 4.7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-145716-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*6/28/2018 1:30:40 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-145716-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-145716-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/18/2018 5:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.1° C, 2.8° C, 3.1° C, 3.9° C and 4.7° C.

**RAD**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-145716-1 | MW-01 | Water | 05/17/18 15:15 | 05/18/18 17:20 |
| 500-145716-2 | MW-02 | Water | 05/15/18 09:05 | 05/18/18 17:20 |
| 500-145716-3 | MW-03 | Water | 05/15/18 11:00 | 05/18/18 17:20 |
| 500-145716-4 | MW-04 | Water | 05/15/18 12:11 | 05/18/18 17:20 |
| 500-145716-5 | MW-05 | Water | 05/15/18 13:31 | 05/18/18 17:20 |
| 500-145716-6 | MW-08 | Water | 05/17/18 13:29 | 05/18/18 17:20 |
| 500-145716-7 | MW-09 | Water | 05/16/18 10:19 | 05/18/18 17:20 |
| 500-145716-8 | MW-10 | Water | 05/16/18 11:41 | 05/18/18 17:20 |
| 500-145716-9 | MW-11 | Water | 05/16/18 13:01 | 05/18/18 17:20 |
| 500-145716-10 | MW-12 | Water | 05/16/18 14:41 | 05/18/18 17:20 |
| 500-145716-11 | MW-15 | Water | 05/17/18 11:58 | 05/18/18 17:20 |
| 500-145716-12 | MW-17 | Water | 05/14/18 14:51 | 05/18/18 17:20 |
| 500-145716-13 | MW-18 | Water | 05/14/18 16:05 | 05/18/18 17:20 |
| 500-145716-14 | MW-19 | Water | 05/14/18 17:35 | 05/18/18 17:20 |
| 500-145716-15 | Duplicate | Water | 05/14/18 00:00 | 05/18/18 17:20 |

## Client Sample ID: MW-01

**Date Collected: 05/17/18 15:15**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.109 | U | 0.143 | 0.143 | 1.00 | 0.238 | pCi/L | 05/29/18 11:58 | 06/20/18 10:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *98.2* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.244 | U | 0.243 | 0.244 | 1.00 | 0.396 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *98.2* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.353 | U | 0.282 | 0.283 | 5.00 | 0.396 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-02

**Date Collected: 05/15/18 09:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0490 | U | 0.132 | 0.132 | 1.00 | 0.244 | pCi/L | 05/29/18 11:58 | 06/20/18 10:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *100* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.0624 | U | 0.224 | 0.224 | 1.00 | 0.408 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *100* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *84.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | -0.0134 | U | 0.260 | 0.260 | 5.00 | 0.408 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-03

**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0740 | U | 0.146 | 0.146 | 1.00 | 0.262 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.5* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.326 | U | 0.302 | 0.303 | 1.00 | 0.489 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *80.7* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.400 | U | 0.335 | 0.336 | 5.00 | 0.489 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-04

**Date Collected: 05/15/18 12:11**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.243 | U | 0.188 | 0.190 | 1.00 | 0.273 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.2* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.418** | | 0.270 | 0.273 | 1.00 | 0.417 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.2* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *81.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.661** | | 0.329 | 0.333 | 5.00 | 0.417 | pCi/L | | 06/23/18 19:42 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

**Client Sample ID: MW-05**
**Date Collected: 05/15/18 13:31**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-5**
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0476 | U | 0.142 | 0.142 | 1.00 | 0.266 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.3* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.337 | U | 0.248 | 0.250 | 1.00 | 0.390 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.3* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *86.0* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.385 | U | 0.286 | 0.288 | 5.00 | 0.390 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-08

**Date Collected: 05/17/18 13:29**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.323** | | 0.210 | 0.212 | 1.00 | 0.285 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.5* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.333 | U | 0.265 | 0.267 | 1.00 | 0.420 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.655** | | 0.338 | 0.341 | 5.00 | 0.420 | pCi/L | | 06/23/18 19:42 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

**Client Sample ID: MW-09**
**Date Collected: 05/16/18 10:19**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-7**
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.103 | U | 0.141 | 0.142 | 1.00 | 0.238 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.235 | U | 0.259 | 0.260 | 1.00 | 0.424 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.338 | U | 0.295 | 0.296 | 5.00 | 0.424 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-10

**Date Collected: 05/16/18 11:41**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.780 | | 0.259 | 0.268 | 1.00 | 0.251 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.9* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.766 | | 0.289 | 0.297 | 1.00 | 0.400 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *83.0* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.55 | | 0.388 | 0.400 | 5.00 | 0.400 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-11

**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.625 | | 0.234 | 0.241 | 1.00 | 0.235 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.497 | | 0.263 | 0.267 | 1.00 | 0.395 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *88.6* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.12 | | 0.352 | 0.360 | 5.00 | 0.395 | pCi/L | | 06/23/18 19:42 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

**Client Sample ID: MW-12**
**Date Collected: 05/16/18 14:41**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-10**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.690** | | 0.255 | 0.263 | 1.00 | 0.263 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0505 | U | 0.229 | 0.229 | 1.00 | 0.401 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *88.2* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.741** | | 0.343 | 0.349 | 5.00 | 0.401 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-15

**Date Collected: 05/17/18 11:58**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-11

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.172 | U | 0.154 | 0.154 | 1.00 | 0.232 | pCi/L | 05/29/18 11:58 | 06/20/18 13:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.6* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 13:17* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.226 | U | 0.217 | 0.218 | 1.00 | 0.351 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.6* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *85.6* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.397** | | 0.266 | 0.267 | 5.00 | 0.351 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-17

**Date Collected: 05/14/18 14:51**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-12

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.27 | | 0.316 | 0.336 | 1.00 | 0.250 | pCi/L | 05/29/18 11:58 | 06/20/18 13:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 13:17* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.755 | | 0.284 | 0.292 | 1.00 | 0.398 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *92.3* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 2.03 | | 0.425 | 0.445 | 5.00 | 0.398 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-18

**Date Collected: 05/14/18 16:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-13

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.332** | | 0.189 | 0.192 | 1.00 | 0.244 | pCi/L | 05/29/18 11:58 | 06/20/18 12:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 12:47* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.309 | U | 0.206 | 0.208 | 1.00 | 0.317 | pCi/L | 05/29/18 13:22 | 06/19/18 10:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |
| *Y Carrier* | *87.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.641** | | 0.280 | 0.283 | 5.00 | 0.317 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-19

**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-14

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.235 | U | 0.173 | 0.174 | 1.00 | 0.246 | pCi/L | 05/29/18 11:58 | 06/20/18 12:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *104* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 12:47* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.326** | | 0.193 | 0.195 | 1.00 | 0.288 | pCi/L | 05/29/18 13:22 | 06/19/18 10:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *104* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |
| *Y Carrier* | *88.2* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.562** | | 0.259 | 0.261 | 5.00 | 0.288 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: Duplicate

**Date Collected: 05/14/18 00:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-15

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.193 | U | 0.166 | 0.166 | 1.00 | 0.249 | pCi/L | 05/29/18 11:58 | 06/20/18 12:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 12:47* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.404** | | 0.210 | 0.213 | 1.00 | 0.307 | pCi/L | 05/29/18 13:22 | 06/19/18 10:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |
| *Y Carrier* | *87.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.597** | | 0.268 | 0.270 | 5.00 | 0.307 | pCi/L | | 06/23/18 19:42 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Rad

### Prep Batch: 367843

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-145716-2 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-145716-3 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-145716-4 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-145716-5 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-145716-6 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-145716-7 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-145716-8 | MW-10 | Total/NA | Water | PrecSep-21 | |
| 500-145716-9 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-145716-10 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-145716-11 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-145716-12 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-145716-13 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-145716-14 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-145716-15 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-367843/23-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-367843/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-145716-10 DU | MW-12 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 367857

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-145716-2 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-145716-3 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-145716-4 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-145716-5 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-145716-6 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-145716-7 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-145716-8 | MW-10 | Total/NA | Water | PrecSep_0 | |
| 500-145716-9 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-145716-10 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-145716-11 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-145716-12 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-145716-13 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-145716-14 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-145716-15 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-367857/23-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-367857/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-145716-10 DU | MW-12 | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-367843/23-A**
**Matrix: Water**
**Analysis Batch: 371317**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 367843**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.1840 | U | 0.137 | 0.138 | 1.00 | 0.195 | pCi/L | 05/29/18 11:58 | 06/20/18 12:44 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 12:44* | *1* |

**Lab Sample ID: LCS 160-367843/1-A**
**Matrix: Water**
**Analysis Batch: 371320**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 367843**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.8 | 11.82 | | 1.37 | 1.00 | 0.215 | pCi/L | 100 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *107* | | *40 - 110* |

**Lab Sample ID: 500-145716-10 DU**
**Matrix: Water**
**Analysis Batch: 371320**

**Client Sample ID: MW-12**
**Prep Type: Total/NA**
**Prep Batch: 367843**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.690 | | | 0.4100 | | 0.198 | 1.00 | 0.223 | pCi/L | | | 0.61 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *97.1* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-367857/23-A**
**Matrix: Water**
**Analysis Batch: 371107**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 367857**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.05875 | U | 0.188 | 0.188 | 1.00 | 0.328 | pCi/L | 05/29/18 13:22 | 06/19/18 10:59 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:59* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:59* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-367857/1-A**
**Matrix: Water**
**Analysis Batch: 371219**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 367857**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 8.21 | 7.721 | | 0.925 | 1.00 | 0.422 | pCi/L | 94 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *107* | | *40 - 110* |
| *Y Carrier* | *84.5* | | *40 - 110* |

**Lab Sample ID: 500-145716-10 DU**
**Matrix: Water**
**Analysis Batch: 371219**

**Client Sample ID: MW-12**
**Prep Type: Total/NA**
**Prep Batch: 367857**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0505 | U | | 0.1106 | U | 0.228 | 1.00 | 0.388 | pCi/L | | | 0.13 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *97.1* | | *40 - 110* |
| *Y Carrier* | *82.6* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Client Sample ID: MW-01
**Date Collected: 05/17/18 15:15**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:42 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-02
**Date Collected: 05/15/18 09:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:42 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-04
**Date Collected: 05/15/18 12:11**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Client Sample ID: MW-05

**Date Collected: 05/15/18 13:31**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-5**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-08

**Date Collected: 05/17/18 13:29**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-6**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-09

**Date Collected: 05/16/18 10:19**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-7**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-10

**Date Collected: 05/16/18 11:41**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-8**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Client Sample ID: MW-11

**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-9**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-12

**Date Collected: 05/16/18 14:41**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-10**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 05/17/18 11:58**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-11**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 13:17 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-17

**Date Collected: 05/14/18 14:51**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-12**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 13:17 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Client Sample ID: MW-18

**Date Collected: 05/14/18 16:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 12:47 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371132 | 06/19/18 10:57 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-19

**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 12:47 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371132 | 06/19/18 10:57 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: Duplicate

**Date Collected: 05/14/18 00:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 12:47 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371132 | 06/19/18 10:57 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc. TestAmerica Job ID: 500-145716-2
Project/Site: Powerton CCR

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

## Laboratory: TestAmerica St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200023 | 11-30-18 |

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

**Report To:**

| | |
|---|---|
| Contact: | Richard Gnat |
| Company: | KPRG and Associates, Inc |
| Address: | 14665 W. Lisbon Rd., Suite 2B |
| | Brookfield, WI 53005 |
| Phone: | 262-781-0475 |
| Email: | richardg@kprginc.com |

**Bill To:**

| | |
|---|---|
| Contact: | |
| Company: | |
| Address: | |
| | |
| Phone: | |
| Email | |
| PO #: | |

500-145716 COC

**Lab Lot #** 500-145716

| | |
|---|---|
| Package Sealed: Yes / No | Samples Sealed: Yes / No |
| Received on Ice: Yes / No | Samples Intact: Yes / No / N/A |
| Temperature °C of Cooler: 3.9, 4.7, 3.1, 2.1, 2.8 | |
| Within Hold Time: Yes / No | Preserv. Indicated: Yes / No / N/A |
| pH Check OK: Yes / No | Res. $CL_2$ Check OK: Yes / No / N/A |
| Sample Labels and COC Agree: Yes / No / COC not present | |

| | | | |
|---|---|---|---|
| **Sampler Name:** Ian John Howieson | **COMPANY:** KPRG & Associates Inc. | # / Cont. | |
| | | Volume | |
| **Project Name:** Quarterly- Powerton CCR | **TestAmerica Project Number:** 50011612 | Preserv. | |
| **Project Location:** Pekin, IL | **TAT** 15 Days | | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 5-17-18 | 15:15 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-02 | 5-15-18 | 09:05 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-03 | 5-15-18 | 11:00 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-04 | 5-15-18 | 12:11 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-05 | 5-15-18 | 13:31 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-08 | 5-17-18 | 13:29 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-09 | 5-16-18 | 10:19 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-10 | 5-16-18 | 11:41 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-11 | 5-16-18 | 13:01 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-12 | 5-16-18 | 14:41 | W | 5 | X | X | X | X | X | X | |
| 11 | | MW-15 | 5-17-18 | 11:58 | W | 5 | X | X | X | X | X | X | |

| | COMPANY: | DATE: | TIME: | | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| RELINQUISHED BY: IJH | KPRG | 5-18-18 | 17:20 | RECEIVED BY: | TA | 5/18/18 | 1720 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received: 05/18/18
Courier:
Hand Delivered: X
Bill of Lading:

__1__of__2__

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-145716

| Package Sealed | Samples Sealed |
|---|---|
| (Yes) No | (Yes) No |
| **Received on Ice** | **Samples Intact** |
| (Yes) No | (Yes) No N/A |

**Temperature °C of Cooler** 2.8, 2.1, 3.1, 3.9, 4.7

| Within Hold Time | Preserv. Indicated |
|---|---|
| (Yes) No | (Yes) No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| (Yes) No | (Yes) No N/A |

Sample Labels and COC Agree: (Yes) No — COC not present

| Sampler Name: | COMPANY: | # / Cont. |
|---|---|---|
| Ian John Howieson | KPRG & Associates Inc. | Volume |
| **Project Name:** | **TestAmerica Project Number:** | Preserv. |
| Quarterly- Powerton CCR | 50011612 | |
| **Project Location:** | **TAT** | |
| Pekin, IL | 15 Days | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | | MW-17 | 5-14-18 | 14:51 | W | 5 | X | X | X | X | X | X | |
| 13 | | MW-18 | 5-14-18 | 16:05 | W | 5 | X | X | X | X | X | X | |
| 14 | | MW-19 | 5-14-18 | 17:35 | W | 5 | X | X | X | X | X | X | |
| 15 | | Duplicates | 5-14-18 | -- | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 5-18-18 | 17:20 | | TA | 5/18/18 | 1720 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
_____

**Preservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 05/18/18
Courier:
Hand Delivered [X]
Bill of Lading:

__2__of__2__

STL-8208 (0600)

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-104744.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-145716-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 6/19/2018 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-145716-1) | 5/17/18 | 15:15 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-02 (500-145716-2) | 5/15/18 | 09:05 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-145716-3) | 5/15/18 | 11:00 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-145716-4) | 5/15/18 | 12:11 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-145716-5) | 5/15/18 | 13:31 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-08 (500-145716-6) | 5/17/18 | 13:29 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-09 (500-145716-7) | 5/16/18 | 10:19 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-145716-8) | 5/16/18 | 11:41 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-11 (500-145716-9) | 5/16/18 | 13:01 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Relinquished by: | 5/21/18 1315 | TA | Overnight Prem | 05-22-18 0850 | TASTL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-104744.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-145716-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 6/19/2018 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-12 (500-145716-10) | 5/16/18 | 14:41 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-15 (500-145716-11) | 5/17/18 | 11:58 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-17 (500-145716-12) | 5/14/18 | 14:51 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-18 (500-145716-13) | 5/14/18 | 16:05 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-19 (500-145716-14) | 5/14/18 | 17:35 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-145716-15) | 5/14/18 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| *Possible Hazard Identification* | *Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)* |
|---|---|
| *Unconfirmed* | ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 5/21/18 1315 | TA | [signature] | 05-22-18 0850 | TAL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-2

**Login Number: 145716**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.1, 2.8, 3.1, 3.9, 4.7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-2

**Login Number: 145716**
**List Number: 2**
**Creator: Press, Nicholas B**

**List Source: TestAmerica St. Louis**
**List Creation: 05/22/18 11:08 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 12 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-2

**Login Number: 145716**
**List Number: 3**
**Creator: Press, Nicholas B**

**List Source: TestAmerica St. Louis**
**List Creation: 05/22/18 11:23 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 12 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) |
| 500-145716-1 | MW-01 | 98.2 |
| 500-145716-2 | MW-02 | 100 |
| 500-145716-3 | MW-03 | 96.5 |
| 500-145716-4 | MW-04 | 93.2 |
| 500-145716-5 | MW-05 | 95.3 |
| 500-145716-6 | MW-08 | 85.5 |
| 500-145716-7 | MW-09 | 92.9 |
| 500-145716-8 | MW-10 | 95.9 |
| 500-145716-9 | MW-11 | 95.0 |
| 500-145716-10 | MW-12 | 93.8 |
| 500-145716-10 DU | MW-12 | 97.1 |
| 500-145716-11 | MW-15 | 97.6 |
| 500-145716-12 | MW-17 | 92.9 |
| 500-145716-13 | MW-18 | 103 |
| 500-145716-14 | MW-19 | 104 |
| 500-145716-15 | Duplicate | 101 |
| LCS 160-367843/1-A | Lab Control Sample | 107 |
| MB 160-367843/23-A | Method Blank | 103 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) | Y Carrier (40-110) |
| 500-145716-1 | MW-01 | 98.2 | 87.1 |
| 500-145716-2 | MW-02 | 100 | 84.5 |
| 500-145716-3 | MW-03 | 96.5 | 80.7 |
| 500-145716-4 | MW-04 | 93.2 | 81.5 |
| 500-145716-5 | MW-05 | 95.3 | 86.0 |
| 500-145716-6 | MW-08 | 85.5 | 87.9 |
| 500-145716-7 | MW-09 | 92.9 | 87.1 |
| 500-145716-8 | MW-10 | 95.9 | 83.0 |
| 500-145716-9 | MW-11 | 95.0 | 88.6 |
| 500-145716-10 | MW-12 | 93.8 | 88.2 |
| 500-145716-10 DU | MW-12 | 97.1 | 82.6 |
| 500-145716-11 | MW-15 | 97.6 | 85.6 |
| 500-145716-12 | MW-17 | 92.9 | 92.3 |
| 500-145716-13 | MW-18 | 103 | 87.5 |
| 500-145716-14 | MW-19 | 104 | 88.2 |
| 500-145716-15 | Duplicate | 101 | 87.5 |
| LCS 160-367857/1-A | Lab Control Sample | 107 | 84.5 |
| MB 160-367857/23-A | Method Blank | 103 | 87.9 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier
Y Carrier = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-149809-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*8/24/2018 2:41:29 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-149809-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-149809-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/10/2018 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 3.6º C, 3.7º C, 5.2º C, 5.4º C and 6.0º C.

**Metals**
Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-445195. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth

Method(s) 6020A: The CCV at line 63 and CCVL at line 38, associated with batch 500-445195 recovered above the upper control limit for Beryllium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-149809-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.051 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.14 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 86 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 430 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 48 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 43 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-02 — Lab Sample ID: 500-149809-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0016 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.067 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.5 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 89 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 530 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 54 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.15 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 51 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-149809-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0015 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.067 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.40 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 82 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 67 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 49 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-149809-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.031 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.79 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 84 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-04 (Continued) — Lab Sample ID: 500-149809-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 0.0060 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 510 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 71 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.32 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 49 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-149809-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.054 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.49 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0069 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 890 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 120 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.32 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 180 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-149809-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0055 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.071 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.1 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.019 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 270 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.32 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 190 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-149809-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.037 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.3 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 86 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.032 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0078 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-09 (Continued) — Lab Sample ID: 500-149809-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 690 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 39 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.14 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 180 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-149809-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0012 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.22 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.39 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 99 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00079 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0062 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 550 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 58 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.19 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 60 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-149809-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.68 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 3.0 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.4 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Cadmium | 0.00082 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 160 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0053 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0012 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.013 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 120 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.65 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 220 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-149809-10

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-149809-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.12 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.15 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.61 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00084 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00072 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.026 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 190 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.44 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 480 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-149809-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.026 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0083 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.048 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.3 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 200 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.033 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.060 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1700 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.48 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 520 | | 130 | | mg/L | 25 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-149809-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.019 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.087 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.055 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.3 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Cadmium | 0.00094 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-17 (Continued) — Lab Sample ID: 500-149809-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 170 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0015 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.084 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Thallium | 0.0023 | | 0.0020 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1600 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 230 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.60 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 620 | | 250 | | mg/L | 50 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-149809-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.58 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0052 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1100 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 230 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.57 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 270 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-149809-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.078 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.8 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.032 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0052 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 720 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 37 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-149809-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: Duplicate (Continued)

## Lab Sample ID: 500-149809-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.067 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.6 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 91 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 560 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 55 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.14 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 70 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-149809-1 | MW-01 | Water | 08/08/18 09:49 | 08/10/18 16:50 |
| 500-149809-2 | MW-02 | Water | 08/07/18 09:30 | 08/10/18 16:50 |
| 500-149809-3 | MW-03 | Water | 08/07/18 10:54 | 08/10/18 16:50 |
| 500-149809-4 | MW-04 | Water | 08/07/18 12:27 | 08/10/18 16:50 |
| 500-149809-5 | MW-05 | Water | 08/07/18 13:30 | 08/10/18 16:50 |
| 500-149809-6 | MW-08 | Water | 08/08/18 11:11 | 08/10/18 16:50 |
| 500-149809-7 | MW-09 | Water | 08/08/18 12:46 | 08/10/18 16:50 |
| 500-149809-8 | MW-10 | Water | 08/08/18 14:44 | 08/10/18 16:50 |
| 500-149809-9 | MW-11 | Water | 08/09/18 14:03 | 08/10/18 16:50 |
| 500-149809-10 | MW-12 | Water | 08/09/18 15:46 | 08/10/18 16:50 |
| 500-149809-11 | MW-15 | Water | 08/09/18 11:42 | 08/10/18 16:50 |
| 500-149809-12 | MW-17 | Water | 08/06/18 14:41 | 08/10/18 16:50 |
| 500-149809-13 | MW-18 | Water | 08/06/18 15:46 | 08/10/18 16:50 |
| 500-149809-14 | MW-19 | Water | 08/06/18 16:48 | 08/10/18 16:50 |
| 500-149809-15 | Duplicate | Water | 08/07/18 00:00 | 08/10/18 16:50 |

## Client Sample ID: MW-01

**Date Collected: 08/08/18 09:49**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| **Barium** | **0.051** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| **Boron** | **0.14** | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 16:41 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| **Calcium** | **86** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:30 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **430** | | 10 | | mg/L | | | 08/12/18 22:38 | 1 |
| **Chloride** | **48** | | 2.0 | | mg/L | | | 08/20/18 14:07 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 08/13/18 18:53 | 1 |
| **Sulfate** | **43** | | 10 | | mg/L | | | 08/15/18 05:38 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

**Client Sample ID: MW-02**
**Date Collected: 08/07/18 09:30**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-2**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| **Arsenic** | **0.0016** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| **Barium** | **0.067** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| **Boron** | **1.5** | | 0.25 | | mg/L | | 08/11/18 12:28 | 08/13/18 16:45 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| **Calcium** | **89** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:36 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **530** | | 10 | | mg/L | | | 08/12/18 22:43 | 1 |
| **Chloride** | **54** | | 2.0 | | mg/L | | | 08/20/18 14:08 | 1 |
| **Fluoride** | **0.15** | | 0.10 | | mg/L | | | 08/13/18 18:57 | 1 |
| **Sulfate** | **51** | | 25 | | mg/L | | | 08/15/18 05:39 | 5 |

**Client Sample ID: MW-03**
**Date Collected: 08/07/18 10:54**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-3**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| **Arsenic** | **0.0015** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| **Barium** | **0.067** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| **Boron** | **0.40** | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 16:48 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| **Calcium** | **82** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:38 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **500** | | 10 | | mg/L | | | 08/12/18 22:46 | 1 |
| **Chloride** | **67** | | 10 | | mg/L | | | 08/20/18 14:42 | 5 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 08/13/18 19:00 | 1 |
| **Sulfate** | **49** | | 25 | | mg/L | | | 08/15/18 05:42 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

**Client Sample ID: MW-04**
**Date Collected: 08/07/18 12:27**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-4**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:20 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| **Arsenic** | **0.0011** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| **Barium** | **0.031** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| **Boron** | **0.79** | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 16:52 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| **Calcium** | **84** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| **Molybdenum** | **0.0060** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:39 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **510** | | 10 | | mg/L | | | 08/12/18 22:48 | 1 |
| **Chloride** | **71** | | 2.0 | | mg/L | | | 08/20/18 14:10 | 1 |
| **Fluoride** | **0.32** | | 0.10 | | mg/L | | | 08/13/18 19:03 | 1 |
| **Sulfate** | **49** | | 25 | | mg/L | | | 08/15/18 05:43 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

**Client Sample ID: MW-05**
**Date Collected: 08/07/18 13:30**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-5**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:23 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| **Barium** | **0.054** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| **Boron** | **0.49** | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 16:56 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| **Molybdenum** | **0.0069** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:41 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **890** | | 10 | | mg/L | | | 08/12/18 22:51 | 1 |
| **Chloride** | **120** | | 10 | | mg/L | | | 08/20/18 14:11 | 5 |
| **Fluoride** | **0.32** | | 0.10 | | mg/L | | | 08/13/18 19:06 | 1 |
| **Sulfate** | **180** | | 50 | | mg/L | | | 08/15/18 05:44 | 10 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-08

**Date Collected: 08/08/18 11:11**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-6

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:27 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| **Arsenic** | **0.0055** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| **Barium** | **0.071** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| **Boron** | **1.1** | | 0.25 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:00 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| **Molybdenum** | **0.019** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:43 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1200** | | 10 | | mg/L | | | 08/12/18 22:54 | 1 |
| **Chloride** | **270** | | 10 | | mg/L | | | 08/20/18 14:12 | 5 |
| **Fluoride** | **0.32** | | 0.10 | | mg/L | | | 08/13/18 19:10 | 1 |
| **Sulfate** | **190** | | 50 | | mg/L | | | 08/15/18 05:45 | 10 |

## Client Sample ID: MW-09

**Date Collected: 08/08/18 12:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-7

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:32 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| **Barium** | **0.037** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| **Boron** | **4.3** | | 1.0 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:03 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| **Calcium** | **86** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| **Molybdenum** | **0.032** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| **Selenium** | **0.0078** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:44 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **690** | | 10 | | mg/L | | | 08/12/18 22:56 | 1 |
| **Chloride** | **39** | | 2.0 | | mg/L | | | 08/20/18 14:16 | 1 |
| **Fluoride** | **0.14** | | 0.10 | | mg/L | | | 08/13/18 19:13 | 1 |
| **Sulfate** | **180** | | 50 | | mg/L | | | 08/15/18 05:46 | 10 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-10

**Date Collected: 08/08/18 14:44**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-8

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:36 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| **Arsenic** | **0.0012** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| **Barium** | **0.22** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| **Boron** | **0.39** | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:07 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| **Calcium** | **99** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| **Cobalt** | **0.014** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| **Lead** | **0.00079** | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| **Selenium** | **0.0062** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:46 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **550** | | 10 | | mg/L | | | 08/12/18 22:59 | 1 |
| **Chloride** | **58** | | 2.0 | | mg/L | | | 08/20/18 14:18 | 1 |
| **Fluoride** | **0.19** | | 0.10 | | mg/L | | | 08/23/18 16:03 | 1 |
| **Sulfate** | **60** | | 20 | | mg/L | | | 08/15/18 05:47 | 4 |

## Client Sample ID: MW-11

**Date Collected: 08/09/18 14:03**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-9

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:40 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| **Arsenic** | **0.68** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| **Barium** | **3.0** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| **Boron** | **1.4** | | 0.50 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:19 | 10 |
| **Cadmium** | **0.00082** | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| **Calcium** | **160** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| **Cobalt** | **0.0053** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| **Lead** | **0.0012** | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| **Molybdenum** | **0.013** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:57 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 08/12/18 23:01 | 1 |
| **Chloride** | **120** | | 10 | | mg/L | | | 08/20/18 14:19 | 5 |
| **Fluoride** | **0.65** | | 0.10 | | mg/L | | | 08/23/18 16:06 | 1 |
| **Sulfate** | **220** | | 50 | | mg/L | | | 08/15/18 05:48 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

**Client Sample ID: MW-12**
**Date Collected: 08/09/18 15:46**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-10**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:56 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| **Arsenic** | **0.12** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| **Barium** | **0.15** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| **Boron** | **0.61** | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:22 | 1 |
| **Cadmium** | **0.00084** | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| **Lead** | **0.00072** | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| **Molybdenum** | **0.026** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:59 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1300** | | 10 | | mg/L | | | 08/12/18 23:04 | 1 |
| **Chloride** | **190** | | 10 | | mg/L | | | 08/20/18 14:20 | 5 |
| **Fluoride** | **0.44** | | 0.10 | | mg/L | | | 08/23/18 16:09 | 1 |
| **Sulfate** | **480** | | 100 | | mg/L | | | 08/15/18 05:49 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

**Client Sample ID: MW-15**
**Date Collected: 08/09/18 11:42**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-11**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.026** | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:00 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| **Arsenic** | **0.0083** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| **Barium** | **0.048** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| **Boron** | **2.3** | | 0.50 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:26 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| **Calcium** | **200** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| **Molybdenum** | **0.033** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| **Selenium** | **0.060** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 11:00 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1700** | | 10 | | mg/L | | | 08/12/18 23:06 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 08/20/18 14:20 | 5 |
| **Fluoride** | **0.48** | | 0.10 | | mg/L | | | 08/23/18 16:12 | 1 |
| **Sulfate** | **520** | | 130 | | mg/L | | | 08/15/18 05:50 | 25 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

**Client Sample ID: MW-17**
**Date Collected: 08/06/18 14:41**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-12**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.019 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:04 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Arsenic | 0.087 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Barium | 0.055 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Boron | 1.3 | | 0.50 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:30 | 10 |
| Cadmium | 0.00094 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Calcium | 170 | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Cobalt | 0.0015 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Molybdenum | 0.084 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Thallium | 0.0023 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 11:02 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1600 | | 10 | | mg/L | | | 08/12/18 23:09 | 1 |
| Chloride | 230 | | 10 | | mg/L | | | 08/20/18 14:21 | 5 |
| Fluoride | 0.60 | | 0.10 | | mg/L | | | 08/23/18 16:24 | 1 |
| Sulfate | 620 | | 250 | | mg/L | | | 08/15/18 05:51 | 50 |

**Client Sample ID: MW-18**
**Date Collected: 08/06/18 15:46**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-13**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.013** | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:08 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| **Barium** | **0.12** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| **Boron** | **0.58** | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:34 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| **Molybdenum** | **0.0052** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 11:03 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1100** | | 10 | | mg/L | | | 08/12/18 23:12 | 1 |
| **Chloride** | **230** | | 10 | | mg/L | | | 08/20/18 14:21 | 5 |
| **Fluoride** | **0.57** | | 0.10 | | mg/L | | | 08/23/18 16:32 | 1 |
| **Sulfate** | **270** | | 50 | | mg/L | | | 08/22/18 05:36 | 10 |

**Client Sample ID: MW-19**
**Date Collected: 08/06/18 16:48**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-14**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:12 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| **Barium** | **0.078** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| **Boron** | **3.8** | | 1.0 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:38 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| **Molybdenum** | **0.032** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| **Selenium** | **0.0052** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 11:05 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **720** | | 10 | | mg/L | | | 08/12/18 23:14 | 1 |
| **Chloride** | **37** | | 2.0 | | mg/L | | | 08/20/18 14:43 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 08/23/18 16:45 | 1 |
| **Sulfate** | **170** | | 50 | | mg/L | | | 08/22/18 05:37 | 10 |

**Client Sample ID: Duplicate**
**Date Collected: 08/07/18 00:00**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-15**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:16 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| **Arsenic** | **0.0014** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| **Barium** | **0.067** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| **Boron** | **1.6** | | 0.50 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:41 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| **Calcium** | **91** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 11:06 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **560** | | 10 | | mg/L | | | 08/12/18 23:17 | 1 |
| **Chloride** | **55** | | 2.0 | | mg/L | | | 08/20/18 14:24 | 1 |
| **Fluoride** | **0.14** | | 0.10 | | mg/L | | | 08/23/18 16:49 | 1 |
| **Sulfate** | **70** | | 20 | | mg/L | | | 08/22/18 05:40 | 4 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| ^ | ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 445039

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-149809-2 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-149809-3 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-149809-4 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-149809-5 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-149809-6 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-149809-7 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-149809-8 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-149809-9 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-149809-10 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-149809-11 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-149809-12 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-149809-13 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-149809-14 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-149809-15 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-445039/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-445039/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 445195

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-2 | MW-02 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-3 | MW-03 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-4 | MW-04 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-5 | MW-05 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-6 | MW-08 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-7 | MW-09 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-8 | MW-10 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-9 | MW-11 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-10 | MW-12 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-11 | MW-15 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-12 | MW-17 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-13 | MW-18 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-14 | MW-19 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-15 | Duplicate | Total Recoverable | Water | 6020A | 445039 |
| MB 500-445039/1-A | Method Blank | Total Recoverable | Water | 6020A | 445039 |
| LCS 500-445039/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 445039 |

### Analysis Batch: 445254

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-2 | MW-02 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-3 | MW-03 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-4 | MW-04 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-5 | MW-05 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-6 | MW-08 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-7 | MW-09 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-8 | MW-10 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-9 | MW-11 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-10 | MW-12 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-11 | MW-15 | Total Recoverable | Water | 6010C | 445039 |

## Metals (Continued)

### Analysis Batch: 445254 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-12 | MW-17 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-13 | MW-18 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-14 | MW-19 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-15 | Duplicate | Total Recoverable | Water | 6010C | 445039 |
| MB 500-445039/1-A | Method Blank | Total Recoverable | Water | 6010C | 445039 |
| LCS 500-445039/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 445039 |

### Analysis Batch: 445305

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-2 | MW-02 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-3 | MW-03 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-4 | MW-04 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-5 | MW-05 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-6 | MW-08 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-7 | MW-09 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-8 | MW-10 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-9 | MW-11 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-10 | MW-12 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-11 | MW-15 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-12 | MW-17 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-13 | MW-18 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-14 | MW-19 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-15 | Duplicate | Total Recoverable | Water | 6020A | 445039 |
| MB 500-445039/1-A | Method Blank | Total Recoverable | Water | 6020A | 445039 |
| LCS 500-445039/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 445039 |

### Prep Batch: 445342

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-149809-2 | MW-02 | Total/NA | Water | 7470A | |
| 500-149809-3 | MW-03 | Total/NA | Water | 7470A | |
| 500-149809-4 | MW-04 | Total/NA | Water | 7470A | |
| 500-149809-5 | MW-05 | Total/NA | Water | 7470A | |
| 500-149809-6 | MW-08 | Total/NA | Water | 7470A | |
| 500-149809-7 | MW-09 | Total/NA | Water | 7470A | |
| 500-149809-8 | MW-10 | Total/NA | Water | 7470A | |
| 500-149809-9 | MW-11 | Total/NA | Water | 7470A | |
| 500-149809-10 | MW-12 | Total/NA | Water | 7470A | |
| 500-149809-11 | MW-15 | Total/NA | Water | 7470A | |
| 500-149809-12 | MW-17 | Total/NA | Water | 7470A | |
| 500-149809-13 | MW-18 | Total/NA | Water | 7470A | |
| 500-149809-14 | MW-19 | Total/NA | Water | 7470A | |
| 500-149809-15 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-445342/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-445342/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-149809-8 MS | MW-10 | Total/NA | Water | 7470A | |
| 500-149809-8 MSD | MW-10 | Total/NA | Water | 7470A | |
| 500-149809-8 DU | MW-10 | Total/NA | Water | 7470A | |

## Metals (Continued)

### Analysis Batch: 445532

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | 7470A | 445342 |
| 500-149809-2 | MW-02 | Total/NA | Water | 7470A | 445342 |
| 500-149809-3 | MW-03 | Total/NA | Water | 7470A | 445342 |
| 500-149809-4 | MW-04 | Total/NA | Water | 7470A | 445342 |
| 500-149809-5 | MW-05 | Total/NA | Water | 7470A | 445342 |
| 500-149809-6 | MW-08 | Total/NA | Water | 7470A | 445342 |
| 500-149809-7 | MW-09 | Total/NA | Water | 7470A | 445342 |
| 500-149809-8 | MW-10 | Total/NA | Water | 7470A | 445342 |
| 500-149809-9 | MW-11 | Total/NA | Water | 7470A | 445342 |
| 500-149809-10 | MW-12 | Total/NA | Water | 7470A | 445342 |
| 500-149809-11 | MW-15 | Total/NA | Water | 7470A | 445342 |
| 500-149809-12 | MW-17 | Total/NA | Water | 7470A | 445342 |
| 500-149809-13 | MW-18 | Total/NA | Water | 7470A | 445342 |
| 500-149809-14 | MW-19 | Total/NA | Water | 7470A | 445342 |
| 500-149809-15 | Duplicate | Total/NA | Water | 7470A | 445342 |
| MB 500-445342/12-A | Method Blank | Total/NA | Water | 7470A | 445342 |
| LCS 500-445342/13-A | Lab Control Sample | Total/NA | Water | 7470A | 445342 |
| 500-149809-8 MS | MW-10 | Total/NA | Water | 7470A | 445342 |
| 500-149809-8 MSD | MW-10 | Total/NA | Water | 7470A | 445342 |
| 500-149809-8 DU | MW-10 | Total/NA | Water | 7470A | 445342 |

## General Chemistry

### Analysis Batch: 445061

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-149809-2 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-149809-3 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-149809-4 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-149809-5 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-149809-6 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-149809-7 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-149809-8 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-149809-9 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-149809-10 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-149809-11 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-149809-12 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-149809-13 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-149809-14 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-149809-15 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-445061/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-445061/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-149809-1 DU | MW-01 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 445284

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-149809-2 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-149809-3 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-149809-4 | MW-04 | Total/NA | Water | SM 4500 F C | |

## General Chemistry (Continued)

### Analysis Batch: 445284 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-5 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-149809-6 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-149809-7 | MW-09 | Total/NA | Water | SM 4500 F C | |
| MB 500-445284/31 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-445284/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 445449

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-2 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-3 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-4 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-5 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-6 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-7 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-8 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-9 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-10 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-11 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-12 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-445449/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-445449/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 446204

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-2 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-3 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-4 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-5 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-6 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-7 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-8 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-9 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-10 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-11 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-12 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-13 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-14 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-15 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-446204/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-446204/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-7 MS | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-7 MSD | MW-09 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 446448

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-13 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-14 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-15 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-446448/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |

## General Chemistry (Continued)

### Analysis Batch: 446448 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-446448/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 446883

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-8 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-149809-9 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-149809-10 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-149809-11 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-149809-12 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-149809-13 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-149809-14 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-149809-15 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-446883/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| MB 500-446883/31 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-446883/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| LCS 500-446883/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| 500-149809-12 MS | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-149809-12 MSD | MW-17 | Total/NA | Water | SM 4500 F C | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-445039/1-A**
**Matrix: Water**
**Analysis Batch: 445254**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 445039**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 13:52 | 1 |

**Lab Sample ID: LCS 500-445039/2-A**
**Matrix: Water**
**Analysis Batch: 445254**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 445039**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.496 | | mg/L | | 99 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-445039/1-A**
**Matrix: Water**
**Analysis Batch: 445195**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 445039**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |

**Lab Sample ID: MB 500-445039/1-A**
**Matrix: Water**
**Analysis Batch: 445305**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 445039**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 16:33 | 1 |

**Lab Sample ID: LCS 500-445039/2-A**
**Matrix: Water**
**Analysis Batch: 445195**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 445039**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.486 | | mg/L | | 97 | 80 - 120 |
| Arsenic | 0.100 | 0.0987 | | mg/L | | 99 | 80 - 120 |
| Barium | 2.00 | 2.09 | | mg/L | | 104 | 80 - 120 |
| Beryllium | 0.0500 | 0.0526 | ^ | mg/L | | 105 | 80 - 120 |
| Cadmium | 0.0500 | 0.0499 | | mg/L | | 100 | 80 - 120 |
| Calcium | 10.0 | 9.26 | | mg/L | | 93 | 80 - 120 |
| Chromium | 0.200 | 0.199 | | mg/L | | 99 | 80 - 120 |
| Cobalt | 0.500 | 0.512 | | mg/L | | 102 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-445039/2-A**
**Matrix: Water**
**Analysis Batch: 445195**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 445039**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lead | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |
| Molybdenum | 1.00 | 0.962 | | mg/L | | 96 | 80 - 120 |
| Selenium | 0.100 | 0.0975 | | mg/L | | 97 | 80 - 120 |
| Thallium | 0.100 | 0.102 | | mg/L | | 102 | 80 - 120 |

**Lab Sample ID: LCS 500-445039/2-A**
**Matrix: Water**
**Analysis Batch: 445305**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 445039**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 0.999 | | mg/L | | 100 | 80 - 120 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-445342/12-A**
**Matrix: Water**
**Analysis Batch: 445532**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 445342**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:27 | 1 |

**Lab Sample ID: LCS 500-445342/13-A**
**Matrix: Water**
**Analysis Batch: 445532**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 445342**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00183 | | mg/L | | 91 | 80 - 120 |

**Lab Sample ID: 500-149809-8 MS**
**Matrix: Water**
**Analysis Batch: 445532**

**Client Sample ID: MW-10**
**Prep Type: Total/NA**
**Prep Batch: 445342**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00104 | | mg/L | | 104 | 75 - 125 |

**Lab Sample ID: 500-149809-8 MSD**
**Matrix: Water**
**Analysis Batch: 445532**

**Client Sample ID: MW-10**
**Prep Type: Total/NA**
**Prep Batch: 445342**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00110 | | mg/L | | 110 | 75 - 125 | 5 | 20 |

**Lab Sample ID: 500-149809-8 DU**
**Matrix: Water**
**Analysis Batch: 445532**

**Client Sample ID: MW-10**
**Prep Type: Total/NA**
**Prep Batch: 445342**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-445061/1**
**Matrix: Water**
**Analysis Batch: 445061**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 08/12/18 22:23 | 1 |

**Lab Sample ID: LCS 500-445061/2**
**Matrix: Water**
**Analysis Batch: 445061**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 294 | | mg/L | | 118 | 80 - 120 |

**Lab Sample ID: 500-149809-1 DU**
**Matrix: Water**
**Analysis Batch: 445061**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 430 | | 448 | | mg/L | | 3 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-446204/4**
**Matrix: Water**
**Analysis Batch: 446204**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 08/20/18 14:06 | 1 |

**Lab Sample ID: LCS 500-446204/5**
**Matrix: Water**
**Analysis Batch: 446204**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 51.4 | | mg/L | | 103 | 85 - 115 |

**Lab Sample ID: 500-149809-7 MS**
**Matrix: Water**
**Analysis Batch: 446204**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 39 | | 50.0 | 82.0 | | mg/L | | 86 | 75 - 125 |

**Lab Sample ID: 500-149809-7 MSD**
**Matrix: Water**
**Analysis Batch: 446204**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 39 | | 50.0 | 83.5 | | mg/L | | 89 | 75 - 125 | 2 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-445284/31**
**Matrix: Water**
**Analysis Batch: 445284**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 08/13/18 18:24 | 1 |

**Lab Sample ID: LCS 500-445284/32**
**Matrix: Water**
**Analysis Batch: 445284**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.3 | | mg/L | | 103 | 80 - 120 |

**Lab Sample ID: MB 500-446883/3**
**Matrix: Water**
**Analysis Batch: 446883**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 08/23/18 14:41 | 1 |

**Lab Sample ID: MB 500-446883/31**
**Matrix: Water**
**Analysis Batch: 446883**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 08/23/18 16:19 | 1 |

**Lab Sample ID: LCS 500-446883/32**
**Matrix: Water**
**Analysis Batch: 446883**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.4 | | mg/L | | 104 | 80 - 120 |

**Lab Sample ID: LCS 500-446883/4**
**Matrix: Water**
**Analysis Batch: 446883**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.5 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: 500-149809-12 MS**
**Matrix: Water**
**Analysis Batch: 446883**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.60 | | 5.00 | 5.80 | | mg/L | | 104 | 75 - 125 |

**Lab Sample ID: 500-149809-12 MSD**
**Matrix: Water**
**Analysis Batch: 446883**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.60 | | 5.00 | 5.69 | | mg/L | | 102 | 75 - 125 | 2 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-445449/3**
**Matrix: Water**
**Analysis Batch: 445449**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 08/15/18 05:30 | 1 |

**Lab Sample ID: LCS 500-445449/4**
**Matrix: Water**
**Analysis Batch: 445449**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 20.2 | | mg/L | | 101 | 80 - 120 |

**Lab Sample ID: MB 500-446448/3**
**Matrix: Water**
**Analysis Batch: 446448**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 08/22/18 05:28 | 1 |

**Lab Sample ID: LCS 500-446448/4**
**Matrix: Water**
**Analysis Batch: 446448**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 21.8 | | mg/L | | 109 | 80 - 120 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-01

**Date Collected: 08/08/18 09:49**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:08 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:01 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445305 | 08/13/18 16:41 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:30 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:38 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 446204 | 08/20/18 14:07 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 445284 | 08/13/18 18:53 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:38 | | |
| | | | | | (End) | 08/15/18 05:39 | | |

## Client Sample ID: MW-02

**Date Collected: 08/07/18 09:30**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:12 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:04 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 445305 | 08/13/18 16:45 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:36 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:43 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 446204 | 08/20/18 14:08 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 445284 | 08/13/18 18:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:39 | | |
| | | | | | (End) | 08/15/18 05:40 | | |

## Client Sample ID: MW-03

**Date Collected: 08/07/18 10:54**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:16 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-03

**Date Collected: 08/07/18 10:54**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:08 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445305 | 08/13/18 16:48 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:38 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:46 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:42 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 445284 | 08/13/18 19:00 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:42 | | |
| | | | | | (End) | 08/15/18 05:43 | | |

## Client Sample ID: MW-04

**Date Collected: 08/07/18 12:27**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:20 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:12 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445305 | 08/13/18 16:52 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:39 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:48 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 446204 | 08/20/18 14:10 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 445284 | 08/13/18 19:03 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:43 | | |
| | | | | | (End) | 08/15/18 05:44 | | |

## Client Sample ID: MW-05

**Date Collected: 08/07/18 13:30**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:23 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:16 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445305 | 08/13/18 16:56 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-05

**Date Collected: 08/07/18 13:30**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:41 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:51 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:11 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 445284 | 08/13/18 19:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:44 | | |
| | | | | | (End) | 08/15/18 05:45 | | |

## Client Sample ID: MW-08

**Date Collected: 08/08/18 11:11**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:27 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:19 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 445305 | 08/13/18 17:00 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:43 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:54 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:12 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 445284 | 08/13/18 19:10 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:45 | | |
| | | | | | (End) | 08/15/18 05:46 | | |

## Client Sample ID: MW-09

**Date Collected: 08/08/18 12:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:32 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:34 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 445305 | 08/13/18 17:03 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:44 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:56 | CLB | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-09

**Date Collected: 08/08/18 12:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 446204 | 08/20/18 14:16 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 445284 | 08/13/18 19:13 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:46 | | |
| | | | | | (End) | 08/15/18 05:47 | | |

## Client Sample ID: MW-10

**Date Collected: 08/08/18 14:44**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:36 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:38 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445305 | 08/13/18 17:07 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:46 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:59 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 446204 | 08/20/18 14:18 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:03 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:47 | | |
| | | | | | (End) | 08/15/18 05:48 | | |

## Client Sample ID: MW-11

**Date Collected: 08/09/18 14:03**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:40 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:42 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 445305 | 08/13/18 17:19 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:57 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 23:01 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:19 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:06 | EAT | TAL CHI |

## Client Sample ID: MW-11

**Date Collected: 08/09/18 14:03**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:48 | | |
| | | | | | (End) | 08/15/18 05:49 | | |

## Client Sample ID: MW-12

**Date Collected: 08/09/18 15:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:56 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:46 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445305 | 08/13/18 17:22 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:59 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 23:04 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:20 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:09 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:49 | | |
| | | | | | (End) | 08/15/18 05:50 | | |

## Client Sample ID: MW-15

**Date Collected: 08/09/18 11:42**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-11

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 15:00 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:49 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 445305 | 08/13/18 17:26 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 11:00 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 23:06 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:20 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 25 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:50 | | |
| | | | | | (End) | 08/15/18 05:51 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-17

**Date Collected: 08/06/18 14:41**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-12

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 15:04 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:53 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 445305 | 08/13/18 17:30 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 11:02 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 23:09 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:21 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:24 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 50 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:51 | | |
| | | | | | (End) | 08/15/18 05:52 | | |

## Client Sample ID: MW-18

**Date Collected: 08/06/18 15:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 15:08 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:57 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445305 | 08/13/18 17:34 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 11:03 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 23:12 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:21 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:32 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 446448 | | CLB | TAL CHI |
| | | | | | (Start) | 08/22/18 05:36 | | |
| | | | | | (End) | 08/22/18 05:37 | | |

## Client Sample ID: MW-19

**Date Collected: 08/06/18 16:48**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 15:12 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-19

**Date Collected: 08/06/18 16:48**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 15:01 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 445305 | 08/13/18 17:38 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 11:05 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 23:14 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 446204 | 08/20/18 14:43 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:45 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 446448 | | CLB | TAL CHI |
| | | | | | (Start) | 08/22/18 05:37 | | |
| | | | | | (End) | 08/22/18 05:38 | | |

## Client Sample ID: Duplicate

**Date Collected: 08/07/18 00:00**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 15:16 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 15:05 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 445305 | 08/13/18 17:41 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 11:06 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 23:17 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 446204 | 08/20/18 14:24 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:49 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 446448 | | CLB | TAL CHI |
| | | | | | (Start) | 08/22/18 05:40 | | |
| | | | | | (End) | 08/22/18 05:41 | | |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: |
|---|---|---|
| Contact: | Richard Gnat | Contact: |
| Company: | KPRG and Associates, Inc | Company: |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: |
| | Brookfield, WI 53005 | |
| Phone: | 262-781-0475 | Phone: |
| Email: | richardg@kprginc.com | Email |
| | | PO #: |

500-149809 COC

**Lab Lot #** 500-149809

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No N/A |

**Temperature °C of Cooler** 3.6, 3.7, 10.0, 5.2, 5.4

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| Yes No | Yes No N/A |

Sample Labels and COC Agree
Yes No COC not present

| Sampler Name: | COMPANY: |
|---|---|
| Ian John Howieson | KPRG & Associates Inc. |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly- Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 8-8-18 | 09:49 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-02 | 8-7-18 | 09:30 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-03 | 8-7-18 | 10:54 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-04 | 8-7-18 | 12:27 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-05 | 8-7-18 | 13:30 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-08 | 8-8-18 | 11:11 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-09 | 8-8-18 | 12:46 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-10 | 8-8-18 | 14:44 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-11 | 8-9-18 | 14:03 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-12 | 8-9-18 | 15:46 | W | 5 | X | X | X | X | X | X | |
| 11 | | MW-13 | 8-9-18 | 11:42 | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 8-10-18 | 16:50 | | TA | 8/10/18 | 1650 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

_____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 08/10/18
Courier:
Hand Delivered [X]
Bill of Lading:

__1__of__2__

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-149809

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No N/A |

**Temperature °C of Cooler** 3.6, 3.7, 6.0, 5.2, 5.4

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| Yes No | Yes No N/A |

**Sample Labels and COC Agree**
Yes No COC not present

| Sampler Name: | COMPANY: |
|---|---|
| Ian John Howieson | KPRG & Associates Inc. |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly- Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | | MW-17 | 8-6-18 | 14:41 | W | 5 | X | X | X | X | X | X | |
| 13 | | MW-18 | 8-6-18 | 15:46 | W | 5 | X | X | X | X | X | X | |
| 14 | | MW-19 | 8-6-18 | 16:48 | W | 5 | X | X | X | X | X | X | |
| 15 | | Duplicates | 8-7-18 | -- | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 8-10-18 | 16:50 | | TA | 8/10/18 | 1650 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
_____

**reservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 08,10,18
Courier:
Hand Delivered X
Bill of Lading:

__2__of__2__

STL-8208 (0600)

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-149809-1

**Login Number: 149809**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.6, 3.7, 5.2, 5.4, 6.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

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# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-149809-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*9/26/2018 7:15:47 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-149809-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-149809-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/10/2018 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 3.6º C, 3.7º C, 5.2º C, 5.4º C and 6.0º C.

**RAD**
Method(s) PrecSep_0: Radium 228 Prep Batch 160-382531:

Sample aliquot 280-113076-1 reduced due to potential matrix interference. Sample was black, opaque, contained heavy sediment levels, and contained plant material.

Sample aliquots 500-149809-8 and 500-149809-12 reduced due to potential matrix interference. Samples contained heavy levels of black sediment.

Sample aliquot 500-149809-9 reduced due to potential matrix interference. Sample was yellow, murky, and contained sediment.

Sample aliquot 500-149809-10 reduced due to potential matrix interference. Sample contained brown floating debris.

Sample aliquot 500-149809-13 reduced due to potential matrix interference. Sample had a strong odor similar to that of sulfur.

MW-10 (500-149809-8), MW-11 (500-149809-9), MW-12 (500-149809-10), MW-17 (500-149809-12) and MW-18 (500-149809-13)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-382525:

Sample aliquot 280-113076-1 reduced due to potential matrix interference. Sample was black, opaque, contained heavy sediment levels, and contained plant material.

Sample aliquots 500-149809-8 and 500-149809-12 reduced due to potential matrix interference. Samples contained heavy levels of black sediment.

Sample aliquot 500-149809-9 reduced due to potential matrix interference. Sample was yellow, murky, and contained sediment.

Sample aliquot 500-149809-10 reduced due to potential matrix interference. Sample contained brown floating debris.

Sample aliquot 500-149809-13 reduced due to potential matrix interference. Sample had a strong odor similar to that of sulfur.

MW-10 (500-149809-8), MW-11 (500-149809-9), MW-12 (500-149809-10), MW-17 (500-149809-12) and MW-18 (500-149809-13)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-149809-1 | MW-01 | Water | 08/08/18 09:49 | 08/10/18 16:50 |
| 500-149809-2 | MW-02 | Water | 08/07/18 09:30 | 08/10/18 16:50 |
| 500-149809-3 | MW-03 | Water | 08/07/18 10:54 | 08/10/18 16:50 |
| 500-149809-4 | MW-04 | Water | 08/07/18 12:27 | 08/10/18 16:50 |
| 500-149809-5 | MW-05 | Water | 08/07/18 13:30 | 08/10/18 16:50 |
| 500-149809-6 | MW-08 | Water | 08/08/18 11:11 | 08/10/18 16:50 |
| 500-149809-7 | MW-09 | Water | 08/08/18 12:46 | 08/10/18 16:50 |
| 500-149809-8 | MW-10 | Water | 08/08/18 14:44 | 08/10/18 16:50 |
| 500-149809-9 | MW-11 | Water | 08/09/18 14:03 | 08/10/18 16:50 |
| 500-149809-10 | MW-12 | Water | 08/09/18 15:46 | 08/10/18 16:50 |
| 500-149809-11 | MW-15 | Water | 08/09/18 11:42 | 08/10/18 16:50 |
| 500-149809-12 | MW-17 | Water | 08/06/18 14:41 | 08/10/18 16:50 |
| 500-149809-13 | MW-18 | Water | 08/06/18 15:46 | 08/10/18 16:50 |
| 500-149809-14 | MW-19 | Water | 08/06/18 16:48 | 08/10/18 16:50 |
| 500-149809-15 | Duplicate | Water | 08/07/18 00:00 | 08/10/18 16:50 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

## Client Sample ID: MW-01

**Date Collected: 08/08/18 09:49**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.218** | | 0.0846 | 0.0868 | 1.00 | 0.0848 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.5* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.361 | U | 0.246 | 0.249 | 1.00 | 0.384 | pCi/L | 08/15/18 10:00 | 08/22/18 09:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.5* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |
| *Y Carrier* | *93.1* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.579** | | 0.260 | 0.264 | 5.00 | 0.384 | pCi/L | | 09/11/18 02:43 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

**Client Sample ID: MW-02**
**Date Collected: 08/07/18 09:30**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-2**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.293 | | 0.0924 | 0.0961 | 1.00 | 0.0714 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.1* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.330 | U | 0.241 | 0.243 | 1.00 | 0.376 | pCi/L | 08/15/18 10:00 | 08/22/18 09:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.1* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |
| *Y Carrier* | *85.6* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.622 | | 0.258 | 0.261 | 5.00 | 0.376 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-03

**Date Collected: 08/07/18 10:54**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.214 | | 0.0803 | 0.0825 | 1.00 | 0.0767 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0137 | U | 0.191 | 0.191 | 1.00 | 0.341 | pCi/L | 08/15/18 10:00 | 08/22/18 09:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |
| *Y Carrier* | *89.3* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.227 | U | 0.207 | 0.208 | 5.00 | 0.341 | pCi/L | | 09/11/18 02:43 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

**Client Sample ID: MW-04**
**Date Collected: 08/07/18 12:27**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-4**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.198** | | 0.0801 | 0.0821 | 1.00 | 0.0789 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.2* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0210 | U | 0.186 | 0.186 | 1.00 | 0.334 | pCi/L | 08/15/18 10:00 | 08/22/18 09:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.2* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |
| *Y Carrier* | *90.1* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.219 | U | 0.203 | 0.203 | 5.00 | 0.334 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-05

**Date Collected: 08/07/18 13:30**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.220** | | 0.0870 | 0.0892 | 1.00 | 0.0905 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.303 | U | 0.263 | 0.265 | 1.00 | 0.423 | pCi/L | 08/15/18 10:00 | 08/22/18 09:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |
| *Y Carrier* | *86.4* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.523** | | 0.277 | 0.280 | 5.00 | 0.423 | pCi/L | | 09/11/18 02:43 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

## Client Sample ID: MW-08

**Date Collected: 08/08/18 11:11**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.309** | | 0.0962 | 0.100 | 1.00 | 0.0786 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0582 | U | 0.234 | 0.234 | 1.00 | 0.410 | pCi/L | 08/15/18 10:00 | 08/22/18 09:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |
| *Y Carrier* | *80.4* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.367 | U | 0.253 | 0.254 | 5.00 | 0.410 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-09

**Date Collected: 08/08/18 12:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.266** | | 0.0889 | 0.0921 | 1.00 | 0.0739 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.9* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.173 | U | 0.207 | 0.208 | 1.00 | 0.342 | pCi/L | 08/15/18 10:00 | 08/22/18 09:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.9* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |
| *Y Carrier* | *88.6* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.440** | | 0.225 | 0.227 | 5.00 | 0.342 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-10

**Date Collected: 08/08/18 14:44**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.557** | | 0.149 | 0.157 | 1.00 | 0.121 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.0123 | U | 0.306 | 0.306 | 1.00 | 0.551 | pCi/L | 08/15/18 10:00 | 08/22/18 09:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |
| *Y Carrier* | *80.0* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.545 | U | 0.340 | 0.344 | 5.00 | 0.551 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-11

**Date Collected: 08/09/18 14:03**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.940 | | 0.187 | 0.205 | 1.00 | 0.108 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.536 | | 0.332 | 0.336 | 1.00 | 0.507 | pCi/L | 08/15/18 10:00 | 08/22/18 09:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.48 | | 0.381 | 0.394 | 5.00 | 0.507 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-12

**Date Collected: 08/09/18 15:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-10

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.456** | | 0.135 | 0.141 | 1.00 | 0.105 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.2* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.279 | U | 0.331 | 0.332 | 1.00 | 0.546 | pCi/L | 08/15/18 10:00 | 08/22/18 09:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.2* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |
| *Y Carrier* | *81.9* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.735** | | 0.357 | 0.361 | 5.00 | 0.546 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-15

**Date Collected: 08/09/18 11:42**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-11

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.246** | | 0.0895 | 0.0922 | 1.00 | 0.0884 | pCi/L | 08/15/18 08:57 | 09/07/18 05:36 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.6* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:36* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.320 | U | 0.212 | 0.214 | 1.00 | 0.323 | pCi/L | 08/15/18 10:00 | 08/22/18 09:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.6* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |
| *Y Carrier* | *85.2* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.566** | | 0.230 | 0.233 | 5.00 | 0.323 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-17

**Date Collected: 08/06/18 14:41**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-12

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.619 | | 0.156 | 0.166 | 1.00 | 0.117 | pCi/L | 08/15/18 08:57 | 09/07/18 05:36 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.3* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:36* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.720 | | 0.340 | 0.347 | 1.00 | 0.491 | pCi/L | 08/15/18 10:00 | 08/22/18 09:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.3* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |
| *Y Carrier* | *84.1* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.34 | | 0.374 | 0.385 | 5.00 | 0.491 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-18

**Date Collected: 08/06/18 15:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-13

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.325 | | 0.112 | 0.116 | 1.00 | 0.0992 | pCi/L | 08/15/18 08:57 | 09/07/18 05:37 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.6* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:37* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.695 | | 0.365 | 0.371 | 1.00 | 0.541 | pCi/L | 08/15/18 10:00 | 08/22/18 09:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.6* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |
| *Y Carrier* | *79.3* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.02 | | 0.382 | 0.389 | 5.00 | 0.541 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-19

**Date Collected: 08/06/18 16:48**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-14

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.268 | | 0.0900 | 0.0932 | 1.00 | 0.0790 | pCi/L | 08/15/18 08:57 | 09/07/18 05:37 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:37* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.567 | | 0.287 | 0.292 | 1.00 | 0.415 | pCi/L | 08/15/18 10:00 | 08/22/18 09:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |
| *Y Carrier* | *74.0* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.835 | | 0.301 | 0.307 | 5.00 | 0.415 | pCi/L | | 09/11/18 02:43 | 1 |

**Client Sample ID: Duplicate**
**Date Collected: 08/07/18 00:00**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-15**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.206 | | 0.0779 | 0.0801 | 1.00 | 0.0620 | pCi/L | 08/15/18 08:57 | 09/07/18 05:38 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.9* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:38* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.204 | U | 0.282 | 0.283 | 1.00 | 0.471 | pCi/L | 08/15/18 10:00 | 08/22/18 09:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.9* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |
| *Y Carrier* | *68.8* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.410 | U | 0.293 | 0.294 | 5.00 | 0.471 | pCi/L | | 09/11/18 02:43 | 1 |

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Rad

### Prep Batch: 382525

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-149809-2 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-149809-3 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-149809-4 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-149809-5 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-149809-6 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-149809-7 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-149809-8 | MW-10 | Total/NA | Water | PrecSep-21 | |
| 500-149809-9 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-149809-10 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-149809-11 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-149809-12 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-149809-13 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-149809-14 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-149809-15 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-382525/22-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-382525/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-149809-15 DU | Duplicate | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 382531

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-149809-2 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-149809-3 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-149809-4 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-149809-5 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-149809-6 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-149809-7 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-149809-8 | MW-10 | Total/NA | Water | PrecSep_0 | |
| 500-149809-9 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-149809-10 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-149809-11 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-149809-12 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-149809-13 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-149809-14 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-149809-15 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-382531/22-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-382531/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-149809-15 DU | Duplicate | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-382525/22-A**
**Matrix: Water**
**Analysis Batch: 387770**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 382525**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.1537 | | 0.0721 | 0.0734 | 1.00 | 0.0777 | pCi/L | 08/15/18 08:57 | 09/07/18 05:38 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.0* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:38* | *1* |

**Lab Sample ID: LCS 160-382525/1-A**
**Matrix: Water**
**Analysis Batch: 387769**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 382525**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 10.54 | | 1.09 | 1.00 | 0.0673 | pCi/L | 93 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *97.3* | | *40 - 110* |

**Lab Sample ID: 500-149809-15 DU**
**Matrix: Water**
**Analysis Batch: 387770**

**Client Sample ID: Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 382525**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.206 | | | 0.2069 | | 0.0824 | 1.00 | 0.0767 | pCi/L | | | 0 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *96.5* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-382531/22-A**
**Matrix: Water**
**Analysis Batch: 384512**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 382531**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.05685 | U | 0.219 | 0.219 | 1.00 | 0.386 | pCi/L | 08/15/18 10:00 | 08/22/18 09:18 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.0* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |
| *Y Carrier* | *82.2* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-382531/1-A**
**Matrix: Water**
**Analysis Batch: 384512**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 382531**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 11.1 | 11.55 | | 1.28 | 1.00 | 0.359 | pCi/L | 104 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *97.3* | | *40 - 110* |
| *Y Carrier* | *88.2* | | *40 - 110* |

**Lab Sample ID: 500-149809-15 DU**
**Matrix: Water**
**Analysis Batch: 384512**

**Client Sample ID: Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 382531**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.204 | U | | 0.07311 | U | 0.232 | 1.00 | 0.402 | pCi/L | | | 0.25 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *96.5* | | *40 - 110* |
| *Y Carrier* | *85.2* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

## Client Sample ID: MW-01
**Date Collected: 08/08/18 09:49**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:16 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-02
**Date Collected: 08/07/18 09:30**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:16 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 08/07/18 10:54**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:16 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-04
**Date Collected: 08/07/18 12:27**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:16 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

## Client Sample ID: MW-05

**Date Collected: 08/07/18 13:30**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:16 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-08

**Date Collected: 08/08/18 11:11**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:16 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-09

**Date Collected: 08/08/18 12:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:16 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-10

**Date Collected: 08/08/18 14:44**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:17 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

## Client Sample ID: MW-11

**Date Collected: 08/09/18 14:03**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-9**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:17 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-12

**Date Collected: 08/09/18 15:46**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-10**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:17 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 08/09/18 11:42**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-11**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:36 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:17 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-17

**Date Collected: 08/06/18 14:41**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-12**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:36 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:17 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

## Client Sample ID: MW-18

**Date Collected: 08/06/18 15:46**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-13**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387770 | 09/07/18 05:37 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:18 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-19

**Date Collected: 08/06/18 16:48**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-14**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387770 | 09/07/18 05:37 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:18 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: Duplicate

**Date Collected: 08/07/18 00:00**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-15**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387770 | 09/07/18 05:38 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:18 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc. TestAmerica Job ID: 500-149809-2
Project/Site: Powerton CCR

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

## Laboratory: TestAmerica St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200023 | 11-30-18 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING


**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211


| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

500-149809 COC

**Lab Lot #** 500-149809

| | |
|---|---|
| Package Sealed: Yes / No | Samples Sealed: Yes / No |
| Received on Ice: Yes / No | Samples Intact: Yes / No / N/A |
| Temperature °C of Cooler: 3.6, 3.7, 10.0, 5.2, 5.4 | |
| Within Hold Time: Yes / No | Preserv. Indicated: Yes / No / N/A |
| pH Check OK: Yes / No | Res $Cl_2$ Check OK: Yes / No / N/A |
| Sample Labels and COC Agree: Yes / No / COC not present | |

| | | | |
|---|---|---|---|
| **Sampler Name:** Ian John Howieson | **COMPANY:** KPRG & Associates Inc. | **# / Cont.** | |
| | | **Volume** | |
| **Project Name:** Quarterly- Powerton CCR | **TestAmerica Project Number:** 50011612 | **Preserv.** | |
| **Project Location:** Pekin, IL | **TAT** 15 Days | | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C - TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 8-8-18 | 09:49 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-02 | 8-7-18 | 09:30 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-03 | 8-7-18 | 10:54 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-04 | 8-7-18 | 12:27 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-05 | 8-7-18 | 13:30 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-08 | 8-8-18 | 11:11 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-09 | 8-8-18 | 12:46 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-10 | 8-8-18 | 14:44 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-11 | 8-9-18 | 14:03 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-12 | 8-9-18 | 15:46 | W | 5 | X | X | X | X | X | X | |
| 11 | | MW-13 | 8-9-18 | 11:42 | W | 5 | X | X | X | X | X | X | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| RELINQUISHED BY: IJH | | COMPANY: KPRG | DATE: 8-10-18 | TIME: 16:50 | RECEIVED BY: | COMPANY: TA | DATE: 8/10/18 | TIME: 1650 |
| RELINQUISHED BY: | | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 08/10/18
Courier:
Hand Delivered [X]
Bill of Lading:

__1__of__2__

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING


**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211


| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-149809

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No N/A |

**Temperature °C of Cooler** 3.6, 3.7, 6.0, 5.2, 5.4

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| Yes No | Yes No N/A |

**Sample Labels and COC Agree**
Yes No COC not present

| Sampler Name: | COMPANY: |
|---|---|
| Ian John Howieson | KPRG & Associates Inc. |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly- Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | | MW-17 | 8-6-18 | 14:41 | W | 5 | X | X | X | X | X | X | |
| 13 | | MW-18 | 8-6-18 | 15:46 | W | 5 | X | X | X | X | X | X | |
| 14 | | MW-19 | 8-6-18 | 16:48 | W | 5 | X | X | X | X | X | X | |
| 15 | | Duplicates | 8-7-18 | -- | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 8-10-18 | 16:50 | | TA | 8/10/18 | 1650 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
_____

**Preservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 08,10,18
Courier:
Hand Delivered X
Bill of Lading:

__2__of__2__

STL-8208 (0600)

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-108777.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-149809-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 9/10/2018 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-149809-1) | 8/8/18 | 09:49 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-02 (500-149809-2) | 8/7/18 | 09:30 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-149809-3) | 8/7/18 | 10:54 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-149809-4) | 8/7/18 | 12:27 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-149809-5) | 8/7/18 | 13:30 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-08 (500-149809-6) | 8/8/18 | 11:11 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-09 (500-149809-7) | 8/8/18 | 12:46 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-149809-8) | 8/8/18 | 14:44 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-11 (500-149809-9) | 8/9/18 | 14:03 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: | | | | |
|---|---|---|---|---|---|---|---|
| Relinquished by: | Date/Time: 8/13/18 1600 | Company TA | Received by: | Date/Time: 8.14.18 0905 | Company TA SRL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016



9/26/2018

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| | | | | |
|---|---|---|---|---|
| **Client Information (Sub Contract Lab)** | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-108777.2 |
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-149809-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 9/10/2018 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-12 (500-149809-10) | 8/9/18 | 15:46 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-15 (500-149809-11) | 8/9/18 | 11:42 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-17 (500-149809-12) | 8/6/18 | 14:41 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-18 (500-149809-13) | 8/6/18 | 15:46 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-19 (500-149809-14) | 8/6/18 | 16:48 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-149809-15) | 8/7/18 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| | |
|---|---|
| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| | | | |
|---|---|---|---|
| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
| Relinquished by: [signature] | Date/Time: 8/13/18 1600 | Company: TA | Received by: [signature] |
| Relinquished by: | Date/Time: | Company | Received by: |
| Relinquished by: | Date/Time: | Company | Received by: |

| | | | | |
|---|---|---|---|---|
| | | | Date/Time: 8-14-18 0905 | Company: TA SRL |
| | | | Date/Time: | Company |
| | | | Date/Time: | Company |

| | | |
|---|---|---|
| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |

Ver: 09/20/2016



9/26/2018

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-149809-2

**Login Number: 149809**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.6, 3.7, 5.2, 5.4, 6.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-149809-2

**Login Number: 149809**
**List Number: 2**
**Creator: Hellm, Michael**

**List Source: TestAmerica St. Louis**
**List Creation: 08/14/18 11:55 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | False | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 16.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) |
| 500-149809-1 | MW-01 | 93.5 |
| 500-149809-2 | MW-02 | 94.1 |
| 500-149809-3 | MW-03 | 101 |
| 500-149809-4 | MW-04 | 93.2 |
| 500-149809-5 | MW-05 | 95.0 |
| 500-149809-6 | MW-08 | 95.0 |
| 500-149809-7 | MW-09 | 95.9 |
| 500-149809-8 | MW-10 | 95.0 |
| 500-149809-9 | MW-11 | 93.8 |
| 500-149809-10 | MW-12 | 91.2 |
| 500-149809-11 | MW-15 | 95.6 |
| 500-149809-12 | MW-17 | 97.3 |
| 500-149809-13 | MW-18 | 95.6 |
| 500-149809-14 | MW-19 | 92.9 |
| 500-149809-15 | Duplicate | 90.9 |
| 500-149809-15 DU | Duplicate | 96.5 |
| LCS 160-382525/1-A | Lab Control Sample | 97.3 |
| MB 160-382525/22-A | Method Blank | 90.0 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) | Y Carrier (40-110) |
| 500-149809-1 | MW-01 | 93.5 | 93.1 |
| 500-149809-2 | MW-02 | 94.1 | 85.6 |
| 500-149809-3 | MW-03 | 101 | 89.3 |
| 500-149809-4 | MW-04 | 93.2 | 90.1 |
| 500-149809-5 | MW-05 | 95.0 | 86.4 |
| 500-149809-6 | MW-08 | 95.0 | 80.4 |
| 500-149809-7 | MW-09 | 95.9 | 88.6 |
| 500-149809-8 | MW-10 | 95.0 | 80.0 |
| 500-149809-9 | MW-11 | 93.8 | 87.9 |
| 500-149809-10 | MW-12 | 91.2 | 81.9 |
| 500-149809-11 | MW-15 | 95.6 | 85.2 |
| 500-149809-12 | MW-17 | 97.3 | 84.1 |
| 500-149809-13 | MW-18 | 95.6 | 79.3 |
| 500-149809-14 | MW-19 | 92.9 | 74.0 |
| 500-149809-15 | Duplicate | 90.9 | 68.8 |
| 500-149809-15 DU | Duplicate | 96.5 | 85.2 |
| LCS 160-382531/1-A | Lab Control Sample | 97.3 | 88.2 |
| MB 160-382531/22-A | Method Blank | 90.0 | 82.2 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier
Y Carrier = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-139619-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*1/26/2018 2:21:05 PM*
Richard Wright, Senior Project Manager
richard.wright@testamericainc.com

Designee for

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-139619-1

## Job ID: 500-139619-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-139619-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 1/12/2018 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.3º C.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-139619-1

## Client Sample ID: ABB — Lab Sample ID: 500-139619-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.36 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 36 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| pH | 8.4 | HF | 0.2 | | SU | 1 | | 9040C | Total/NA |
| Total Dissolved Solids | 590 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 57 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.43 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 250 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: ASB — Lab Sample ID: 500-139619-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.35 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| pH | 8.2 | HF | 0.2 | | SU | 1 | | 9040C | Total/NA |
| Total Dissolved Solids | 950 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.46 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 220 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-139619-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 9040C | pH | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-139619-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-139619-1 | ABB | Water | 01/11/18 09:35 | 01/12/18 09:40 |
| 500-139619-2 | ASB | Water | 01/11/18 09:50 | 01/12/18 09:40 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-139619-1

**Client Sample ID: ABB**
**Date Collected: 01/11/18 09:35**
**Date Received: 01/12/18 09:40**

**Lab Sample ID: 500-139619-1**
**Matrix: Water**

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.36 | | 0.050 | | mg/L | | 01/12/18 14:46 | 01/15/18 13:24 | 1 |
| Calcium | 36 | | 0.20 | | mg/L | | 01/12/18 14:46 | 01/15/18 13:24 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 8.4 | HF | 0.2 | | SU | | | 01/12/18 16:00 | 1 |
| Total Dissolved Solids | 590 | | 10 | | mg/L | | | 01/14/18 23:52 | 1 |
| Chloride | 57 | | 2.0 | | mg/L | | | 01/18/18 21:46 | 1 |
| Fluoride | 0.43 | | 0.10 | | mg/L | | | 01/25/18 11:33 | 1 |
| Sulfate | 250 | | 50 | | mg/L | | | 01/18/18 07:16 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-139619-1

**Client Sample ID: ASB**
**Date Collected: 01/11/18 09:50**
**Date Received: 01/12/18 09:40**

**Lab Sample ID: 500-139619-2**
**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.35 | | 0.050 | | mg/L | | 01/12/18 14:46 | 01/15/18 13:27 | 1 |
| Calcium | 110 | | 0.20 | | mg/L | | 01/12/18 14:46 | 01/15/18 13:27 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 8.2 | HF | 0.2 | | SU | | | 01/12/18 16:04 | 1 |
| Total Dissolved Solids | 950 | | 10 | | mg/L | | | 01/14/18 23:55 | 1 |
| Chloride | 180 | | 10 | | mg/L | | | 01/18/18 22:24 | 5 |
| Fluoride | 0.46 | | 0.10 | | mg/L | | | 01/25/18 11:36 | 1 |
| Sulfate | 220 | | 50 | | mg/L | | | 01/18/18 07:19 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-139619-1

## Qualifiers

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| HF | Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 416709

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-139619-1 | ABB | Total Recoverable | Water | 3005A | |
| 500-139619-2 | ASB | Total Recoverable | Water | 3005A | |
| MB 500-416709/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-416709/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 416965

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-139619-1 | ABB | Total Recoverable | Water | 6020A | 416709 |
| 500-139619-2 | ASB | Total Recoverable | Water | 6020A | 416709 |
| MB 500-416709/1-A | Method Blank | Total Recoverable | Water | 6020A | 416709 |
| LCS 500-416709/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 416709 |

## General Chemistry

### Analysis Batch: 416763

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-139619-1 | ABB | Total/NA | Water | SM 2540C | |
| 500-139619-2 | ASB | Total/NA | Water | SM 2540C | |
| MB 500-416763/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-416763/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 416975

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-139619-1 | ABB | Total/NA | Water | 9040C | |
| 500-139619-2 | ASB | Total/NA | Water | 9040C | |
| 500-139619-1 DU | ABB | Total/NA | Water | 9040C | |
| 500-139619-2 DU | ASB | Total/NA | Water | 9040C | |

### Analysis Batch: 417213

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-139619-1 | ABB | Total/NA | Water | SM 4500 SO4 E | |
| 500-139619-2 | ASB | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-417213/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-417213/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-139619-1 MS | ABB | Total/NA | Water | SM 4500 SO4 E | |
| 500-139619-1 MSD | ABB | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 417327

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-139619-1 | ABB | Total/NA | Water | SM 4500 Cl- E | |
| 500-139619-2 | ASB | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-417327/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-417327/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 418006

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-139619-1 | ABB | Total/NA | Water | SM 4500 F C | |
| 500-139619-2 | ASB | Total/NA | Water | SM 4500 F C | |
| MB 500-418006/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-418006/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-416709/1-A**
**Matrix: Water**
**Analysis Batch: 416965**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 416709**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 01/12/18 14:46 | 01/15/18 12:57 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 01/12/18 14:46 | 01/15/18 12:57 | 1 |

**Lab Sample ID: LCS 500-416709/2-A**
**Matrix: Water**
**Analysis Batch: 416965**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 416709**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 0.988 | | mg/L | | 99 | 80 - 120 |
| Calcium | 10.0 | 9.54 | | mg/L | | 95 | 80 - 120 |

## Method: 9040C - pH

**Lab Sample ID: 500-139619-1 DU**
**Matrix: Water**
**Analysis Batch: 416975**

**Client Sample ID: ABB**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| pH | 8.4 | HF | 8.4 | | SU | | 0.2 | |

**Lab Sample ID: 500-139619-2 DU**
**Matrix: Water**
**Analysis Batch: 416975**

**Client Sample ID: ASB**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| pH | 8.2 | HF | 8.3 | | SU | | 0.4 | |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-416763/1**
**Matrix: Water**
**Analysis Batch: 416763**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 01/14/18 22:56 | 1 |

**Lab Sample ID: LCS 500-416763/2**
**Matrix: Water**
**Analysis Batch: 416763**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 278 | | mg/L | | 111 | 80 - 120 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-417327/12**
**Matrix: Water**
**Analysis Batch: 417327**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 01/18/18 21:40 | 1 |

**Lab Sample ID: LCS 500-417327/13**
**Matrix: Water**
**Analysis Batch: 417327**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 51.3 | | mg/L | | 103 | 85 - 115 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-418006/3**
**Matrix: Water**
**Analysis Batch: 418006**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 01/25/18 11:20 | 1 |

**Lab Sample ID: LCS 500-418006/4**
**Matrix: Water**
**Analysis Batch: 418006**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.1 | | mg/L | | 101 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-417213/3**
**Matrix: Water**
**Analysis Batch: 417213**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 01/18/18 07:10 | 1 |

**Lab Sample ID: LCS 500-417213/4**
**Matrix: Water**
**Analysis Batch: 417213**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 20.6 | | mg/L | | 103 | 80 - 120 |

**Lab Sample ID: 500-139619-1 MS**
**Matrix: Water**
**Analysis Batch: 417213**

**Client Sample ID: ABB**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 250 | | 400 | 671 | | mg/L | | 106 | 75 - 125 |

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: 500-139619-1 MSD**
**Matrix: Water**
**Analysis Batch: 417213**

**Client Sample ID: ABB**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 250 | | 400 | 602 | | mg/L | | 89 | 75 - 125 | 11 | 20 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-139619-1

## Client Sample ID: ABB

**Lab Sample ID: 500-139619-1**

**Date Collected: 01/11/18 09:35**

**Matrix: Water**

**Date Received: 01/12/18 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 416709 | 01/12/18 14:46 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 416965 | 01/15/18 13:24 | FXG | TAL CHI |
| Total/NA | Analysis | 9040C | | 1 | 416975 | | SMO | TAL CHI |
| | | | | | (Start) | 01/12/18 16:00 | | |
| | | | | | (End) | 01/12/18 16:02 | | |
| Total/NA | Analysis | SM 2540C | | 1 | 416763 | 01/14/18 23:52 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 417327 | 01/18/18 21:46 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 418006 | 01/25/18 11:33 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 417213 | | CLB | TAL CHI |
| | | | | | (Start) | 01/18/18 07:16 | | |
| | | | | | (End) | 01/18/18 07:17 | | |

## Client Sample ID: ASB

**Lab Sample ID: 500-139619-2**

**Date Collected: 01/11/18 09:50**

**Matrix: Water**

**Date Received: 01/12/18 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 416709 | 01/12/18 14:46 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 416965 | 01/15/18 13:27 | FXG | TAL CHI |
| Total/NA | Analysis | 9040C | | 1 | 416975 | | SMO | TAL CHI |
| | | | | | (Start) | 01/12/18 16:04 | | |
| | | | | | (End) | 01/12/18 16:06 | | |
| Total/NA | Analysis | SM 2540C | | 1 | 416763 | 01/14/18 23:55 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 417327 | 01/18/18 22:24 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 418006 | 01/25/18 11:36 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 417213 | | CLB | TAL CHI |
| | | | | | (Start) | 01/18/18 07:19 | | |
| | | | | | (End) | 01/18/18 07:20 | | |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-139619-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-18 |

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-139619

Chain of Custody Number:

Page ____ of ____

Temperature °C of Cooler: 4.3

| Client | KPRG & Assoc. | Client Project # | 23517 |
|---|---|---|---|
| Project Name | NRG | | |
| Project Location/State | IL | Lab Project # | |
| Sampler | LR/MW | Lab PM | |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

500-139619 COC

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | 3 | 8 | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Parameter | B, Ca | Cl, Fl, pH, SO4, TDS | | | | | | | | |
| 1 | | ABB | 1/11/18 | 0935 | 2 | W | | X | X | | | | | | | | |
| 2 | | ASB | 1/11/18 | 0950 | 2 | W | | X | X | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| | KPRG | 1/11/18 | 1630 | | TA | 1-11-18 | 430 |
| | TA | 1-11-18 | 12000 | | TALHT | 01/12/18 | 0940 |
| | | | | | | | |

Lab Courier
Shipped FX Priority
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-139619-1

**Login Number: 139619**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 4.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-74121-1
Client Project/Site: Midwest Generation

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*3/5/2018 1:48:28 PM*

Carrie Gamber, Senior Project Manager
(412)963-2428
carrie.gamber@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 180-74121-1

**Laboratory: TestAmerica Pittsburgh**

**Narrative**

# CASE NARRATIVE

## Client: KPRG and Associates, Inc.

## Project: Midwest Generation

## Report Number: 180-74121-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

**RECEIPT**
The samples were received on 01/12/2018; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.8 C.

**IC**
Several samples were diluted due to the nature of the sample matrix. Elevated reporting limits (RLs) were provided. The dilutions were dependent on conductivity pre-screen of the samples.

Sulfate failed the recovery criteria low for the MS/MSD of sample ASB - NATURAL (180-74121-22) in batch 180-236373.

**METALS**
The following sample were digested at a diluted level due to the nature of the sample matrix: ABB - PH 13.0 (180-74121-2), ABB - PH 12.0 (180-74121-3), ABB - PH 2.0 (180-74121-10). Elevated reporting limits (RLs) are provided.

Several samples were diluted due to the nature of the sample matrix and/or to bring the concentration of boron and calcium within the linear range. Elevated reporting limits (RLs) are provided.

**GENERAL CHEMISTRY**
Due to the matrix, the initial volumes used for several samples deviated from the standard procedure for TDS.

The Conductivity of the sample was greater than that of what the instrument could detect. The sample result was reported as >100000 umhos/cm (>100 MS) , since the method states that for conductivity the sample can not be diluted. B02 (180-74121-24).

The pH for the following sample was outside the instrument calibration range of pH 2 to pH 13 . The sample results was < 0 pH SU units therefore the result was reported as <1.00: B02 (180-74121-24).

## Qualifiers

### HPLC/IC

| Qualifier | Qualifier Description |
|---|---|
| F1 | MS and/or MSD Recovery is outside acceptance limits. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| H | Sample was prepped or analyzed beyond the specified holding time |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74121-1

## Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200005 | 06-30-18 |

The following analytes are included in this report, but are not accredited/certified under this accreditation/certification:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| SM 2510B | | Solid | Specific Conductance |
| SM 2540C | | Solid | Total Dissolved Solids |

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 2540G | | Solid | Percent Moisture |
| 2540G | | Solid | Percent Solids |
| SM 2580B | | Solid | Oxidation Reduction Potential |

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74121-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 180-74121-1 | ABB - PRETEST | Solid | 01/11/18 09:40 | 01/12/18 09:10 |
| 180-74121-2 | ABB - PH 13.0 | Solid | 01/11/18 09:40 | 01/12/18 09:10 |
| 180-74121-3 | ABB - PH 12.0 | Solid | 01/11/18 09:40 | 01/12/18 09:10 |
| 180-74121-4 | ABB - PH 10.5 | Solid | 01/11/18 09:40 | 01/12/18 09:10 |
| 180-74121-6 | ABB - PH 8.0 | Solid | 01/11/18 09:40 | 01/12/18 09:10 |
| 180-74121-7 | ABB - PH 7.0 | Solid | 01/11/18 09:40 | 01/12/18 09:10 |
| 180-74121-8 | ABB - PH 5.5 | Solid | 01/11/18 09:40 | 01/12/18 09:10 |
| 180-74121-9 | ABB - PH 4.0 | Solid | 01/11/18 09:40 | 01/12/18 09:10 |
| 180-74121-10 | ABB - PH 2.0 | Solid | 01/11/18 09:40 | 01/12/18 09:10 |
| 180-74121-11 | ABB- NATURAL | Solid | 01/11/18 09:40 | 01/12/18 09:10 |
| 180-74121-12 | ASB - PRETEST | Solid | 01/11/18 09:55 | 01/12/18 09:10 |
| 180-74121-13 | ASB - PH 13.0 | Solid | 01/11/18 09:55 | 01/12/18 09:10 |
| 180-74121-14 | ASB- PH 12.0 | Solid | 01/11/18 09:55 | 01/12/18 09:10 |
| 180-74121-15 | ASB - PH 10.5 | Solid | 01/11/18 09:55 | 01/12/18 09:10 |
| 180-74121-17 | ASB - PH 8.0 | Solid | 01/11/18 09:55 | 01/12/18 09:10 |
| 180-74121-18 | ASB - PH 7.0 | Solid | 01/11/18 09:55 | 01/12/18 09:10 |
| 180-74121-19 | ASB - PH 5.5 | Solid | 01/11/18 09:55 | 01/12/18 09:10 |
| 180-74121-20 | ASB - PH 4.0 | Solid | 01/11/18 09:55 | 01/12/18 09:10 |
| 180-74121-21 | ASB - PH 2.0 | Solid | 01/11/18 09:55 | 01/12/18 09:10 |
| 180-74121-22 | ASB - NATURAL | Solid | 01/11/18 09:55 | 01/12/18 09:10 |
| 180-74121-23 | B01 | Solid | 01/11/18 00:00 | 01/12/18 09:10 |
| 180-74121-24 | B02 | Solid | 01/11/18 00:00 | 01/12/18 09:10 |
| 180-74121-25 | B03 | Solid | 01/11/18 00:00 | 01/12/18 09:10 |
| 180-74121-26 | ABB - AIR DRIED | Solid | 01/11/18 09:40 | 01/12/18 09:10 |
| 180-74121-27 | ASB - AIR DRIED | Solid | 01/11/18 09:55 | 01/12/18 09:10 |

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74121-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| EPA 9056A | Anions, Ion Chromatography | SW846 | TAL PIT |
| EPA 6020A | Metals (ICP/MS) | SW846 | TAL PIT |
| 2540G | SM 2540G | SM22 | TAL PIT |
| EPA 9040C | pH | SW846 | TAL PIT |
| SM 2510B | Conductivity, Specific Conductance | SM | TAL PIT |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL PIT |
| SM 2580B | Reduction-Oxidation (REDOX) Potential | SM | TAL PIT |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater",

SM22 = SM22

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

## Client Sample ID: ABB - PRETEST

**Lab Sample ID: 180-74121-1**

**Date Collected: 01/11/18 09:40**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 2540G | | 1 | | | 234952 | 01/24/18 06:29 | CLL | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 950 mL | 237107 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237380 | 02/12/18 13:38 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 950 mL | 237107 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237380 | 02/12/18 13:44 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 950 mL | 237107 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237380 | 02/12/18 13:50 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237733 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237737 | 02/16/18 12:32 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB - PH 13.0

**Lab Sample ID: 180-74121-2**

**Date Collected: 01/11/18 09:40**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 50 | | | 236553 | 02/09/18 20:54 | CMR | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 5 mL | 50 mL | 236440 | 02/08/18 11:28 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 236729 | 02/10/18 00:22 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 5 mL | 50 mL | 236440 | 02/08/18 11:28 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 236828 | 02/13/18 03:15 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 236465 | 02/07/18 12:01 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 236475 | 02/07/18 11:39 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 4 mL | 100 mL | 237078 | 02/15/18 14:59 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 236472 | 02/07/18 11:37 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB - PH 12.0

**Date Collected: 01/11/18 09:40**
**Date Received: 01/12/18 09:10**

## Lab Sample ID: 180-74121-3

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 10 | | | 236732 | 02/13/18 06:23 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 5 mL | 50 mL | 236807 | 02/13/18 13:38 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 237198 | 02/15/18 22:06 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237380 | 02/12/18 13:47 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 237425 | 02/12/18 13:26 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 10 mL | 100 mL | 237078 | 02/15/18 14:59 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 237422 | 02/12/18 13:25 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB - PH 10.5

**Date Collected: 01/11/18 09:40**
**Date Received: 01/12/18 09:10**

## Lab Sample ID: 180-74121-4

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 5 | | | 237859 | 02/26/18 15:10 | MJH | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 50 | | | 237859 | 02/26/18 15:26 | MJH | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 237311 | 02/19/18 13:03 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 237590 | 02/21/18 01:08 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 237311 | 02/19/18 13:03 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 237713 | 02/22/18 04:12 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237737 | 02/16/18 12:27 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 237752 | 02/16/18 12:33 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74121-1

## Client Sample ID: ABB - PH 10.5

**Lab Sample ID: 180-74121-4**

**Date Collected: 01/11/18 09:40**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 50 mL | 100 mL | 237329 | 02/19/18 15:41 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 237751 | 02/16/18 12:36 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB - PH 8.0

**Lab Sample ID: 180-74121-6**

**Date Collected: 01/11/18 09:40**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 2.5 | | | 236732 | 02/13/18 06:39 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 25 | | | 236732 | 02/13/18 06:54 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236807 | 02/13/18 13:38 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 237198 | 02/15/18 22:02 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237380 | 02/12/18 13:41 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 237425 | 02/12/18 13:21 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 25 mL | 100 mL | 237078 | 02/15/18 14:59 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 237422 | 02/12/18 13:19 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB - PH 7.0

**Lab Sample ID: 180-74121-7**

**Date Collected: 01/11/18 09:40**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237761 | 02/21/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 10 | | | 237859 | 02/26/18 08:41 | MJH | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237761 | 02/21/18 10:00 | LWM | TAL PIT |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74121-1

## Client Sample ID: ABB - PH 7.0

**Date Collected: 01/11/18 09:40**
**Date Received: 01/12/18 09:10**

## Lab Sample ID: 180-74121-7

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | EPA 9056A | | 100 | | | 237859 | 02/26/18 10:34 | MJH | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237761 | 02/21/18 10:00 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 237767 | 02/23/18 12:01 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 237942 | 02/24/18 17:22 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237761 | 02/21/18 10:00 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 237767 | 02/23/18 12:01 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 10 | | | 238052 | 02/27/18 09:55 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237761 | 02/21/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237772 | 02/23/18 10:06 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237761 | 02/21/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 237776 | 02/23/18 10:08 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237761 | 02/21/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 25 mL | 100 mL | 238055 | 02/27/18 15:07 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237761 | 02/21/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 237774 | 02/23/18 10:06 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB - PH 5.5

**Date Collected: 01/11/18 09:40**
**Date Received: 01/12/18 09:10**

## Lab Sample ID: 180-74121-8

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 10 | | | 236732 | 02/13/18 07:09 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236807 | 02/13/18 13:38 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 10 | | | 237323 | 02/16/18 20:24 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237380 | 02/12/18 13:53 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 237425 | 02/12/18 13:31 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 10 mL | 100 mL | 237078 | 02/15/18 14:59 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74121-1

## Client Sample ID: ABB - PH 5.5

**Date Collected: 01/11/18 09:40**
**Date Received: 01/12/18 09:10**

## Lab Sample ID: 180-74121-8

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | SM 2580B | | 1 | | | 237422 | 02/12/18 13:32 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB - PH 4.0

**Date Collected: 01/11/18 09:40**
**Date Received: 01/12/18 09:10**

## Lab Sample ID: 180-74121-9

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 25 | | | 236377 | 02/08/18 19:08 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236440 | 02/08/18 11:28 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 10 | | | 236828 | 02/13/18 03:19 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 236465 | 02/07/18 12:16 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 236475 | 02/07/18 12:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 5 mL | 100 mL | 236785 | 02/13/18 10:45 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 236472 | 02/07/18 11:58 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB - PH 2.0

**Date Collected: 01/11/18 09:40**
**Date Received: 01/12/18 09:10**

## Lab Sample ID: 180-74121-10

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 100 | 1 mL | 1.0 mL | 237598 | 02/22/18 11:00 | MJH | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 5 mL | 50 mL | 237767 | 02/23/18 12:01 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 10 | | | 237942 | 02/24/18 17:11 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 5 mL | 50 mL | 237767 | 02/23/18 12:01 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 10 | | | 238052 | 02/27/18 09:41 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |

## Client Sample ID: ABB - PH 2.0

**Lab Sample ID: 180-74121-10**

**Date Collected: 01/11/18 09:40**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237531 | 02/19/18 10:25 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 237553 | 02/19/18 10:30 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 2 mL | 100 mL | 237940 | 02/26/18 14:33 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 237550 | 02/19/18 10:27 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB- NATURAL

**Lab Sample ID: 180-74121-11**

**Date Collected: 01/11/18 09:40**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 1 | | | 236373 | 02/08/18 08:53 | MJH | TAL PIT |
| | Instrument ID: CHICS2100B | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 10 | | | 236373 | 02/08/18 09:08 | MJH | TAL PIT |
| | Instrument ID: CHICS2100B | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236437 | 02/08/18 11:22 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 236729 | 02/09/18 22:54 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236437 | 02/08/18 11:22 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 236828 | 02/13/18 00:44 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 236465 | 02/07/18 12:19 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 236475 | 02/07/18 12:09 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 100 mL | 100 mL | 236785 | 02/13/18 10:45 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 42.3 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 236472 | 02/07/18 12:03 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB - PRETEST

**Lab Sample ID: 180-74121-12**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 2540G | | 1 | | | 234952 | 01/24/18 06:29 | CLL | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 950 mL | 237107 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237380 | 02/12/18 13:59 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 950 mL | 237107 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237380 | 02/12/18 14:03 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 950 mL | 237107 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237380 | 02/12/18 14:12 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 950 mL | 237107 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237380 | 02/12/18 14:15 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237733 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237737 | 02/16/18 12:43 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237733 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237737 | 02/16/18 12:49 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237531 | 02/19/18 10:31 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB - PH 13.0

**Lab Sample ID: 180-74121-13**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 50 | | | 236553 | 02/09/18 21:26 | CMR | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236440 | 02/08/18 11:28 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 236729 | 02/10/18 00:27 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236440 | 02/08/18 11:28 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 236828 | 02/13/18 03:24 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 236465 | 02/07/18 11:52 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |

## Client Sample ID: ASB - PH 13.0

**Lab Sample ID: 180-74121-13**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | SM 2510B | | 1 | | | 236475 | 02/07/18 11:32 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 3 mL | 100 mL | 236825 | 02/13/18 15:26 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 236472 | 02/07/18 11:29 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB- PH 12.0

**Lab Sample ID: 180-74121-14**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 5 | | | 237859 | 02/26/18 15:42 | MJH | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 237311 | 02/19/18 13:03 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 237590 | 02/21/18 01:11 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 237311 | 02/19/18 13:03 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 237713 | 02/22/18 04:16 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237737 | 02/16/18 12:38 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 237752 | 02/16/18 12:40 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 25 mL | 100 mL | 237329 | 02/19/18 15:41 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237165 | 02/14/18 08:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 237751 | 02/16/18 12:44 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB - PH 10.5

**Lab Sample ID: 180-74121-15**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74121-1

## Client Sample ID: ASB - PH 10.5

**Lab Sample ID: 180-74121-15**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | EPA 9056A | | 1 | 1 mL | 1.0 mL | 237598 | 02/22/18 13:55 | MJH | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 5 | 1 mL | 1.0 mL | 237598 | 02/22/18 14:11 | MJH | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 237537 | 02/21/18 11:22 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 237821 | 02/23/18 11:37 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 237537 | 02/21/18 11:22 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 238052 | 02/26/18 21:24 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237531 | 02/19/18 10:06 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 237553 | 02/19/18 10:12 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 100 mL | 100 mL | 237940 | 02/26/18 14:33 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237381 | 02/17/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 237550 | 02/19/18 10:06 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB - PH 8.0

**Lab Sample ID: 180-74121-17**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 2.5 | | | 236732 | 02/13/18 07:40 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236807 | 02/13/18 13:38 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 237198 | 02/15/18 22:16 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237380 | 02/12/18 14:09 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 237425 | 02/12/18 13:52 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74121-1

## Client Sample ID: ASB - PH 8.0

**Lab Sample ID: 180-74121-17**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | SM 2540C | | 1 | 50 mL | 100 mL | 237078 | 02/15/18 14:59 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 237422 | 02/12/18 13:51 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB - PH 7.0

**Lab Sample ID: 180-74121-18**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 2.5 | | | 236732 | 02/13/18 10:28 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 5 | | | 236891 | 02/14/18 14:01 | MJH | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236807 | 02/13/18 13:38 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 237198 | 02/15/18 22:20 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237380 | 02/12/18 14:06 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 237425 | 02/12/18 13:47 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 25 mL | 100 mL | 237078 | 02/15/18 14:59 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 237422 | 02/12/18 13:44 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB - PH 5.5

**Lab Sample ID: 180-74121-19**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 238030 | 02/26/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 10 | | | 238212 | 03/01/18 08:38 | MJH | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 238030 | 02/26/18 10:00 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 238166 | 02/28/18 13:51 | KA | TAL PIT |

## Client Sample ID: ASB - PH 5.5

**Lab Sample ID: 180-74121-19**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | EPA 6020A | | 10 | | | 238310 | 03/01/18 01:11 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 238030 | 02/26/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 238129 | 02/28/18 09:00 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 238030 | 02/26/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 238130 | 02/28/18 09:00 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 238030 | 02/26/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 25 mL | 100 mL | 238132 | 02/28/18 10:41 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 238030 | 02/26/18 10:00 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 238131 | 02/28/18 09:00 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB - PH 4.0

**Lab Sample ID: 180-74121-20**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 25 | | | 236377 | 02/08/18 19:38 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236440 | 02/08/18 11:28 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 10 | | | 236828 | 02/13/18 03:29 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 236465 | 02/07/18 11:46 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 236475 | 02/07/18 11:29 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 5 mL | 100 mL | 236785 | 02/13/18 10:45 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 236472 | 02/07/18 11:25 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB - PH 2.0

**Lab Sample ID: 180-74121-21**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237539 | 02/19/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 100 | | | 237721 | 02/23/18 10:54 | MJH | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237539 | 02/19/18 08:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 237582 | 02/21/18 15:34 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 50 | | | 237942 | 02/24/18 17:19 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237539 | 02/19/18 08:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 237582 | 02/21/18 15:34 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 50 | | | 238052 | 02/26/18 22:37 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237539 | 02/19/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237560 | 02/21/18 10:17 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237539 | 02/19/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 237563 | 02/21/18 10:17 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237539 | 02/19/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 2 mL | 100 mL | 237940 | 02/26/18 14:33 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 237539 | 02/19/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 237562 | 02/21/18 10:17 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB - NATURAL

**Lab Sample ID: 180-74121-22**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 1 | | | 236373 | 02/08/18 09:56 | MJH | TAL PIT |
| | Instrument ID: CHICS2100B | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236437 | 02/08/18 11:22 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 236729 | 02/09/18 22:57 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236437 | 02/08/18 11:22 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 236828 | 02/13/18 01:01 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 236465 | 02/07/18 12:23 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |

## Client Sample ID: ASB - NATURAL

**Lab Sample ID: 180-74121-22**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | SM 2510B | | 1 | | | 236475 | 02/07/18 12:12 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 100 mL | 100 mL | 236785 | 02/13/18 10:45 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 40.4 g | 400 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 236472 | 02/07/18 12:07 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: B01

**Lab Sample ID: 180-74121-23**

**Date Collected: 01/11/18 00:00**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 1.0 g | 2000 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 1 | | | 236373 | 02/08/18 08:37 | MJH | TAL PIT |
| | Instrument ID: CHICS2100B | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 2000 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236437 | 02/08/18 11:22 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 236729 | 02/09/18 22:51 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 2000 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236437 | 02/08/18 11:22 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 236828 | 02/13/18 00:39 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 2000 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 236465 | 02/07/18 13:39 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 2000 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 236475 | 02/07/18 13:54 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 2000 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 100 mL | 100 mL | 236785 | 02/13/18 10:45 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 2000 mL | 236165 | 02/05/18 11:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 236472 | 02/07/18 13:52 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: B02

**Lab Sample ID: 180-74121-24**

**Date Collected: 01/11/18 00:00**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 1.0 g | 400 mL | 237539 | 02/19/18 08:30 | LWM | TAL PIT |

## Client Sample ID: B02

**Date Collected: 01/11/18 00:00**
**Date Received: 01/12/18 09:10**

## Lab Sample ID: 180-74121-24

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | EPA 9056A | | 250 | | | 237721 | 02/23/18 11:25 | MJH | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 400 mL | 237539 | 02/19/18 08:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 237582 | 02/21/18 15:34 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 237821 | 02/23/18 12:33 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 400 mL | 237539 | 02/19/18 08:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 237582 | 02/21/18 15:34 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 238052 | 02/26/18 22:42 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 400 mL | 237539 | 02/19/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237560 | 02/21/18 10:23 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 400 mL | 237539 | 02/19/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 237563 | 02/21/18 10:21 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 400 mL | 237539 | 02/19/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2540C | | 1 | 1 mL | 100 mL | 237940 | 02/26/18 14:33 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 400 mL | 237539 | 02/19/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 237562 | 02/21/18 10:23 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: B03

**Date Collected: 01/11/18 00:00**
**Date Received: 01/12/18 09:10**

## Lab Sample ID: 180-74121-25

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 1.0 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 50 | | | 236732 | 02/13/18 10:59 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 100 | | | 236891 | 02/14/18 14:17 | MJH | TAL PIT |
| | Instrument ID: CHICS2000 | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 236807 | 02/13/18 13:38 | KA | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 237198 | 02/15/18 21:57 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 237380 | 02/12/18 15:47 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 237425 | 02/12/18 15:44 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-74121-1

## Client Sample ID: B03

**Date Collected: 01/11/18 00:00**
**Date Received: 01/12/18 09:10**

## Lab Sample ID: 180-74121-25

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | SM 2540C | | 1 | 3 mL | 100 mL | 237078 | 02/15/18 14:59 | KXW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 400 mL | 236722 | 02/10/18 08:30 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 237422 | 02/12/18 15:47 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB - AIR DRIED

**Date Collected: 01/11/18 09:40**
**Date Received: 01/12/18 09:10**

## Lab Sample ID: 180-74121-26

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 2540G | | 1 | | | 235778 | 02/01/18 13:28 | RMA | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB - AIR DRIED

**Date Collected: 01/11/18 09:55**
**Date Received: 01/12/18 09:10**

## Lab Sample ID: 180-74121-27

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 2540G | | 1 | | | 235778 | 02/01/18 13:28 | RMA | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

**Laboratory References:**

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

**Analyst References:**

Lab: TAL PIT

Batch Type: Leach

LWM = Larry Matko

Batch Type: Prep

KA = Kayla Kalamasz

Batch Type: Analysis

CLL = Cheryl Loheyde

CMR = Carl Reagle

KXW = Kaitlyn White

MJH = Matthew Hartman

MTW = Michael Wesoloski

RMA = Rachel Aguiar

RSK = Robert Kurtz

WTR = Bill Reinheimer

## Client Sample ID: ABB - PRETEST

**Lab Sample ID: 180-74121-1**
**Matrix: Solid**
**Date Collected: 01/11/18 09:40**
**Date Received: 01/12/18 09:10**

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Percent Moisture | 46.7 | | 0.1 | | % | | | 01/24/18 06:29 | 1 |
| Percent Solids | 53.3 | | 0.1 | | % | | | 01/24/18 06:29 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 7.5 | | 0.1 | | SU | | | 02/12/18 13:38 | 1 |
| pH | 12.6 | | 0.1 | | SU | | | 02/12/18 13:44 | 1 |
| pH | 3.8 | | 0.1 | | SU | | | 02/12/18 13:50 | 1 |
| pH | 4.0 | | 0.1 | | SU | | | 02/16/18 12:32 | 1 |

## Client Sample ID: ABB - PH 13.0

**Lab Sample ID: 180-74121-2**
**Matrix: Solid**
**Date Collected: 01/11/18 09:40**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <50 | | 50 | | mg/L | | | 02/09/18 20:54 | 50 |
| Fluoride | 12 | | 5.0 | | mg/L | | | 02/09/18 20:54 | 50 |
| Sulfate | 640 | | 50 | | mg/L | | | 02/09/18 20:54 | 50 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 7400 | | 800 | | ug/L | | 02/08/18 11:28 | 02/13/18 03:15 | 1 |
| Calcium | 48000 | | 5000 | | ug/L | | 02/08/18 11:28 | 02/10/18 00:22 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 12.7 | | 0.1 | | SU | | | 02/07/18 12:01 | 1 |
| Specific Conductance | 33000 | | 1.0 | | umhos/cm | | | 02/07/18 11:39 | 1 |
| Total Dissolved Solids | 13000 | | 250 | | mg/L | | | 02/15/18 14:59 | 1 |
| Oxidation Reduction Potential | - 243 | | 10 | | millivolts | | | 02/07/18 11:37 | 1 |

## Client Sample ID: ABB - PH 12.0

**Lab Sample ID: 180-74121-3**
**Matrix: Solid**
**Date Collected: 01/11/18 09:40**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 22 | | 10 | | mg/L | | | 02/13/18 06:23 | 10 |
| Fluoride | 6.4 | | 1.0 | | mg/L | | | 02/13/18 06:23 | 10 |
| Sulfate | 780 | | 10 | | mg/L | | | 02/13/18 06:23 | 10 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 7800 | | 800 | | ug/L | | 02/13/18 13:38 | 02/15/18 22:06 | 1 |
| Calcium | 17000 | | 5000 | | ug/L | | 02/13/18 13:38 | 02/15/18 22:06 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 12.5 | | 0.1 | | SU | | | 02/12/18 13:47 | 1 |
| Specific Conductance | 13000 | | 1.0 | | umhos/cm | | | 02/12/18 13:26 | 1 |

## Client Sample ID: ABB - PH 12.0

**Lab Sample ID: 180-74121-3**
**Date Collected: 01/11/18 09:40**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### General Chemistry - Leach (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 6100 | | 100 | | mg/L | | | 02/15/18 14:59 | 1 |
| Oxidation Reduction Potential | - 106 | | 10 | | millivolts | | | 02/12/18 13:25 | 1 |

## Client Sample ID: ABB - PH 10.5

**Lab Sample ID: 180-74121-4**
**Date Collected: 01/11/18 09:40**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 16 | | 5.0 | | mg/L | | | 02/26/18 15:10 | 5 |
| Fluoride | 11 | | 0.50 | | mg/L | | | 02/26/18 15:10 | 5 |
| Sulfate | 740 | | 50 | | mg/L | | | 02/26/18 15:26 | 50 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 6400 | | 80 | | ug/L | | 02/19/18 13:03 | 02/22/18 04:12 | 1 |
| Calcium | 10000 | | 500 | | ug/L | | 02/19/18 13:03 | 02/21/18 01:08 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 10.5 | | 0.1 | | SU | | | 02/16/18 12:27 | 1 |
| Specific Conductance | 2700 | | 1.0 | | umhos/cm | | | 02/16/18 12:33 | 1 |
| Total Dissolved Solids | 1900 | | 20 | | mg/L | | | 02/19/18 15:41 | 1 |
| Oxidation Reduction Potential | 100 | | 10 | | millivolts | | | 02/16/18 12:36 | 1 |

## Client Sample ID: ABB - PH 8.0

**Lab Sample ID: 180-74121-6**
**Date Collected: 01/11/18 09:40**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 21 | | 2.5 | | mg/L | | | 02/13/18 06:39 | 2.5 |
| Fluoride | 1.7 | | 0.25 | | mg/L | | | 02/13/18 06:39 | 2.5 |
| Sulfate | 860 | | 25 | | mg/L | | | 02/13/18 06:54 | 25 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 4300 | | 80 | | ug/L | | 02/13/18 13:38 | 02/15/18 22:02 | 1 |
| Calcium | 380000 | | 500 | | ug/L | | 02/13/18 13:38 | 02/15/18 22:02 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 8.0 | | 0.1 | | SU | | | 02/12/18 13:41 | 1 |
| Specific Conductance | 3900 | | 1.0 | | umhos/cm | | | 02/12/18 13:21 | 1 |
| Total Dissolved Solids | 3200 | | 40 | | mg/L | | | 02/15/18 14:59 | 1 |
| Oxidation Reduction Potential | 280 | | 10 | | millivolts | | | 02/12/18 13:19 | 1 |

## Client Sample ID: ABB - PH 7.0

**Lab Sample ID: 180-74121-7**
**Date Collected: 01/11/18 09:40**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **15** | | 10 | | mg/L | | | 02/26/18 08:41 | 10 |
| Fluoride | <1.0 | | 1.0 | | mg/L | | | 02/26/18 08:41 | 10 |
| **Sulfate** | **800** | | 100 | | mg/L | | | 02/26/18 10:34 | 100 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Boron** | **6900** | | 800 | | ug/L | | 02/23/18 12:01 | 02/27/18 09:55 | 10 |
| Calcium | <500 | | 500 | | ug/L | | 02/23/18 12:01 | 02/24/18 17:22 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **7.2** | | 0.1 | | SU | | | 02/23/18 10:06 | 1 |
| **Specific Conductance** | **7500** | | 1.0 | | umhos/cm | | | 02/23/18 10:08 | 1 |
| **Total Dissolved Solids** | **6500** | | 40 | | mg/L | | | 02/27/18 15:07 | 1 |
| **Oxidation Reduction Potential** | **93** | | 10 | | millivolts | | | 02/23/18 10:06 | 1 |

## Client Sample ID: ABB - PH 5.5

**Lab Sample ID: 180-74121-8**
**Date Collected: 01/11/18 09:40**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **20** | | 10 | | mg/L | | | 02/13/18 07:09 | 10 |
| Fluoride | <1.0 | | 1.0 | | mg/L | | | 02/13/18 07:09 | 10 |
| **Sulfate** | **980** | | 10 | | mg/L | | | 02/13/18 07:09 | 10 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Boron** | **11000** | | 800 | | ug/L | | 02/13/18 13:38 | 02/16/18 20:24 | 10 |
| **Calcium** | **3200000** | | 5000 | | ug/L | | 02/13/18 13:38 | 02/16/18 20:24 | 10 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **5.9** | | 0.1 | | SU | | | 02/12/18 13:53 | 1 |
| **Specific Conductance** | **19000** | | 1.0 | | umhos/cm | | | 02/12/18 13:31 | 1 |
| **Total Dissolved Solids** | **19000** | | 100 | | mg/L | | | 02/15/18 14:59 | 1 |
| **Oxidation Reduction Potential** | **260** | | 10 | | millivolts | | | 02/12/18 13:32 | 1 |

## Client Sample ID: ABB - PH 4.0

**Lab Sample ID: 180-74121-9**
**Date Collected: 01/11/18 09:40**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <25 | | 25 | | mg/L | | | 02/08/18 19:08 | 25 |
| **Fluoride** | **15** | | 2.5 | | mg/L | | | 02/08/18 19:08 | 25 |
| **Sulfate** | **880** | | 25 | | mg/L | | | 02/08/18 19:08 | 25 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Boron** | **12000** | | 800 | | ug/L | | 02/08/18 11:28 | 02/13/18 03:19 | 10 |

## Client Sample ID: ABB - PH 4.0

**Lab Sample ID: 180-74121-9**
**Date Collected: 01/11/18 09:40**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### Method: EPA 6020A - Metals (ICP/MS) - Leach (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 5700000 | | 5000 | | ug/L | | 02/08/18 11:28 | 02/13/18 03:19 | 10 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 4.3 | | 0.1 | | SU | | | 02/07/18 12:16 | 1 |
| Specific Conductance | 31000 | | 1.0 | | umhos/cm | | | 02/07/18 12:05 | 1 |
| Total Dissolved Solids | 33000 | | 200 | | mg/L | | | 02/13/18 10:45 | 1 |
| Oxidation Reduction Potential | 330 | | 10 | | millivolts | | | 02/07/18 11:58 | 1 |

## Client Sample ID: ABB - PH 2.0

**Lab Sample ID: 180-74121-10**
**Date Collected: 01/11/18 09:40**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <100 | | 100 | | mg/L | | | 02/22/18 11:00 | 100 |
| Fluoride | 26 | | 10 | | mg/L | | | 02/22/18 11:00 | 100 |
| Sulfate | 920 | | 100 | | mg/L | | | 02/22/18 11:00 | 100 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 26000 | | 8000 | | ug/L | | 02/23/18 12:01 | 02/27/18 09:41 | 10 |
| Calcium | 11000000 | | 50000 | | ug/L | | 02/23/18 12:01 | 02/24/18 17:11 | 10 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 2.3 | | 0.1 | | SU | | | 02/19/18 10:25 | 1 |
| Specific Conductance | 77000 | | 1.0 | | umhos/cm | | | 02/19/18 10:30 | 1 |
| Total Dissolved Solids | 92000 | | 500 | | mg/L | | | 02/26/18 14:33 | 1 |
| Oxidation Reduction Potential | 530 | | 10 | | millivolts | | | 02/19/18 10:27 | 1 |

## Client Sample ID: ABB- NATURAL

**Lab Sample ID: 180-74121-11**
**Date Collected: 01/11/18 09:40**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 27 | | 1.0 | | mg/L | | | 02/08/18 08:53 | 1 |
| Fluoride | 2.8 | | 0.10 | | mg/L | | | 02/08/18 08:53 | 1 |
| Sulfate | 910 | | 10 | | mg/L | | | 02/08/18 09:08 | 10 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 3700 | | 80 | | ug/L | | 02/08/18 11:22 | 02/13/18 00:44 | 1 |
| Calcium | 130000 | | 500 | | ug/L | | 02/08/18 11:22 | 02/09/18 22:54 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 8.8 | | 0.1 | | SU | | | 02/07/18 12:19 | 1 |
| Specific Conductance | 2300 | | 1.0 | | umhos/cm | | | 02/07/18 12:09 | 1 |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | | | 02/13/18 10:45 | 1 |

## Client Sample ID: ABB- NATURAL

**Lab Sample ID: 180-74121-11**

**Date Collected: 01/11/18 09:40**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

### General Chemistry - Leach (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 220 | | 10 | | millivolts | | | 02/07/18 12:03 | 1 |

## Client Sample ID: ASB - PRETEST

**Lab Sample ID: 180-74121-12**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Percent Moisture | 35.7 | | 0.1 | | % | | | 01/24/18 06:29 | 1 |
| Percent Solids | 64.3 | | 0.1 | | % | | | 01/24/18 06:29 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 12.8 | | 0.1 | | SU | | | 02/12/18 13:59 | 1 |
| pH | 3.8 | | 0.1 | | SU | | | 02/12/18 14:03 | 1 |
| pH | 3.9 | | 0.1 | | SU | | | 02/12/18 14:12 | 1 |
| pH | 12.6 | | 0.1 | | SU | | | 02/12/18 14:15 | 1 |
| pH | 12.4 | | 0.1 | | SU | | | 02/16/18 12:43 | 1 |
| pH | 3.5 | | 0.1 | | SU | | | 02/16/18 12:49 | 1 |
| pH | 3.1 | | 0.1 | | SU | | | 02/19/18 10:31 | 1 |

## Client Sample ID: ASB - PH 13.0

**Lab Sample ID: 180-74121-13**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <50 | | 50 | | mg/L | | | 02/09/18 21:26 | 50 |
| Fluoride | <5.0 | | 5.0 | | mg/L | | | 02/09/18 21:26 | 50 |
| Sulfate | 91 | | 50 | | mg/L | | | 02/09/18 21:26 | 50 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 100 | | 80 | | ug/L | | 02/08/18 11:28 | 02/13/18 03:24 | 1 |
| Calcium | 3000 | | 500 | | ug/L | | 02/08/18 11:28 | 02/10/18 00:27 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 12.7 | | 0.1 | | SU | | | 02/07/18 11:52 | 1 |
| Specific Conductance | 44000 | | 1.0 | | umhos/cm | | | 02/07/18 11:32 | 1 |
| Total Dissolved Solids | 13000 | | 330 | | mg/L | | | 02/13/18 15:26 | 1 |
| Oxidation Reduction Potential | - 118 | | 10 | | millivolts | | | 02/07/18 11:29 | 1 |

## Client Sample ID: ASB- PH 12.0

**Lab Sample ID: 180-74121-14**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5.1 | | 5.0 | | mg/L | | | 02/26/18 15:42 | 5 |
| Fluoride | 1.3 | | 0.50 | | mg/L | | | 02/26/18 15:42 | 5 |

## Client Sample ID: ASB- PH 12.0

**Lab Sample ID: 180-74121-14**
**Matrix: Solid**
**Date Collected: 01/11/18 09:55**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 76 | | 5.0 | | mg/L | | | 02/26/18 15:42 | 5 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 900 | | 80 | | ug/L | | 02/19/18 13:03 | 02/22/18 04:16 | 1 |
| Calcium | 1300 | | 500 | | ug/L | | 02/19/18 13:03 | 02/21/18 01:11 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 11.9 | | 0.1 | | SU | | | 02/16/18 12:38 | 1 |
| Specific Conductance | 3000 | | 1.0 | | umhos/cm | | | 02/16/18 12:40 | 1 |
| Total Dissolved Solids | 1400 | | 40 | | mg/L | | | 02/19/18 15:41 | 1 |
| Oxidation Reduction Potential | 18 | | 10 | | millivolts | | | 02/16/18 12:44 | 1 |

## Client Sample ID: ASB - PH 10.5

**Lab Sample ID: 180-74121-15**
**Matrix: Solid**
**Date Collected: 01/11/18 09:55**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 6.3 | | 1.0 | | mg/L | | | 02/22/18 13:55 | 1 |
| Fluoride | 1.0 | | 0.10 | | mg/L | | | 02/22/18 13:55 | 1 |
| Sulfate | 72 | | 5.0 | | mg/L | | | 02/22/18 14:11 | 5 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 650 | | 80 | | ug/L | | 02/21/18 11:22 | 02/26/18 21:24 | 1 |
| Calcium | 2600 | | 500 | | ug/L | | 02/21/18 11:22 | 02/23/18 11:37 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 10.3 | | 0.1 | | SU | | | 02/19/18 10:06 | 1 |
| Specific Conductance | 620 | | 1.0 | | umhos/cm | | | 02/19/18 10:12 | 1 |
| Total Dissolved Solids | 410 | | 10 | | mg/L | | | 02/26/18 14:33 | 1 |
| Oxidation Reduction Potential | 74 | | 10 | | millivolts | | | 02/19/18 10:06 | 1 |

## Client Sample ID: ASB - PH 8.0

**Lab Sample ID: 180-74121-17**
**Matrix: Solid**
**Date Collected: 01/11/18 09:55**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 7.9 | | 2.5 | | mg/L | | | 02/13/18 07:40 | 2.5 |
| Fluoride | <0.25 | | 0.25 | | mg/L | | | 02/13/18 07:40 | 2.5 |
| Sulfate | 110 | | 2.5 | | mg/L | | | 02/13/18 07:40 | 2.5 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 1000 | | 80 | | ug/L | | 02/13/18 13:38 | 02/15/18 22:16 | 1 |
| Calcium | 390000 | | 500 | | ug/L | | 02/13/18 13:38 | 02/15/18 22:16 | 1 |

## Client Sample ID: ASB - PH 8.0

**Lab Sample ID: 180-74121-17**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 7.6 | | 0.1 | | SU | | | 02/12/18 14:09 | 1 |
| Specific Conductance | 2700 | | 1.0 | | umhos/cm | | | 02/12/18 13:52 | 1 |
| Total Dissolved Solids | 2200 | | 20 | | mg/L | | | 02/15/18 14:59 | 1 |
| Oxidation Reduction Potential | 230 | | 10 | | millivolts | | | 02/12/18 13:51 | 1 |

## Client Sample ID: ASB - PH 7.0

**Lab Sample ID: 180-74121-18**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 7.4 | | 2.5 | | mg/L | | | 02/13/18 10:28 | 2.5 |
| Fluoride | <0.50 | | 0.50 | | mg/L | | | 02/14/18 14:01 | 5 |
| Sulfate | 110 | | 2.5 | | mg/L | | | 02/13/18 10:28 | 2.5 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 1500 | | 80 | | ug/L | | 02/13/18 13:38 | 02/15/18 22:20 | 1 |
| Calcium | 680000 | | 500 | | ug/L | | 02/13/18 13:38 | 02/15/18 22:20 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 6.7 | | 0.1 | | SU | | | 02/12/18 14:06 | 1 |
| Specific Conductance | 4600 | | 1.0 | | umhos/cm | | | 02/12/18 13:47 | 1 |
| Total Dissolved Solids | 3900 | | 40 | | mg/L | | | 02/15/18 14:59 | 1 |
| Oxidation Reduction Potential | 290 | | 10 | | millivolts | | | 02/12/18 13:44 | 1 |

## Client Sample ID: ASB - PH 5.5

**Lab Sample ID: 180-74121-19**

**Date Collected: 01/11/18 09:55**

**Matrix: Solid**

**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <10 | | 10 | | mg/L | | | 03/01/18 08:38 | 10 |
| Fluoride | <1.0 | | 1.0 | | mg/L | | | 03/01/18 08:38 | 10 |
| Sulfate | 110 | | 10 | | mg/L | | | 03/01/18 08:38 | 10 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 2600 | | 800 | | ug/L | | 02/28/18 13:51 | 03/01/18 01:11 | 10 |
| Calcium | 1100000 | | 5000 | | ug/L | | 02/28/18 13:51 | 03/01/18 01:11 | 10 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 5.2 | | 0.1 | | SU | | | 02/28/18 09:00 | 1 |
| Specific Conductance | 7400 | | 1.0 | | umhos/cm | | | 02/28/18 09:00 | 1 |
| Total Dissolved Solids | 7500 | | 40 | | mg/L | | | 02/28/18 10:41 | 1 |
| Oxidation Reduction Potential | 350 | | 10 | | millivolts | | | 02/28/18 09:00 | 1 |

## Client Sample ID: ASB - PH 4.0

**Lab Sample ID: 180-74121-20**
**Date Collected: 01/11/18 09:55**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <25 | | 25 | | mg/L | | | 02/08/18 19:38 | 25 |
| Fluoride | <2.5 | | 2.5 | | mg/L | | | 02/08/18 19:38 | 25 |
| **Sulfate** | **52** | | 25 | | mg/L | | | 02/08/18 19:38 | 25 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Boron** | **6700** | | 800 | | ug/L | | 02/08/18 11:28 | 02/13/18 03:29 | 10 |
| **Calcium** | **4500000** | | 5000 | | ug/L | | 02/08/18 11:28 | 02/13/18 03:29 | 10 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **3.8** | | 0.1 | | SU | | | 02/07/18 11:46 | 1 |
| **Specific Conductance** | **30000** | | 1.0 | | umhos/cm | | | 02/07/18 11:29 | 1 |
| **Total Dissolved Solids** | **31000** | | 200 | | mg/L | | | 02/13/18 10:45 | 1 |
| **Oxidation Reduction Potential** | **360** | | 10 | | millivolts | | | 02/07/18 11:25 | 1 |

## Client Sample ID: ASB - PH 2.0

**Lab Sample ID: 180-74121-21**
**Date Collected: 01/11/18 09:55**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <100 | | 100 | | mg/L | | | 02/23/18 10:54 | 100 |
| Fluoride | <10 | | 10 | | mg/L | | | 02/23/18 10:54 | 100 |
| Sulfate | <100 | | 100 | | mg/L | | | 02/23/18 10:54 | 100 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Boron** | **19000** | | 4000 | | ug/L | | 02/21/18 15:34 | 02/26/18 22:37 | 50 |
| **Calcium** | **13000000** | | 25000 | | ug/L | | 02/21/18 15:34 | 02/24/18 17:19 | 50 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **2.8** | **H** | 0.1 | | SU | | | 02/21/18 10:17 | 1 |
| **Specific Conductance** | **78000** | | 1.0 | | umhos/cm | | | 02/21/18 10:17 | 1 |
| **Total Dissolved Solids** | **93000** | | 500 | | mg/L | | | 02/26/18 14:33 | 1 |
| **Oxidation Reduction Potential** | **540** | | 10 | | millivolts | | | 02/21/18 10:17 | 1 |

## Client Sample ID: ASB - NATURAL

**Lab Sample ID: 180-74121-22**
**Date Collected: 01/11/18 09:55**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chloride** | **6.5** | | 1.0 | | mg/L | | | 02/08/18 09:56 | 1 |
| **Fluoride** | **0.21** | | 0.10 | | mg/L | | | 02/08/18 09:56 | 1 |
| **Sulfate** | **87** | **F1** | 1.0 | | mg/L | | | 02/08/18 09:56 | 1 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Boron** | **360** | | 80 | | ug/L | | 02/08/18 11:22 | 02/13/18 01:01 | 1 |

## Client Sample ID: ASB - NATURAL

**Lab Sample ID: 180-74121-22**
**Matrix: Solid**
**Date Collected: 01/11/18 09:55**
**Date Received: 01/12/18 09:10**

### Method: EPA 6020A - Metals (ICP/MS) - Leach (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Calcium** | **35000** | | 500 | | ug/L | | 02/08/18 11:22 | 02/09/18 22:57 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **8.5** | | 0.1 | | SU | | | 02/07/18 12:23 | 1 |
| **Specific Conductance** | **340** | | 1.0 | | umhos/cm | | | 02/07/18 12:12 | 1 |
| **Total Dissolved Solids** | **200** | | 10 | | mg/L | | | 02/13/18 10:45 | 1 |
| **Oxidation Reduction Potential** | **210** | | 10 | | millivolts | | | 02/07/18 12:07 | 1 |

## Client Sample ID: B01

**Lab Sample ID: 180-74121-23**
**Matrix: Solid**
**Date Collected: 01/11/18 00:00**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <1.0 | | 1.0 | | mg/L | | | 02/08/18 08:37 | 1 |
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 02/08/18 08:37 | 1 |
| Sulfate | <1.0 | | 1.0 | | mg/L | | | 02/08/18 08:37 | 1 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <80 | | 80 | | ug/L | | 02/08/18 11:22 | 02/13/18 00:39 | 1 |
| Calcium | <500 | | 500 | | ug/L | | 02/08/18 11:22 | 02/09/18 22:51 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **5.9** | | 0.1 | | SU | | | 02/07/18 13:39 | 1 |
| **Specific Conductance** | **1.7** | | 1.0 | | umhos/cm | | | 02/07/18 13:54 | 1 |
| **Total Dissolved Solids** | **19** | | 10 | | mg/L | | | 02/13/18 10:45 | 1 |
| **Oxidation Reduction Potential** | **400** | | 10 | | millivolts | | | 02/07/18 13:52 | 1 |

## Client Sample ID: B02

**Lab Sample ID: 180-74121-24**
**Matrix: Solid**
**Date Collected: 01/11/18 00:00**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <250 | | 250 | | mg/L | | | 02/23/18 11:25 | 250 |
| Fluoride | <25 | | 25 | | mg/L | | | 02/23/18 11:25 | 250 |
| Sulfate | <250 | | 250 | | mg/L | | | 02/23/18 11:25 | 250 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <80 | | 80 | | ug/L | | 02/21/18 15:34 | 02/26/18 22:42 | 1 |
| **Calcium** | **1200** | | 500 | | ug/L | | 02/21/18 15:34 | 02/23/18 12:33 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | <0.1 | H | 0.1 | | SU | | | 02/21/18 10:23 | 1 |
| **Specific Conductance** | **> 100000** | | 1.0 | | umhos/cm | | | 02/21/18 10:21 | 1 |
| **Total Dissolved Solids** | **3400** | | 1000 | | mg/L | | | 02/26/18 14:33 | 1 |

## Client Sample ID: B02
**Lab Sample ID: 180-74121-24**
**Date Collected: 01/11/18 00:00**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### General Chemistry - Leach (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 580 | | 10 | | millivolts | | | 02/21/18 10:23 | 1 |

## Client Sample ID: B03
**Lab Sample ID: 180-74121-25**
**Date Collected: 01/11/18 00:00**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <50 | | 50 | | mg/L | | | 02/13/18 10:59 | 50 |
| Fluoride | <10 | | 10 | | mg/L | | | 02/14/18 14:17 | 100 |
| Sulfate | <50 | | 50 | | mg/L | | | 02/13/18 10:59 | 50 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <80 | | 80 | | ug/L | | 02/13/18 13:38 | 02/15/18 21:57 | 1 |
| Calcium | <500 | | 500 | | ug/L | | 02/13/18 13:38 | 02/15/18 21:57 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 12.9 | | 0.1 | | SU | | | 02/12/18 15:47 | 1 |
| Specific Conductance | 41000 | | 1.0 | | umhos/cm | | | 02/12/18 15:44 | 1 |
| Total Dissolved Solids | 10000 | | 330 | | mg/L | | | 02/15/18 14:59 | 1 |
| Oxidation Reduction Potential | - 22 | | 10 | | millivolts | | | 02/12/18 15:47 | 1 |

## Client Sample ID: ABB - AIR DRIED
**Lab Sample ID: 180-74121-26**
**Date Collected: 01/11/18 09:40**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Percent Moisture | 5.4 | | 0.1 | | % | | | 02/01/18 13:28 | 1 |
| Percent Solids | 94.6 | | 0.1 | | % | | | 02/01/18 13:28 | 1 |

## Client Sample ID: ASB - AIR DRIED
**Lab Sample ID: 180-74121-27**
**Date Collected: 01/11/18 09:55**
**Matrix: Solid**
**Date Received: 01/12/18 09:10**

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Percent Moisture | 1.1 | | 0.1 | | % | | | 02/01/18 13:28 | 1 |
| Percent Solids | 98.9 | | 0.1 | | % | | | 02/01/18 13:28 | 1 |

## Method: EPA 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 180-236373/6**
**Matrix: Solid**
**Analysis Batch: 236373**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <1.0 | | 1.0 | | mg/L | | | 02/08/18 06:17 | 1 |
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 02/08/18 06:17 | 1 |
| Sulfate | <1.0 | | 1.0 | | mg/L | | | 02/08/18 06:17 | 1 |

**Lab Sample ID: LCS 180-236373/5**
**Matrix: Solid**
**Analysis Batch: 236373**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 25.0 | 25.0 | | mg/L | | 100 | 80 - 120 |
| Fluoride | 1.25 | 1.02 | | mg/L | | 82 | 80 - 120 |
| Sulfate | 25.0 | 24.0 | | mg/L | | 96 | 80 - 120 |

**Lab Sample ID: MB 180-236377/17**
**Matrix: Solid**
**Analysis Batch: 236377**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <1.0 | | 1.0 | | mg/L | | | 02/08/18 09:27 | 1 |
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 02/08/18 09:27 | 1 |
| Sulfate | <1.0 | | 1.0 | | mg/L | | | 02/08/18 09:27 | 1 |

**Lab Sample ID: LCS 180-236377/16**
**Matrix: Solid**
**Analysis Batch: 236377**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 25.0 | 25.0 | | mg/L | | 100 | 80 - 120 |
| Fluoride | 1.25 | 1.18 | | mg/L | | 94 | 80 - 120 |
| Sulfate | 25.0 | 24.1 | | mg/L | | 96 | 80 - 120 |

**Lab Sample ID: MB 180-236553/16**
**Matrix: Solid**
**Analysis Batch: 236553**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <1.0 | | 1.0 | | mg/L | | | 02/09/18 16:56 | 1 |
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 02/09/18 16:56 | 1 |
| Sulfate | <1.0 | | 1.0 | | mg/L | | | 02/09/18 16:56 | 1 |

**Lab Sample ID: LCS 180-236553/15**
**Matrix: Solid**
**Analysis Batch: 236553**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 25.0 | 25.9 | | mg/L | | 103 | 80 - 120 |
| Fluoride | 1.25 | 1.20 | | mg/L | | 96 | 80 - 120 |
| Sulfate | 25.0 | 22.0 | | mg/L | | 88 | 80 - 120 |

## Method: EPA 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: MB 180-236732/6**
**Matrix: Solid**
**Analysis Batch: 236732**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <1.0 | | 1.0 | | mg/L | | | 02/13/18 05:33 | 1 |
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 02/13/18 05:33 | 1 |
| Sulfate | <1.0 | | 1.0 | | mg/L | | | 02/13/18 05:33 | 1 |

**Lab Sample ID: LCS 180-236732/5**
**Matrix: Solid**
**Analysis Batch: 236732**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 25.0 | 25.9 | | mg/L | | 103 | 80 - 120 |
| Fluoride | 1.25 | 1.25 | | mg/L | | 100 | 80 - 120 |
| Sulfate | 25.0 | 25.1 | | mg/L | | 100 | 80 - 120 |

**Lab Sample ID: MB 180-236891/6**
**Matrix: Solid**
**Analysis Batch: 236891**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <1.0 | | 1.0 | | mg/L | | | 02/14/18 11:05 | 1 |
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 02/14/18 11:05 | 1 |
| Sulfate | <1.0 | | 1.0 | | mg/L | | | 02/14/18 11:05 | 1 |

**Lab Sample ID: LCS 180-236891/5**
**Matrix: Solid**
**Analysis Batch: 236891**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 51.9 | | mg/L | | 104 | 80 - 120 |
| Fluoride | 2.50 | 2.58 | | mg/L | | 103 | 80 - 120 |
| Sulfate | 50.0 | 49.2 | | mg/L | | 98 | 80 - 120 |

**Lab Sample ID: MB 180-237598/6**
**Matrix: Solid**
**Analysis Batch: 237598**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <1.0 | | 1.0 | | mg/L | | | 02/22/18 08:13 | 1 |
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 02/22/18 08:13 | 1 |
| Sulfate | <1.0 | | 1.0 | | mg/L | | | 02/22/18 08:13 | 1 |

**Lab Sample ID: LCS 180-237598/5**
**Matrix: Solid**
**Analysis Batch: 237598**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 25.0 | 25.4 | | mg/L | | 102 | 80 - 120 |
| Fluoride | 1.25 | 1.20 | | mg/L | | 96 | 80 - 120 |
| Sulfate | 25.0 | 21.2 | | mg/L | | 85 | 80 - 120 |

## Method: EPA 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: MB 180-237721/6**
**Matrix: Solid**
**Analysis Batch: 237721**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <1.0 | | 1.0 | | mg/L | | | 02/23/18 07:16 | 1 |
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 02/23/18 07:16 | 1 |
| Sulfate | <1.0 | | 1.0 | | mg/L | | | 02/23/18 07:16 | 1 |

**Lab Sample ID: LCS 180-237721/5**
**Matrix: Solid**
**Analysis Batch: 237721**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 25.0 | 26.0 | | mg/L | | 104 | 80 - 120 |
| Fluoride | 1.25 | 1.24 | | mg/L | | 100 | 80 - 120 |
| Sulfate | 25.0 | 21.9 | | mg/L | | 87 | 80 - 120 |

**Lab Sample ID: MB 180-237859/6**
**Matrix: Solid**
**Analysis Batch: 237859**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <1.0 | | 1.0 | | mg/L | | | 02/26/18 08:06 | 1 |
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 02/26/18 08:06 | 1 |
| Sulfate | <1.0 | | 1.0 | | mg/L | | | 02/26/18 08:06 | 1 |

**Lab Sample ID: LCS 180-237859/5**
**Matrix: Solid**
**Analysis Batch: 237859**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 25.0 | 26.4 | | mg/L | | 106 | 80 - 120 |
| Fluoride | 1.25 | 1.23 | | mg/L | | 99 | 80 - 120 |
| Sulfate | 25.0 | 22.5 | | mg/L | | 90 | 80 - 120 |

**Lab Sample ID: MB 180-238212/6**
**Matrix: Solid**
**Analysis Batch: 238212**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <1.0 | | 1.0 | | mg/L | | | 03/01/18 06:47 | 1 |
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 03/01/18 06:47 | 1 |
| Sulfate | <1.0 | | 1.0 | | mg/L | | | 03/01/18 06:47 | 1 |

**Lab Sample ID: LCS 180-238212/5**
**Matrix: Solid**
**Analysis Batch: 238212**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 52.6 | | mg/L | | 105 | 80 - 120 |
| Fluoride | 2.50 | 2.55 | | mg/L | | 102 | 80 - 120 |
| Sulfate | 50.0 | 49.8 | | mg/L | | 100 | 80 - 120 |

## Method: EPA 9056A - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 180-74121-22 MS**
**Matrix: Solid**
**Analysis Batch: 236373**

**Client Sample ID: ASB - NATURAL**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 6.5 | | 25.0 | 31.7 | | mg/L | | 101 | 80 - 120 |
| Fluoride | 0.21 | | 1.25 | 1.44 | | mg/L | | 98 | 80 - 120 |
| Sulfate | 87 | F1 | 25.0 | 107 | F1 | mg/L | | 78 | 80 - 120 |

**Lab Sample ID: 180-74121-22 MSD**
**Matrix: Solid**
**Analysis Batch: 236373**

**Client Sample ID: ASB - NATURAL**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 6.5 | | 25.0 | 31.5 | | mg/L | | 100 | 80 - 120 | 0 | 15 |
| Fluoride | 0.21 | | 1.25 | 1.44 | | mg/L | | 98 | 80 - 120 | 0 | 15 |
| Sulfate | 87 | F1 | 25.0 | 106 | F1 | mg/L | | 76 | 80 - 120 | 1 | 15 |

## Method: EPA 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 180-236437/1-A**
**Matrix: Solid**
**Analysis Batch: 236729**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 236437**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | <500 | | 500 | | ug/L | | 02/08/18 11:22 | 02/09/18 22:43 | 1 |

**Lab Sample ID: MB 180-236437/1-A**
**Matrix: Solid**
**Analysis Batch: 236828**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 236437**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <80 | | 80 | | ug/L | | 02/08/18 11:22 | 02/13/18 00:25 | 1 |

**Lab Sample ID: LCS 180-236437/2-A**
**Matrix: Solid**
**Analysis Batch: 236729**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 236437**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Calcium | 50000 | 53100 | | ug/L | | 106 | 80 - 120 |

**Lab Sample ID: LCS 180-236437/2-A**
**Matrix: Solid**
**Analysis Batch: 236828**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 236437**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1000 | 1010 | | ug/L | | 101 | 80 - 120 |

**Lab Sample ID: LCSD 180-236437/3-A**
**Matrix: Solid**
**Analysis Batch: 236729**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 236437**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 50000 | 52500 | | ug/L | | 105 | 80 - 120 | 1 | 20 |

## Method: EPA 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCSD 180-236437/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 236828** — **Prep Batch: 236437**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 1000 | 1030 | | ug/L | | 103 | 80 - 120 | 2 | 20 |

**Lab Sample ID: MB 180-236440/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 236729** — **Prep Batch: 236440**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | <500 | | 500 | | ug/L | | 02/08/18 11:28 | 02/10/18 00:04 | 1 |

**Lab Sample ID: MB 180-236440/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 236828** — **Prep Batch: 236440**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <80 | | 80 | | ug/L | | 02/08/18 11:28 | 02/13/18 02:47 | 1 |

**Lab Sample ID: LCS 180-236440/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 236729** — **Prep Batch: 236440**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Calcium | 50000 | 52800 | | ug/L | | 106 | 80 - 120 |

**Lab Sample ID: LCS 180-236440/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 236828** — **Prep Batch: 236440**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1000 | 916 | | ug/L | | 92 | 80 - 120 |

**Lab Sample ID: LCSD 180-236440/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 236729** — **Prep Batch: 236440**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 50000 | 51500 | | ug/L | | 103 | 80 - 120 | 2 | 20 |

**Lab Sample ID: LCSD 180-236440/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 236828** — **Prep Batch: 236440**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 1000 | 917 | | ug/L | | 92 | 80 - 120 | 0 | 20 |

**Lab Sample ID: MB 180-236807/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 237198** — **Prep Batch: 236807**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <80 | | 80 | | ug/L | | 02/13/18 13:38 | 02/15/18 21:43 | 1 |

## Method: EPA 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 180-236807/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 237198** — **Prep Batch: 236807**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | <500 | | 500 | | ug/L | | 02/13/18 13:38 | 02/15/18 21:43 | 1 |

**Lab Sample ID: LCS 180-236807/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 237198** — **Prep Batch: 236807**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1000 | 866 | | ug/L | | 87 | 80 - 120 |
| Calcium | 50000 | 46700 | | ug/L | | 93 | 80 - 120 |

**Lab Sample ID: LCSD 180-236807/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 237198** — **Prep Batch: 236807**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 1000 | 879 | | ug/L | | 88 | 80 - 120 | 1 | 20 |
| Calcium | 50000 | 46500 | | ug/L | | 93 | 80 - 120 | 1 | 20 |

**Lab Sample ID: MB 180-237311/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 237590** — **Prep Batch: 237311**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | <500 | | 500 | | ug/L | | 02/19/18 13:03 | 02/21/18 00:31 | 1 |

**Lab Sample ID: MB 180-237311/1-A** — **Client Sample ID: Method Blank**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 237713** — **Prep Batch: 237311**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <80 | | 80 | | ug/L | | 02/19/18 13:03 | 02/22/18 03:08 | 1 |

**Lab Sample ID: LCS 180-237311/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 237590** — **Prep Batch: 237311**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Calcium | 50000 | 48400 | | ug/L | | 97 | 80 - 120 |

**Lab Sample ID: LCS 180-237311/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 237713** — **Prep Batch: 237311**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1000 | 1010 | | ug/L | | 101 | 80 - 120 |

## Method: EPA 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCSD 180-237311/3-A**
**Matrix: Solid**
**Analysis Batch: 237590**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 237311**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 50000 | 48200 | | ug/L | | 96 | 80 - 120 | 0 | 20 |

**Lab Sample ID: LCSD 180-237311/3-A**
**Matrix: Solid**
**Analysis Batch: 237713**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 237311**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 1000 | 1020 | | ug/L | | 102 | 80 - 120 | 0 | 20 |

**Lab Sample ID: MB 180-237537/1-A**
**Matrix: Solid**
**Analysis Batch: 237821**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 237537**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | <500 | | 500 | | ug/L | | 02/21/18 11:22 | 02/23/18 11:29 | 1 |

**Lab Sample ID: MB 180-237537/1-A**
**Matrix: Solid**
**Analysis Batch: 238052**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 237537**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <80 | | 80 | | ug/L | | 02/21/18 11:22 | 02/26/18 21:10 | 1 |

**Lab Sample ID: LCS 180-237537/2-A**
**Matrix: Solid**
**Analysis Batch: 237821**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 237537**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Calcium | 50000 | 55300 | | ug/L | | 111 | 80 - 120 |

**Lab Sample ID: LCS 180-237537/2-A**
**Matrix: Solid**
**Analysis Batch: 238052**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 237537**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1000 | 1010 | | ug/L | | 101 | 80 - 120 |

**Lab Sample ID: LCSD 180-237537/3-A**
**Matrix: Solid**
**Analysis Batch: 237821**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 237537**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 50000 | 55200 | | ug/L | | 110 | 80 - 120 | 0 | 20 |

**Lab Sample ID: LCSD 180-237537/3-A**
**Matrix: Solid**
**Analysis Batch: 238052**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 237537**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 1000 | 1060 | | ug/L | | 106 | 80 - 120 | 5 | 20 |

**Lab Sample ID: MB 180-237582/1-A**
**Matrix: Solid**
**Analysis Batch: 237821**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 237582**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | <500 | | 500 | | ug/L | | 02/21/18 15:34 | 02/23/18 12:07 | 1 |

**Lab Sample ID: MB 180-237582/1-A**
**Matrix: Solid**
**Analysis Batch: 238052**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 237582**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <80 | | 80 | | ug/L | | 02/21/18 15:34 | 02/26/18 22:14 | 1 |

**Lab Sample ID: LCS 180-237582/2-A**
**Matrix: Solid**
**Analysis Batch: 237821**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 237582**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Calcium | 50000 | 54400 | | ug/L | | 109 | 80 - 120 |

**Lab Sample ID: LCS 180-237582/2-A**
**Matrix: Solid**
**Analysis Batch: 238052**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 237582**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1000 | 992 | | ug/L | | 99 | 80 - 120 |

**Lab Sample ID: LCSD 180-237582/3-A**
**Matrix: Solid**
**Analysis Batch: 237821**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 237582**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 50000 | 54900 | | ug/L | | 110 | 80 - 120 | 1 | 20 |

**Lab Sample ID: LCSD 180-237582/3-A**
**Matrix: Solid**
**Analysis Batch: 238052**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 237582**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 1000 | 1000 | | ug/L | | 100 | 80 - 120 | 1 | 20 |

**Lab Sample ID: MB 180-237767/1-A**
**Matrix: Solid**
**Analysis Batch: 237942**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 237767**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | <500 | | 500 | | ug/L | | 02/23/18 12:01 | 02/24/18 16:45 | 1 |

**Lab Sample ID: MB 180-237767/1-A**
**Matrix: Solid**
**Analysis Batch: 238052**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 237767**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <80 | | 80 | | ug/L | | 02/23/18 12:01 | 02/27/18 09:22 | 1 |

## Method: EPA 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 180-237767/2-A**
**Matrix: Solid**
**Analysis Batch: 237942**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 237767**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Calcium | 50000 | 51800 | | ug/L | | 104 | 80 - 120 |

**Lab Sample ID: LCS 180-237767/2-A**
**Matrix: Solid**
**Analysis Batch: 238052**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 237767**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1000 | 970 | | ug/L | | 97 | 80 - 120 |

**Lab Sample ID: LCSD 180-237767/3-A**
**Matrix: Solid**
**Analysis Batch: 237942**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 237767**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 50000 | 52100 | | ug/L | | 104 | 80 - 120 | 1 | 20 |

**Lab Sample ID: LCSD 180-237767/3-A**
**Matrix: Solid**
**Analysis Batch: 238052**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 237767**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 1000 | 1000 | | ug/L | | 100 | 80 - 120 | 3 | 20 |

**Lab Sample ID: MB 180-238166/1-A**
**Matrix: Solid**
**Analysis Batch: 238310**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 238166**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <80 | | 80 | | ug/L | | 02/28/18 13:51 | 03/01/18 01:20 | 1 |
| Calcium | <500 | | 500 | | ug/L | | 02/28/18 13:51 | 03/01/18 01:20 | 1 |

**Lab Sample ID: LCS 180-238166/2-A**
**Matrix: Solid**
**Analysis Batch: 238310**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 238166**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1000 | 1130 | | ug/L | | 113 | 80 - 120 |
| Calcium | 50000 | 48700 | | ug/L | | 97 | 80 - 120 |

**Lab Sample ID: LCSD 180-238166/3-A**
**Matrix: Solid**
**Analysis Batch: 238310**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 238166**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 1000 | 1100 | | ug/L | | 110 | 80 - 120 | 3 | 20 |
| Calcium | 50000 | 47900 | | ug/L | | 96 | 80 - 120 | 2 | 20 |

## Method: EPA 9040C - pH

**Lab Sample ID: LCS 180-236465/1**
**Matrix: Solid**
**Analysis Batch: 236465**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 7.00 | 7.0 | | SU | | 100 | 99 - 101 |

**Lab Sample ID: LCS 180-236465/24**
**Matrix: Solid**
**Analysis Batch: 236465**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 7.00 | 7.0 | | SU | | 100 | 99 - 101 |

**Lab Sample ID: LCS 180-236465/47**
**Matrix: Solid**
**Analysis Batch: 236465**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 7.00 | 7.0 | | SU | | 100 | 99 - 101 |

**Lab Sample ID: LCS 180-237380/1**
**Matrix: Solid**
**Analysis Batch: 237380**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 7.00 | 7.0 | | SU | | 100 | 99 - 101 |

**Lab Sample ID: LCS 180-237531/1**
**Matrix: Solid**
**Analysis Batch: 237531**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 7.00 | 7.0 | | SU | | 100 | 99 - 101 |

**Lab Sample ID: LCS 180-237560/1**
**Matrix: Solid**
**Analysis Batch: 237560**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 7.00 | 7.0 | | SU | | 100 | 99 - 101 |

**Lab Sample ID: LCS 180-237737/1**
**Matrix: Solid**
**Analysis Batch: 237737**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 7.00 | 7.0 | | SU | | 100 | 99 - 101 |

**Lab Sample ID: LCS 180-237772/1**
**Matrix: Solid**
**Analysis Batch: 237772**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 7.00 | 7.0 | | SU | | 100 | 99 - 101 |

**Lab Sample ID: LCS 180-238129/1**
**Matrix: Solid**
**Analysis Batch: 238129**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 7.00 | 7.0 | | SU | | 100 | 99 - 101 |

## Method: SM 2510B - Conductivity, Specific Conductance

**Lab Sample ID: MB 180-236475/17**
**Matrix: Solid**
**Analysis Batch: 236475**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | <1.0 | | 1.0 | | umhos/cm | | | 02/07/18 11:58 | 1 |

**Lab Sample ID: MB 180-236475/2**
**Matrix: Solid**
**Analysis Batch: 236475**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | <1.0 | | 1.0 | | umhos/cm | | | 02/07/18 11:03 | 1 |

**Lab Sample ID: MB 180-236475/43**
**Matrix: Solid**
**Analysis Batch: 236475**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | <1.0 | | 1.0 | | umhos/cm | | | 02/07/18 13:32 | 1 |

**Lab Sample ID: LCS 180-236475/1**
**Matrix: Solid**
**Analysis Batch: 236475**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductance | 84.0 | 85.1 | | umhos/cm | | 101 | 90 - 110 |

**Lab Sample ID: LCS 180-236475/16**
**Matrix: Solid**
**Analysis Batch: 236475**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductance | 84.0 | 85.0 | | umhos/cm | | 101 | 90 - 110 |

**Lab Sample ID: LCS 180-236475/42**
**Matrix: Solid**
**Analysis Batch: 236475**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductance | 84.0 | 85.1 | | umhos/cm | | 101 | 90 - 110 |

## Method: SM 2510B - Conductivity, Specific Conductance (Continued)

**Lab Sample ID: MB 180-237425/2**
**Matrix: Solid**
**Analysis Batch: 237425**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | <1.0 | | 1.0 | | umhos/cm | | | 02/12/18 10:05 | 1 |

**Lab Sample ID: LCS 180-237425/1**
**Matrix: Solid**
**Analysis Batch: 237425**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductance | 84.0 | 85.0 | | umhos/cm | | 101 | 90 - 110 |

**Lab Sample ID: MB 180-237553/2**
**Matrix: Solid**
**Analysis Batch: 237553**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | <1.0 | | 1.0 | | umhos/cm | | | 02/19/18 10:06 | 1 |

**Lab Sample ID: LCS 180-237553/1**
**Matrix: Solid**
**Analysis Batch: 237553**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductance | 84.0 | 88.6 | | umhos/cm | | 105 | 90 - 110 |

**Lab Sample ID: MB 180-237563/2**
**Matrix: Solid**
**Analysis Batch: 237563**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | <1.0 | | 1.0 | | umhos/cm | | | 02/21/18 10:04 | 1 |

**Lab Sample ID: LCS 180-237563/1**
**Matrix: Solid**
**Analysis Batch: 237563**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductance | 84.0 | 79.9 | | umhos/cm | | 95 | 90 - 110 |

**Lab Sample ID: MB 180-237752/2**
**Matrix: Solid**
**Analysis Batch: 237752**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | <1.0 | | 1.0 | | umhos/cm | | | 02/16/18 08:07 | 1 |

**Lab Sample ID: LCS 180-237752/1**
**Matrix: Solid**
**Analysis Batch: 237752**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductance | 84.0 | 85.1 | | umhos/cm | | 101 | 90 - 110 |

**Lab Sample ID: MB 180-237776/2**
**Matrix: Solid**
**Analysis Batch: 237776**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | <1.0 | | 1.0 | | umhos/cm | | | 02/23/18 10:04 | 1 |

**Lab Sample ID: LCS 180-237776/1**
**Matrix: Solid**
**Analysis Batch: 237776**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductance | 84.0 | 88.5 | | umhos/cm | | 105 | 90 - 110 |

**Lab Sample ID: MB 180-238130/2**
**Matrix: Solid**
**Analysis Batch: 238130**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | <1.0 | | 1.0 | | umhos/cm | | | 02/28/18 09:00 | 1 |

**Lab Sample ID: LCS 180-238130/1**
**Matrix: Solid**
**Analysis Batch: 238130**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductance | 84.0 | 89.5 | | umhos/cm | | 107 | 90 - 110 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 180-236785/2**
**Matrix: Solid**
**Analysis Batch: 236785**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 02/13/18 10:45 | 1 |

**Lab Sample ID: LCS 180-236785/1**
**Matrix: Solid**
**Analysis Batch: 236785**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 339 | 388 | | mg/L | | 114 | 80 - 120 |

**Lab Sample ID: MB 180-236825/2**
**Matrix: Solid**
**Analysis Batch: 236825**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 02/13/18 15:26 | 1 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: LCS 180-236825/1**
**Matrix: Solid**
**Analysis Batch: 236825**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 339 | 364 | | mg/L | | 107 | 80 - 120 |

**Lab Sample ID: MB 180-237078/2**
**Matrix: Solid**
**Analysis Batch: 237078**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 02/15/18 14:59 | 1 |

**Lab Sample ID: LCS 180-237078/1**
**Matrix: Solid**
**Analysis Batch: 237078**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 339 | 342 | | mg/L | | 101 | 80 - 120 |

**Lab Sample ID: MB 180-237329/2**
**Matrix: Solid**
**Analysis Batch: 237329**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 02/19/18 15:41 | 1 |

**Lab Sample ID: LCS 180-237329/1**
**Matrix: Solid**
**Analysis Batch: 237329**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 339 | 330 | | mg/L | | 97 | 80 - 120 |

**Lab Sample ID: MB 180-237940/2**
**Matrix: Solid**
**Analysis Batch: 237940**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 02/26/18 14:33 | 1 |

**Lab Sample ID: LCS 180-237940/1**
**Matrix: Solid**
**Analysis Batch: 237940**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 339 | 338 | | mg/L | | 100 | 80 - 120 |

**Lab Sample ID: MB 180-238055/2**
**Matrix: Solid**
**Analysis Batch: 238055**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 02/27/18 15:07 | 1 |

**Lab Sample ID: LCS 180-238055/1**
**Matrix: Solid**
**Analysis Batch: 238055**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 339 | 360 | | mg/L | | 106 | 80 - 120 |

**Lab Sample ID: MB 180-238132/2**
**Matrix: Solid**
**Analysis Batch: 238132**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 02/28/18 10:41 | 1 |

**Lab Sample ID: LCS 180-238132/1**
**Matrix: Solid**
**Analysis Batch: 238132**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 339 | 366 | | mg/L | | 108 | 80 - 120 |

**Lab Sample ID: 180-74121-9 DU**
**Matrix: Solid**
**Analysis Batch: 236785**

**Client Sample ID: ABB - PH 4.0**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 33000 | | 32500 | | mg/L | | 1 | 10 |

**Lab Sample ID: 180-74121-20 DU**
**Matrix: Solid**
**Analysis Batch: 236785**

**Client Sample ID: ASB - PH 4.0**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 31000 | | 31200 | | mg/L | | 2 | 10 |

**Lab Sample ID: 180-74121-13 DU**
**Matrix: Solid**
**Analysis Batch: 236825**

**Client Sample ID: ASB - PH 13.0**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 13000 | | 13900 | | mg/L | | 4 | 10 |

## Method: SM 2580B - Reduction-Oxidation (REDOX) Potential

**Lab Sample ID: LCS 180-236472/1**
**Matrix: Solid**
**Analysis Batch: 236472**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 475 | 467 | | millivolts | | 98 | 90 - 110 |

## Method: SM 2580B - Reduction-Oxidation (REDOX) Potential (Continued)

**Lab Sample ID: LCS 180-236472/13**
**Matrix: Solid**
**Analysis Batch: 236472**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 475 | 465 | | millivolts | | 98 | 90 - 110 |

**Lab Sample ID: LCS 180-236472/36**
**Matrix: Solid**
**Analysis Batch: 236472**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 475 | 463 | | millivolts | | 97 | 90 - 110 |

**Lab Sample ID: LCS 180-237422/1**
**Matrix: Solid**
**Analysis Batch: 237422**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 475 | 466 | | millivolts | | 98 | 90 - 110 |

**Lab Sample ID: LCS 180-237550/1**
**Matrix: Solid**
**Analysis Batch: 237550**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 475 | 469 | | millivolts | | 99 | 90 - 110 |

**Lab Sample ID: LCS 180-237562/1**
**Matrix: Solid**
**Analysis Batch: 237562**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 475 | 472 | | millivolts | | 99 | 90 - 110 |

**Lab Sample ID: LCS 180-237751/1**
**Matrix: Solid**
**Analysis Batch: 237751**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 475 | 467 | | millivolts | | 98 | 90 - 110 |

**Lab Sample ID: LCS 180-237774/1**
**Matrix: Solid**
**Analysis Batch: 237774**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 475 | 473 | | millivolts | | 100 | 90 - 110 |

**Lab Sample ID: LCS 180-238131/1**
**Matrix: Solid**
**Analysis Batch: 238131**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 475 | 468 | | millivolts | | 99 | 90 - 110 |

## HPLC/IC

### Leach Batch: 236165

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-2 | ABB - PH 13.0 | Leach | Solid | 1313 | |
| 180-74121-9 | ABB - PH 4.0 | Leach | Solid | 1313 | |
| 180-74121-11 | ABB- NATURAL | Leach | Solid | 1313 | |
| 180-74121-13 | ASB - PH 13.0 | Leach | Solid | 1313 | |
| 180-74121-20 | ASB - PH 4.0 | Leach | Solid | 1313 | |
| 180-74121-22 | ASB - NATURAL | Leach | Solid | 1313 | |
| 180-74121-23 | B01 | Leach | Solid | 1313 | |
| 180-74121-22 MS | ASB - NATURAL | Leach | Solid | 1313 | |
| 180-74121-22 MSD | ASB - NATURAL | Leach | Solid | 1313 | |

### Analysis Batch: 236373

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-11 | ABB- NATURAL | Leach | Solid | EPA 9056A | 236165 |
| 180-74121-11 | ABB- NATURAL | Leach | Solid | EPA 9056A | 236165 |
| 180-74121-22 | ASB - NATURAL | Leach | Solid | EPA 9056A | 236165 |
| 180-74121-23 | B01 | Leach | Solid | EPA 9056A | 236165 |
| MB 180-236373/6 | Method Blank | Total/NA | Solid | EPA 9056A | |
| LCS 180-236373/5 | Lab Control Sample | Total/NA | Solid | EPA 9056A | |
| 180-74121-22 MS | ASB - NATURAL | Leach | Solid | EPA 9056A | 236165 |
| 180-74121-22 MSD | ASB - NATURAL | Leach | Solid | EPA 9056A | 236165 |

### Analysis Batch: 236377

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-9 | ABB - PH 4.0 | Leach | Solid | EPA 9056A | 236165 |
| 180-74121-20 | ASB - PH 4.0 | Leach | Solid | EPA 9056A | 236165 |
| MB 180-236377/17 | Method Blank | Total/NA | Solid | EPA 9056A | |
| LCS 180-236377/16 | Lab Control Sample | Total/NA | Solid | EPA 9056A | |

### Analysis Batch: 236553

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-2 | ABB - PH 13.0 | Leach | Solid | EPA 9056A | 236165 |
| 180-74121-13 | ASB - PH 13.0 | Leach | Solid | EPA 9056A | 236165 |
| MB 180-236553/16 | Method Blank | Total/NA | Solid | EPA 9056A | |
| LCS 180-236553/15 | Lab Control Sample | Total/NA | Solid | EPA 9056A | |

### Leach Batch: 236722

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-3 | ABB - PH 12.0 | Leach | Solid | 1313 | |
| 180-74121-6 | ABB - PH 8.0 | Leach | Solid | 1313 | |
| 180-74121-8 | ABB - PH 5.5 | Leach | Solid | 1313 | |
| 180-74121-17 | ASB - PH 8.0 | Leach | Solid | 1313 | |
| 180-74121-18 | ASB - PH 7.0 | Leach | Solid | 1313 | |
| 180-74121-25 | B03 | Leach | Solid | 1313 | |

### Analysis Batch: 236732

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-3 | ABB - PH 12.0 | Leach | Solid | EPA 9056A | 236722 |
| 180-74121-6 | ABB - PH 8.0 | Leach | Solid | EPA 9056A | 236722 |
| 180-74121-6 | ABB - PH 8.0 | Leach | Solid | EPA 9056A | 236722 |
| 180-74121-8 | ABB - PH 5.5 | Leach | Solid | EPA 9056A | 236722 |
| 180-74121-17 | ASB - PH 8.0 | Leach | Solid | EPA 9056A | 236722 |

## HPLC/IC (Continued)

### Analysis Batch: 236732 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-18 | ASB - PH 7.0 | Leach | Solid | EPA 9056A | 236722 |
| 180-74121-25 | B03 | Leach | Solid | EPA 9056A | 236722 |
| MB 180-236732/6 | Method Blank | Total/NA | Solid | EPA 9056A | |
| LCS 180-236732/5 | Lab Control Sample | Total/NA | Solid | EPA 9056A | |

### Analysis Batch: 236891

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-18 | ASB - PH 7.0 | Leach | Solid | EPA 9056A | 236722 |
| 180-74121-25 | B03 | Leach | Solid | EPA 9056A | 236722 |
| MB 180-236891/6 | Method Blank | Total/NA | Solid | EPA 9056A | |
| LCS 180-236891/5 | Lab Control Sample | Total/NA | Solid | EPA 9056A | |

### Leach Batch: 237165

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-4 | ABB - PH 10.5 | Leach | Solid | 1313 | |
| 180-74121-14 | ASB- PH 12.0 | Leach | Solid | 1313 | |

### Leach Batch: 237381

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-10 | ABB - PH 2.0 | Leach | Solid | 1313 | |
| 180-74121-15 | ASB - PH 10.5 | Leach | Solid | 1313 | |

### Leach Batch: 237539

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-21 | ASB - PH 2.0 | Leach | Solid | 1313 | |
| 180-74121-24 | B02 | Leach | Solid | 1313 | |

### Analysis Batch: 237598

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-10 | ABB - PH 2.0 | Leach | Solid | EPA 9056A | 237381 |
| 180-74121-15 | ASB - PH 10.5 | Leach | Solid | EPA 9056A | 237381 |
| 180-74121-15 | ASB - PH 10.5 | Leach | Solid | EPA 9056A | 237381 |
| MB 180-237598/6 | Method Blank | Total/NA | Solid | EPA 9056A | |
| LCS 180-237598/5 | Lab Control Sample | Total/NA | Solid | EPA 9056A | |

### Analysis Batch: 237721

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-21 | ASB - PH 2.0 | Leach | Solid | EPA 9056A | 237539 |
| 180-74121-24 | B02 | Leach | Solid | EPA 9056A | 237539 |
| MB 180-237721/6 | Method Blank | Total/NA | Solid | EPA 9056A | |
| LCS 180-237721/5 | Lab Control Sample | Total/NA | Solid | EPA 9056A | |

### Leach Batch: 237761

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-7 | ABB - PH 7.0 | Leach | Solid | 1313 | |

### Analysis Batch: 237859

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-4 | ABB - PH 10.5 | Leach | Solid | EPA 9056A | 237165 |
| 180-74121-4 | ABB - PH 10.5 | Leach | Solid | EPA 9056A | 237165 |
| 180-74121-7 | ABB - PH 7.0 | Leach | Solid | EPA 9056A | 237761 |

## HPLC/IC (Continued)

### Analysis Batch: 237859 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-7 | ABB - PH 7.0 | Leach | Solid | EPA 9056A | 237761 |
| 180-74121-14 | ASB- PH 12.0 | Leach | Solid | EPA 9056A | 237165 |
| MB 180-237859/6 | Method Blank | Total/NA | Solid | EPA 9056A | |
| LCS 180-237859/5 | Lab Control Sample | Total/NA | Solid | EPA 9056A | |

### Leach Batch: 238030

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-19 | ASB - PH 5.5 | Leach | Solid | 1313 | |

### Analysis Batch: 238212

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-19 | ASB - PH 5.5 | Leach | Solid | EPA 9056A | 238030 |
| MB 180-238212/6 | Method Blank | Total/NA | Solid | EPA 9056A | |
| LCS 180-238212/5 | Lab Control Sample | Total/NA | Solid | EPA 9056A | |

## Metals

### Leach Batch: 236165

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-2 | ABB - PH 13.0 | Leach | Solid | 1313 | |
| 180-74121-9 | ABB - PH 4.0 | Leach | Solid | 1313 | |
| 180-74121-11 | ABB- NATURAL | Leach | Solid | 1313 | |
| 180-74121-13 | ASB - PH 13.0 | Leach | Solid | 1313 | |
| 180-74121-20 | ASB - PH 4.0 | Leach | Solid | 1313 | |
| 180-74121-22 | ASB - NATURAL | Leach | Solid | 1313 | |
| 180-74121-23 | B01 | Leach | Solid | 1313 | |

### Prep Batch: 236437

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-11 | ABB- NATURAL | Leach | Solid | 3010A | 236165 |
| 180-74121-22 | ASB - NATURAL | Leach | Solid | 3010A | 236165 |
| 180-74121-23 | B01 | Leach | Solid | 3010A | 236165 |
| MB 180-236437/1-A | Method Blank | Total/NA | Solid | 3010A | |
| LCS 180-236437/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |
| LCSD 180-236437/3-A | Lab Control Sample Dup | Total/NA | Solid | 3010A | |

### Prep Batch: 236440

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-2 | ABB - PH 13.0 | Leach | Solid | 3010A | 236165 |
| 180-74121-9 | ABB - PH 4.0 | Leach | Solid | 3010A | 236165 |
| 180-74121-13 | ASB - PH 13.0 | Leach | Solid | 3010A | 236165 |
| 180-74121-20 | ASB - PH 4.0 | Leach | Solid | 3010A | 236165 |
| MB 180-236440/1-A | Method Blank | Total/NA | Solid | 3010A | |
| LCS 180-236440/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |
| LCSD 180-236440/3-A | Lab Control Sample Dup | Total/NA | Solid | 3010A | |

### Leach Batch: 236722

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-3 | ABB - PH 12.0 | Leach | Solid | 1313 | |
| 180-74121-6 | ABB - PH 8.0 | Leach | Solid | 1313 | |

## Metals (Continued)

### Leach Batch: 236722 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-8 | ABB - PH 5.5 | Leach | Solid | 1313 | |
| 180-74121-17 | ASB - PH 8.0 | Leach | Solid | 1313 | |
| 180-74121-18 | ASB - PH 7.0 | Leach | Solid | 1313 | |
| 180-74121-25 | B03 | Leach | Solid | 1313 | |

### Analysis Batch: 236729

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-2 | ABB - PH 13.0 | Leach | Solid | EPA 6020A | 236440 |
| 180-74121-11 | ABB- NATURAL | Leach | Solid | EPA 6020A | 236437 |
| 180-74121-13 | ASB - PH 13.0 | Leach | Solid | EPA 6020A | 236440 |
| 180-74121-22 | ASB - NATURAL | Leach | Solid | EPA 6020A | 236437 |
| 180-74121-23 | B01 | Leach | Solid | EPA 6020A | 236437 |
| MB 180-236437/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 236437 |
| MB 180-236440/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 236440 |
| LCS 180-236437/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 236437 |
| LCS 180-236440/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 236440 |
| LCSD 180-236437/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 6020A | 236437 |
| LCSD 180-236440/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 6020A | 236440 |

### Prep Batch: 236807

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-3 | ABB - PH 12.0 | Leach | Solid | 3010A | 236722 |
| 180-74121-6 | ABB - PH 8.0 | Leach | Solid | 3010A | 236722 |
| 180-74121-8 | ABB - PH 5.5 | Leach | Solid | 3010A | 236722 |
| 180-74121-17 | ASB - PH 8.0 | Leach | Solid | 3010A | 236722 |
| 180-74121-18 | ASB - PH 7.0 | Leach | Solid | 3010A | 236722 |
| 180-74121-25 | B03 | Leach | Solid | 3010A | 236722 |
| MB 180-236807/1-A | Method Blank | Total/NA | Solid | 3010A | |
| LCS 180-236807/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |
| LCSD 180-236807/3-A | Lab Control Sample Dup | Total/NA | Solid | 3010A | |

### Analysis Batch: 236828

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-2 | ABB - PH 13.0 | Leach | Solid | EPA 6020A | 236440 |
| 180-74121-9 | ABB - PH 4.0 | Leach | Solid | EPA 6020A | 236440 |
| 180-74121-11 | ABB- NATURAL | Leach | Solid | EPA 6020A | 236437 |
| 180-74121-13 | ASB - PH 13.0 | Leach | Solid | EPA 6020A | 236440 |
| 180-74121-20 | ASB - PH 4.0 | Leach | Solid | EPA 6020A | 236440 |
| 180-74121-22 | ASB - NATURAL | Leach | Solid | EPA 6020A | 236437 |
| 180-74121-23 | B01 | Leach | Solid | EPA 6020A | 236437 |
| MB 180-236437/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 236437 |
| MB 180-236440/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 236440 |
| LCS 180-236437/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 236437 |
| LCS 180-236440/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 236440 |
| LCSD 180-236437/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 6020A | 236437 |
| LCSD 180-236440/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 6020A | 236440 |

### Leach Batch: 237165

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-4 | ABB - PH 10.5 | Leach | Solid | 1313 | |
| 180-74121-14 | ASB- PH 12.0 | Leach | Solid | 1313 | |

## Analysis Batch: 237198

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-3 | ABB - PH 12.0 | Leach | Solid | EPA 6020A | 236807 |
| 180-74121-6 | ABB - PH 8.0 | Leach | Solid | EPA 6020A | 236807 |
| 180-74121-17 | ASB - PH 8.0 | Leach | Solid | EPA 6020A | 236807 |
| 180-74121-18 | ASB - PH 7.0 | Leach | Solid | EPA 6020A | 236807 |
| 180-74121-25 | B03 | Leach | Solid | EPA 6020A | 236807 |
| MB 180-236807/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 236807 |
| LCS 180-236807/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 236807 |
| LCSD 180-236807/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 6020A | 236807 |

## Prep Batch: 237311

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-4 | ABB - PH 10.5 | Leach | Solid | 3010A | 237165 |
| 180-74121-14 | ASB- PH 12.0 | Leach | Solid | 3010A | 237165 |
| MB 180-237311/1-A | Method Blank | Total/NA | Solid | 3010A | |
| LCS 180-237311/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |
| LCSD 180-237311/3-A | Lab Control Sample Dup | Total/NA | Solid | 3010A | |

## Analysis Batch: 237323

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-8 | ABB - PH 5.5 | Leach | Solid | EPA 6020A | 236807 |

## Leach Batch: 237381

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-10 | ABB - PH 2.0 | Leach | Solid | 1313 | |
| 180-74121-15 | ASB - PH 10.5 | Leach | Solid | 1313 | |

## Prep Batch: 237537

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-15 | ASB - PH 10.5 | Leach | Solid | 3010A | 237381 |
| MB 180-237537/1-A | Method Blank | Total/NA | Solid | 3010A | |
| LCS 180-237537/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |
| LCSD 180-237537/3-A | Lab Control Sample Dup | Total/NA | Solid | 3010A | |

## Leach Batch: 237539

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-21 | ASB - PH 2.0 | Leach | Solid | 1313 | |
| 180-74121-24 | B02 | Leach | Solid | 1313 | |

## Prep Batch: 237582

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-21 | ASB - PH 2.0 | Leach | Solid | 3010A | 237539 |
| 180-74121-24 | B02 | Leach | Solid | 3010A | 237539 |
| MB 180-237582/1-A | Method Blank | Total/NA | Solid | 3010A | |
| LCS 180-237582/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |
| LCSD 180-237582/3-A | Lab Control Sample Dup | Total/NA | Solid | 3010A | |

## Analysis Batch: 237590

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-4 | ABB - PH 10.5 | Leach | Solid | EPA 6020A | 237311 |
| 180-74121-14 | ASB- PH 12.0 | Leach | Solid | EPA 6020A | 237311 |
| MB 180-237311/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 237311 |
| LCS 180-237311/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 237311 |
| LCSD 180-237311/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 6020A | 237311 |

## Analysis Batch: 237713

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-4 | ABB - PH 10.5 | Leach | Solid | EPA 6020A | 237311 |
| 180-74121-14 | ASB- PH 12.0 | Leach | Solid | EPA 6020A | 237311 |
| MB 180-237311/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 237311 |
| LCS 180-237311/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 237311 |
| LCSD 180-237311/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 6020A | 237311 |

## Leach Batch: 237761

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-7 | ABB - PH 7.0 | Leach | Solid | 1313 | |

## Prep Batch: 237767

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-7 | ABB - PH 7.0 | Leach | Solid | 3010A | 237761 |
| 180-74121-10 | ABB - PH 2.0 | Leach | Solid | 3010A | 237381 |
| MB 180-237767/1-A | Method Blank | Total/NA | Solid | 3010A | |
| LCS 180-237767/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |
| LCSD 180-237767/3-A | Lab Control Sample Dup | Total/NA | Solid | 3010A | |

## Analysis Batch: 237821

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-15 | ASB - PH 10.5 | Leach | Solid | EPA 6020A | 237537 |
| 180-74121-24 | B02 | Leach | Solid | EPA 6020A | 237582 |
| MB 180-237537/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 237537 |
| MB 180-237582/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 237582 |
| LCS 180-237537/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 237537 |
| LCS 180-237582/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 237582 |
| LCSD 180-237537/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 6020A | 237537 |
| LCSD 180-237582/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 6020A | 237582 |

## Analysis Batch: 237942

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-7 | ABB - PH 7.0 | Leach | Solid | EPA 6020A | 237767 |
| 180-74121-10 | ABB - PH 2.0 | Leach | Solid | EPA 6020A | 237767 |
| 180-74121-21 | ASB - PH 2.0 | Leach | Solid | EPA 6020A | 237582 |
| MB 180-237767/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 237767 |
| LCS 180-237767/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 237767 |
| LCSD 180-237767/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 6020A | 237767 |

## Leach Batch: 238030

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-19 | ASB - PH 5.5 | Leach | Solid | 1313 | |

## Analysis Batch: 238052

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-7 | ABB - PH 7.0 | Leach | Solid | EPA 6020A | 237767 |
| 180-74121-10 | ABB - PH 2.0 | Leach | Solid | EPA 6020A | 237767 |
| 180-74121-15 | ASB - PH 10.5 | Leach | Solid | EPA 6020A | 237537 |
| 180-74121-21 | ASB - PH 2.0 | Leach | Solid | EPA 6020A | 237582 |
| 180-74121-24 | B02 | Leach | Solid | EPA 6020A | 237582 |
| MB 180-237537/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 237537 |
| MB 180-237582/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 237582 |
| MB 180-237767/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 237767 |
| LCS 180-237537/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 237537 |

## Metals (Continued)

### Analysis Batch: 238052 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 180-237582/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 237582 |
| LCS 180-237767/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 237767 |
| LCSD 180-237537/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 6020A | 237537 |
| LCSD 180-237582/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 6020A | 237582 |
| LCSD 180-237767/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 6020A | 237767 |

### Prep Batch: 238166

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-19 | ASB - PH 5.5 | Leach | Solid | 3010A | 238030 |
| MB 180-238166/1-A | Method Blank | Total/NA | Solid | 3010A | |
| LCS 180-238166/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |
| LCSD 180-238166/3-A | Lab Control Sample Dup | Total/NA | Solid | 3010A | |

### Analysis Batch: 238310

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-19 | ASB - PH 5.5 | Leach | Solid | EPA 6020A | 238166 |
| MB 180-238166/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 238166 |
| LCS 180-238166/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 238166 |
| LCSD 180-238166/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 6020A | 238166 |

## General Chemistry

### Analysis Batch: 234952

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-1 | ABB - PRETEST | Total/NA | Solid | 2540G | |
| 180-74121-12 | ASB - PRETEST | Total/NA | Solid | 2540G | |

### Analysis Batch: 235778

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-26 | ABB - AIR DRIED | Total/NA | Solid | 2540G | |
| 180-74121-27 | ASB - AIR DRIED | Total/NA | Solid | 2540G | |

### Leach Batch: 236165

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-2 | ABB - PH 13.0 | Leach | Solid | 1313 | |
| 180-74121-9 | ABB - PH 4.0 | Leach | Solid | 1313 | |
| 180-74121-11 | ABB- NATURAL | Leach | Solid | 1313 | |
| 180-74121-13 | ASB - PH 13.0 | Leach | Solid | 1313 | |
| 180-74121-20 | ASB - PH 4.0 | Leach | Solid | 1313 | |
| 180-74121-22 | ASB - NATURAL | Leach | Solid | 1313 | |
| 180-74121-23 | B01 | Leach | Solid | 1313 | |
| 180-74121-9 DU | ABB - PH 4.0 | Leach | Solid | 1313 | |
| 180-74121-13 DU | ASB - PH 13.0 | Leach | Solid | 1313 | |
| 180-74121-20 DU | ASB - PH 4.0 | Leach | Solid | 1313 | |

### Analysis Batch: 236465

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-2 | ABB - PH 13.0 | Leach | Solid | EPA 9040C | 236165 |
| 180-74121-9 | ABB - PH 4.0 | Leach | Solid | EPA 9040C | 236165 |
| 180-74121-11 | ABB- NATURAL | Leach | Solid | EPA 9040C | 236165 |

## General Chemistry (Continued)

### Analysis Batch: 236465 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-13 | ASB - PH 13.0 | Leach | Solid | EPA 9040C | 236165 |
| 180-74121-20 | ASB - PH 4.0 | Leach | Solid | EPA 9040C | 236165 |
| 180-74121-22 | ASB - NATURAL | Leach | Solid | EPA 9040C | 236165 |
| 180-74121-23 | B01 | Leach | Solid | EPA 9040C | 236165 |
| LCS 180-236465/1 | Lab Control Sample | Total/NA | Solid | EPA 9040C | |
| LCS 180-236465/24 | Lab Control Sample | Total/NA | Solid | EPA 9040C | |
| LCS 180-236465/47 | Lab Control Sample | Total/NA | Solid | EPA 9040C | |

### Analysis Batch: 236472

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-2 | ABB - PH 13.0 | Leach | Solid | SM 2580B | 236165 |
| 180-74121-9 | ABB - PH 4.0 | Leach | Solid | SM 2580B | 236165 |
| 180-74121-11 | ABB- NATURAL | Leach | Solid | SM 2580B | 236165 |
| 180-74121-13 | ASB - PH 13.0 | Leach | Solid | SM 2580B | 236165 |
| 180-74121-20 | ASB - PH 4.0 | Leach | Solid | SM 2580B | 236165 |
| 180-74121-22 | ASB - NATURAL | Leach | Solid | SM 2580B | 236165 |
| 180-74121-23 | B01 | Leach | Solid | SM 2580B | 236165 |
| LCS 180-236472/1 | Lab Control Sample | Total/NA | Solid | SM 2580B | |
| LCS 180-236472/13 | Lab Control Sample | Total/NA | Solid | SM 2580B | |
| LCS 180-236472/36 | Lab Control Sample | Total/NA | Solid | SM 2580B | |

### Analysis Batch: 236475

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-2 | ABB - PH 13.0 | Leach | Solid | SM 2510B | 236165 |
| 180-74121-9 | ABB - PH 4.0 | Leach | Solid | SM 2510B | 236165 |
| 180-74121-11 | ABB- NATURAL | Leach | Solid | SM 2510B | 236165 |
| 180-74121-13 | ASB - PH 13.0 | Leach | Solid | SM 2510B | 236165 |
| 180-74121-20 | ASB - PH 4.0 | Leach | Solid | SM 2510B | 236165 |
| 180-74121-22 | ASB - NATURAL | Leach | Solid | SM 2510B | 236165 |
| 180-74121-23 | B01 | Leach | Solid | SM 2510B | 236165 |
| MB 180-236475/17 | Method Blank | Total/NA | Solid | SM 2510B | |
| MB 180-236475/2 | Method Blank | Total/NA | Solid | SM 2510B | |
| MB 180-236475/43 | Method Blank | Total/NA | Solid | SM 2510B | |
| LCS 180-236475/1 | Lab Control Sample | Total/NA | Solid | SM 2510B | |
| LCS 180-236475/16 | Lab Control Sample | Total/NA | Solid | SM 2510B | |
| LCS 180-236475/42 | Lab Control Sample | Total/NA | Solid | SM 2510B | |

### Leach Batch: 236722

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-3 | ABB - PH 12.0 | Leach | Solid | 1313 | |
| 180-74121-6 | ABB - PH 8.0 | Leach | Solid | 1313 | |
| 180-74121-8 | ABB - PH 5.5 | Leach | Solid | 1313 | |
| 180-74121-17 | ASB - PH 8.0 | Leach | Solid | 1313 | |
| 180-74121-18 | ASB - PH 7.0 | Leach | Solid | 1313 | |
| 180-74121-25 | B03 | Leach | Solid | 1313 | |

### Analysis Batch: 236785

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-9 | ABB - PH 4.0 | Leach | Solid | SM 2540C | 236165 |
| 180-74121-11 | ABB- NATURAL | Leach | Solid | SM 2540C | 236165 |
| 180-74121-20 | ASB - PH 4.0 | Leach | Solid | SM 2540C | 236165 |

## General Chemistry (Continued)

### Analysis Batch: 236785 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-22 | ASB - NATURAL | Leach | Solid | SM 2540C | 236165 |
| 180-74121-23 | B01 | Leach | Solid | SM 2540C | 236165 |
| MB 180-236785/2 | Method Blank | Total/NA | Solid | SM 2540C | |
| LCS 180-236785/1 | Lab Control Sample | Total/NA | Solid | SM 2540C | |
| 180-74121-9 DU | ABB - PH 4.0 | Leach | Solid | SM 2540C | 236165 |
| 180-74121-20 DU | ASB - PH 4.0 | Leach | Solid | SM 2540C | 236165 |

### Analysis Batch: 236825

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-13 | ASB - PH 13.0 | Leach | Solid | SM 2540C | 236165 |
| MB 180-236825/2 | Method Blank | Total/NA | Solid | SM 2540C | |
| LCS 180-236825/1 | Lab Control Sample | Total/NA | Solid | SM 2540C | |
| 180-74121-13 DU | ASB - PH 13.0 | Leach | Solid | SM 2540C | 236165 |

### Analysis Batch: 237078

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-2 | ABB - PH 13.0 | Leach | Solid | SM 2540C | 236165 |
| 180-74121-3 | ABB - PH 12.0 | Leach | Solid | SM 2540C | 236722 |
| 180-74121-6 | ABB - PH 8.0 | Leach | Solid | SM 2540C | 236722 |
| 180-74121-8 | ABB - PH 5.5 | Leach | Solid | SM 2540C | 236722 |
| 180-74121-17 | ASB - PH 8.0 | Leach | Solid | SM 2540C | 236722 |
| 180-74121-18 | ASB - PH 7.0 | Leach | Solid | SM 2540C | 236722 |
| 180-74121-25 | B03 | Leach | Solid | SM 2540C | 236722 |
| MB 180-237078/2 | Method Blank | Total/NA | Solid | SM 2540C | |
| LCS 180-237078/1 | Lab Control Sample | Total/NA | Solid | SM 2540C | |

### Leach Batch: 237107

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-1 | ABB - PRETEST | Leach | Solid | 1313 | |
| 180-74121-1 | ABB - PRETEST | Leach | Solid | 1313 | |
| 180-74121-1 | ABB - PRETEST | Leach | Solid | 1313 | |
| 180-74121-12 | ASB - PRETEST | Leach | Solid | 1313 | |
| 180-74121-12 | ASB - PRETEST | Leach | Solid | 1313 | |
| 180-74121-12 | ASB - PRETEST | Leach | Solid | 1313 | |
| 180-74121-12 | ASB - PRETEST | Leach | Solid | 1313 | |

### Leach Batch: 237165

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-4 | ABB - PH 10.5 | Leach | Solid | 1313 | |
| 180-74121-14 | ASB- PH 12.0 | Leach | Solid | 1313 | |

### Analysis Batch: 237329

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-4 | ABB - PH 10.5 | Leach | Solid | SM 2540C | 237165 |
| 180-74121-14 | ASB- PH 12.0 | Leach | Solid | SM 2540C | 237165 |
| MB 180-237329/2 | Method Blank | Total/NA | Solid | SM 2540C | |
| LCS 180-237329/1 | Lab Control Sample | Total/NA | Solid | SM 2540C | |

### Analysis Batch: 237380

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-1 | ABB - PRETEST | Leach | Solid | EPA 9040C | 237107 |

## General Chemistry (Continued)

### Analysis Batch: 237380 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-1 | ABB - PRETEST | Leach | Solid | EPA 9040C | 237107 |
| 180-74121-1 | ABB - PRETEST | Leach | Solid | EPA 9040C | 237107 |
| 180-74121-3 | ABB - PH 12.0 | Leach | Solid | EPA 9040C | 236722 |
| 180-74121-6 | ABB - PH 8.0 | Leach | Solid | EPA 9040C | 236722 |
| 180-74121-8 | ABB - PH 5.5 | Leach | Solid | EPA 9040C | 236722 |
| 180-74121-12 | ASB - PRETEST | Leach | Solid | EPA 9040C | 237107 |
| 180-74121-12 | ASB - PRETEST | Leach | Solid | EPA 9040C | 237107 |
| 180-74121-12 | ASB - PRETEST | Leach | Solid | EPA 9040C | 237107 |
| 180-74121-12 | ASB - PRETEST | Leach | Solid | EPA 9040C | 237107 |
| 180-74121-17 | ASB - PH 8.0 | Leach | Solid | EPA 9040C | 236722 |
| 180-74121-18 | ASB - PH 7.0 | Leach | Solid | EPA 9040C | 236722 |
| 180-74121-25 | B03 | Leach | Solid | EPA 9040C | 236722 |
| LCS 180-237380/1 | Lab Control Sample | Total/NA | Solid | EPA 9040C | |

### Leach Batch: 237381

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-10 | ABB - PH 2.0 | Leach | Solid | 1313 | |
| 180-74121-12 | ASB - PRETEST | Leach | Solid | 1313 | |
| 180-74121-15 | ASB - PH 10.5 | Leach | Solid | 1313 | |

### Analysis Batch: 237422

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-3 | ABB - PH 12.0 | Leach | Solid | SM 2580B | 236722 |
| 180-74121-6 | ABB - PH 8.0 | Leach | Solid | SM 2580B | 236722 |
| 180-74121-8 | ABB - PH 5.5 | Leach | Solid | SM 2580B | 236722 |
| 180-74121-17 | ASB - PH 8.0 | Leach | Solid | SM 2580B | 236722 |
| 180-74121-18 | ASB - PH 7.0 | Leach | Solid | SM 2580B | 236722 |
| 180-74121-25 | B03 | Leach | Solid | SM 2580B | 236722 |
| LCS 180-237422/1 | Lab Control Sample | Total/NA | Solid | SM 2580B | |

### Analysis Batch: 237425

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-3 | ABB - PH 12.0 | Leach | Solid | SM 2510B | 236722 |
| 180-74121-6 | ABB - PH 8.0 | Leach | Solid | SM 2510B | 236722 |
| 180-74121-8 | ABB - PH 5.5 | Leach | Solid | SM 2510B | 236722 |
| 180-74121-17 | ASB - PH 8.0 | Leach | Solid | SM 2510B | 236722 |
| 180-74121-18 | ASB - PH 7.0 | Leach | Solid | SM 2510B | 236722 |
| 180-74121-25 | B03 | Leach | Solid | SM 2510B | 236722 |
| MB 180-237425/2 | Method Blank | Total/NA | Solid | SM 2510B | |
| LCS 180-237425/1 | Lab Control Sample | Total/NA | Solid | SM 2510B | |

### Analysis Batch: 237531

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-10 | ABB - PH 2.0 | Leach | Solid | EPA 9040C | 237381 |
| 180-74121-12 | ASB - PRETEST | Leach | Solid | EPA 9040C | 237381 |
| 180-74121-15 | ASB - PH 10.5 | Leach | Solid | EPA 9040C | 237381 |
| LCS 180-237531/1 | Lab Control Sample | Total/NA | Solid | EPA 9040C | |

### Leach Batch: 237539

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-21 | ASB - PH 2.0 | Leach | Solid | 1313 | |

## General Chemistry (Continued)

### Leach Batch: 237539 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-24 | B02 | Leach | Solid | 1313 | |

### Analysis Batch: 237550

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-10 | ABB - PH 2.0 | Leach | Solid | SM 2580B | 237381 |
| 180-74121-15 | ASB - PH 10.5 | Leach | Solid | SM 2580B | 237381 |
| LCS 180-237550/1 | Lab Control Sample | Total/NA | Solid | SM 2580B | |

### Analysis Batch: 237553

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-10 | ABB - PH 2.0 | Leach | Solid | SM 2510B | 237381 |
| 180-74121-15 | ASB - PH 10.5 | Leach | Solid | SM 2510B | 237381 |
| MB 180-237553/2 | Method Blank | Total/NA | Solid | SM 2510B | |
| LCS 180-237553/1 | Lab Control Sample | Total/NA | Solid | SM 2510B | |

### Analysis Batch: 237560

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-21 | ASB - PH 2.0 | Leach | Solid | EPA 9040C | 237539 |
| 180-74121-24 | B02 | Leach | Solid | EPA 9040C | 237539 |
| LCS 180-237560/1 | Lab Control Sample | Total/NA | Solid | EPA 9040C | |

### Analysis Batch: 237562

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-21 | ASB - PH 2.0 | Leach | Solid | SM 2580B | 237539 |
| 180-74121-24 | B02 | Leach | Solid | SM 2580B | 237539 |
| LCS 180-237562/1 | Lab Control Sample | Total/NA | Solid | SM 2580B | |

### Analysis Batch: 237563

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-21 | ASB - PH 2.0 | Leach | Solid | SM 2510B | 237539 |
| 180-74121-24 | B02 | Leach | Solid | SM 2510B | 237539 |
| MB 180-237563/2 | Method Blank | Total/NA | Solid | SM 2510B | |
| LCS 180-237563/1 | Lab Control Sample | Total/NA | Solid | SM 2510B | |

### Leach Batch: 237733

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-1 | ABB - PRETEST | Leach | Solid | 1313 | |
| 180-74121-12 | ASB - PRETEST | Leach | Solid | 1313 | |
| 180-74121-12 | ASB - PRETEST | Leach | Solid | 1313 | |

### Analysis Batch: 237737

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-1 | ABB - PRETEST | Leach | Solid | EPA 9040C | 237733 |
| 180-74121-4 | ABB - PH 10.5 | Leach | Solid | EPA 9040C | 237165 |
| 180-74121-12 | ASB - PRETEST | Leach | Solid | EPA 9040C | 237733 |
| 180-74121-12 | ASB - PRETEST | Leach | Solid | EPA 9040C | 237733 |
| 180-74121-14 | ASB- PH 12.0 | Leach | Solid | EPA 9040C | 237165 |
| LCS 180-237737/1 | Lab Control Sample | Total/NA | Solid | EPA 9040C | |

## General Chemistry (Continued)

### Analysis Batch: 237751

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-4 | ABB - PH 10.5 | Leach | Solid | SM 2580B | 237165 |
| 180-74121-14 | ASB- PH 12.0 | Leach | Solid | SM 2580B | 237165 |
| LCS 180-237751/1 | Lab Control Sample | Total/NA | Solid | SM 2580B | |

### Analysis Batch: 237752

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-4 | ABB - PH 10.5 | Leach | Solid | SM 2510B | 237165 |
| 180-74121-14 | ASB- PH 12.0 | Leach | Solid | SM 2510B | 237165 |
| MB 180-237752/2 | Method Blank | Total/NA | Solid | SM 2510B | |
| LCS 180-237752/1 | Lab Control Sample | Total/NA | Solid | SM 2510B | |

### Leach Batch: 237761

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-7 | ABB - PH 7.0 | Leach | Solid | 1313 | |

### Analysis Batch: 237772

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-7 | ABB - PH 7.0 | Leach | Solid | EPA 9040C | 237761 |
| LCS 180-237772/1 | Lab Control Sample | Total/NA | Solid | EPA 9040C | |

### Analysis Batch: 237774

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-7 | ABB - PH 7.0 | Leach | Solid | SM 2580B | 237761 |
| LCS 180-237774/1 | Lab Control Sample | Total/NA | Solid | SM 2580B | |

### Analysis Batch: 237776

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-7 | ABB - PH 7.0 | Leach | Solid | SM 2510B | 237761 |
| MB 180-237776/2 | Method Blank | Total/NA | Solid | SM 2510B | |
| LCS 180-237776/1 | Lab Control Sample | Total/NA | Solid | SM 2510B | |

### Analysis Batch: 237940

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-10 | ABB - PH 2.0 | Leach | Solid | SM 2540C | 237381 |
| 180-74121-15 | ASB - PH 10.5 | Leach | Solid | SM 2540C | 237381 |
| 180-74121-21 | ASB - PH 2.0 | Leach | Solid | SM 2540C | 237539 |
| 180-74121-24 | B02 | Leach | Solid | SM 2540C | 237539 |
| MB 180-237940/2 | Method Blank | Total/NA | Solid | SM 2540C | |
| LCS 180-237940/1 | Lab Control Sample | Total/NA | Solid | SM 2540C | |

### Leach Batch: 238030

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-19 | ASB - PH 5.5 | Leach | Solid | 1313 | |

### Analysis Batch: 238055

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-7 | ABB - PH 7.0 | Leach | Solid | SM 2540C | 237761 |
| MB 180-238055/2 | Method Blank | Total/NA | Solid | SM 2540C | |
| LCS 180-238055/1 | Lab Control Sample | Total/NA | Solid | SM 2540C | |

## General Chemistry (Continued)

### Analysis Batch: 238129

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-19 | ASB - PH 5.5 | Leach | Solid | EPA 9040C | 238030 |
| LCS 180-238129/1 | Lab Control Sample | Total/NA | Solid | EPA 9040C | |

### Analysis Batch: 238130

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-19 | ASB - PH 5.5 | Leach | Solid | SM 2510B | 238030 |
| MB 180-238130/2 | Method Blank | Total/NA | Solid | SM 2510B | |
| LCS 180-238130/1 | Lab Control Sample | Total/NA | Solid | SM 2510B | |

### Analysis Batch: 238131

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-19 | ASB - PH 5.5 | Leach | Solid | SM 2580B | 238030 |
| LCS 180-238131/1 | Lab Control Sample | Total/NA | Solid | SM 2580B | |

### Analysis Batch: 238132

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-74121-19 | ASB - PH 5.5 | Leach | Solid | SM 2540C | 238030 |
| MB 180-238132/2 | Method Blank | Total/NA | Solid | SM 2540C | |
| LCS 180-238132/1 | Lab Control Sample | Total/NA | Solid | SM 2540C | |

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

# Chain of Custody Record

(optional)

Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)

Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

Lab Job #:
Chain of Custody Number:
Page _____ of _____
Temperature °C of Cooler:

Client: KPRG & Assoc. | Client Project #: 23517
Project Name: NRG
Project Location/State: IL | Lab Project #:
Sampler: LR/MW | Lab PM:

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | Parameter: LEAF Method 1313 | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ABB | 1/11/18 | 0940 | 2 | SE | | X | | | | | | | | |
| | | ASB | 1/11/18 | 0955 | 2 | SE | | X | | | | | | | | |

180-74121 Chain of Custody

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| | KPRG | 1/11/18 | 1630 | | TA | 1-11-18 | 430 |
| | TA | 1-11-18 | 1645 | | | 1/12/18 | 0910 |
| | | | | | | | |

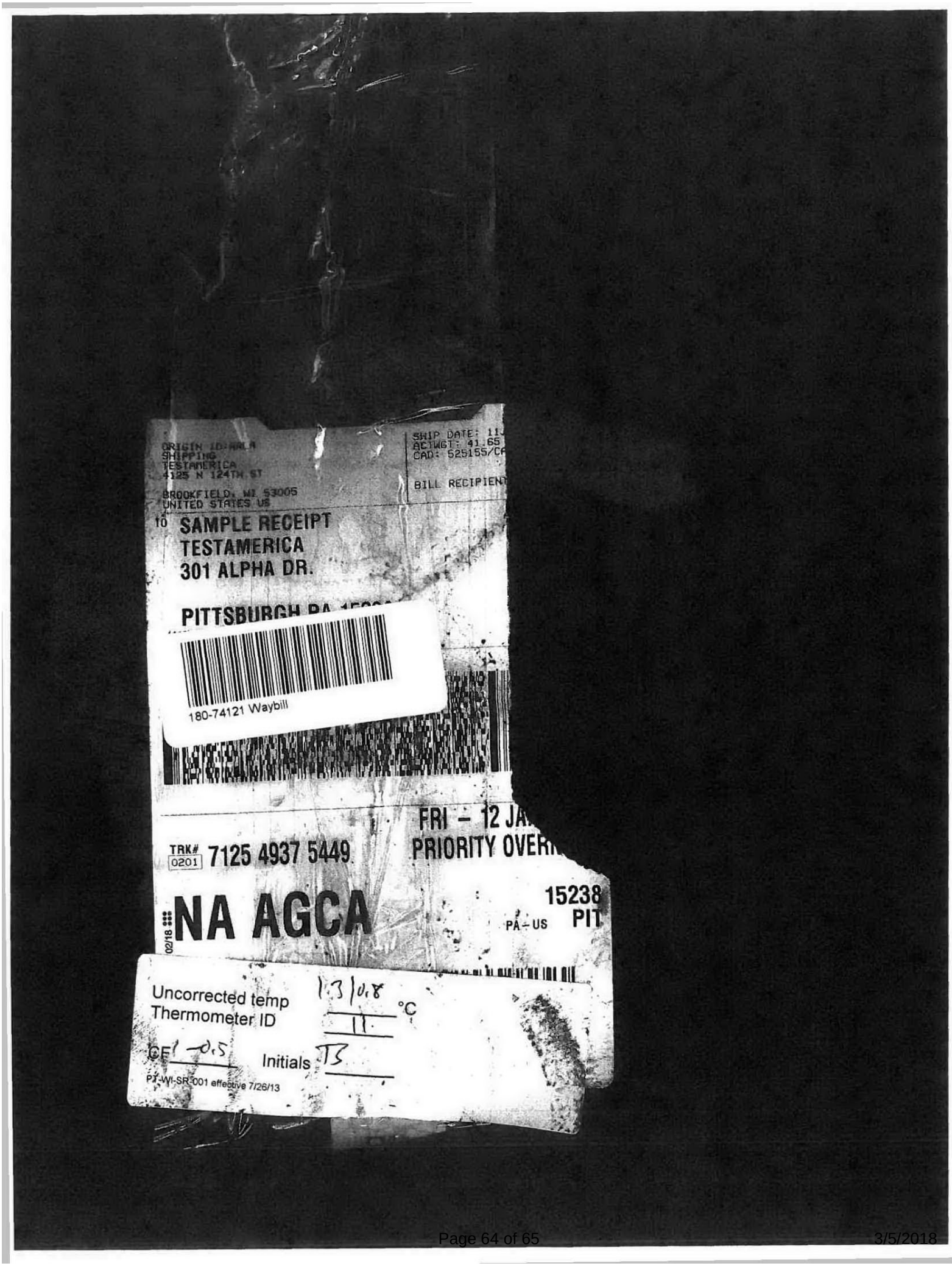
Lab Courier
Shipped
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments
LEAF Method 1313 CCR Appendix 3
→ B, Ca, Cl, Fl, pH, Sulfate, TDS

Lab Comments:

TAL-4124-500 (1209)


ORIGIN ID:MKLA
SHIPPING
TESTAMERICA
4125 N 124TH ST
BROOKFIELD, WI 53005
UNITED STATES US
SHIP DATE: 11
ACTWGT: 41.65
CAD: 525155/CA
BILL RECIPIENT
10 SAMPLE RECEIPT
TESTAMERICA
301 ALPHA DR.
PITTSBURGH PA
180-74121 Waybill
TRK# 0201 7125 4937 5449
FRI - 12 JA
PRIORITY OVER
NA AGCA
15238
PA - US
PIT
02/18
Uncorrected temp 1.3 | 0.8 °C
Thermometer ID 11
CF +0.5 Initials TB
PT-WI-SR-001 effective 7/26/13

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 180-74121-1

**Login Number: 74121**
**List Number: 1**
**Creator: Neri, Tom**

**List Source: TestAmerica Pittsburgh**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

## 3.0 ANALYTICAL DATA AND STATUS OF EVALUATIONS

The analytical data from the FAB initial groundwater sampling to date for Appendix III and IV parameters are provided in Tables 3 and 4, respectively. The analytical data packages are included in Appendix A. As previously noted, this data is being collected as part of initial detection monitoring requirements under 257.94(b). All tables include the sample dates and whether the specific well is considered upgradient or downgradient relative to groundwater flow and the regulated unit.

Once the first eight rounds of initial Appendix III and Appendix IV sampling are completed for all of the designated monitoring wells, the data will be statistically evaluated to establish background water quality in accordance with procedures defined in CCR Compliance Statistical Approach for Groundwater Data Evaluation, Midwest Generation Powerton Generating Station dated October 10, 2017. This includes outlier testing, spatial/temporal variability testing, distributional testing, and the establishment of Prediction Limits for all Appendix III compounds to which the ninth round of groundwater detection monitoring data will be compared to determine whether there may be a statistically significant increase (SSI) for a specific compound at each well location. The evaluations will be performed with the assistance of the Sanitas™ statistical software package.

TestAmerica

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# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-145716-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*6/4/2018 4:41:01 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-145716-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-145716-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/18/2018 5:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.1º C, 2.8º C, 3.1º C, 3.9º C and 4.7º C.

**Metals**
Method(s) 6020A: The low level continuing calibration verification (CCVL) at line 58, associated with batch 500-433393 recovered above the upper control limit for Beryllium. The samples associated with this CCVL were non-detects for the affected analytes; therefore, the data have been reported

Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-433393. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-145716-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.045 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.15 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 88 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00068 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 540 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 50 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.12 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 48 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-02 — Lab Sample ID: 500-145716-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.065 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.22 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 80 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Mercury | 0.00040 | | 0.00020 | | mg/L | 1 | | 7470A | Total/NA |
| Total Dissolved Solids | 500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 45 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.23 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 54 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-145716-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0010 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.059 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.35 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 77 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 520 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 65 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.23 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 77 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-145716-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.037 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.68 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-04 (Continued) — Lab Sample ID: 500-145716-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 87 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 630 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 66 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.27 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 100 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-145716-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.062 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.61 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 910 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 89 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.29 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 210 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-145716-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0030 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.072 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.024 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.37 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-145716-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.038 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.1 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 89 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.031 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0060 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Mercury | 0.00029 | | 0.00020 | | mg/L | 1 | | 7470A | Total/NA |
| Total Dissolved Solids | 550 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-09 (Continued) — Lab Sample ID: 500-145716-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 36 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.15 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 180 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-145716-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0010 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.22 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.42 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 93 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.021 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0010 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0050 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 530 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 44 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.19 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 80 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-145716-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.089 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.47 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.0 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0041 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.014 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 88 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.61 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 270 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-145716-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.012 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.086 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-145716-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.10 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.46 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00052 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00067 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.021 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.47 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 720 | | 130 | | mg/L | 25 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-145716-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.029 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0081 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.050 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.3 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 200 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.030 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.077 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1800 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 160 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.50 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 680 | | 130 | | mg/L | 25 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-145716-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.42 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.17 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.6 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Cadmium | 0.0020 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 170 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-17 (Continued) — Lab Sample ID: 500-145716-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.0029 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0021 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.13 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Thallium | 0.0068 | | 0.0020 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1700 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 220 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.60 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 800 | | 130 | | mg/L | 25 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-145716-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.13 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.57 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0052 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.59 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 440 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-145716-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.079 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.1 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 96 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.043 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0044 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 820 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 35 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.16 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 180 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-145716-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.077 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: Duplicate (Continued) — Lab Sample ID: 500-145716-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 3.9 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 95 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.042 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0040 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 850 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 36 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.15 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 190 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-145716-1 | MW-01 | Water | 05/17/18 15:15 | 05/18/18 17:20 |
| 500-145716-2 | MW-02 | Water | 05/15/18 09:05 | 05/18/18 17:20 |
| 500-145716-3 | MW-03 | Water | 05/15/18 11:00 | 05/18/18 17:20 |
| 500-145716-4 | MW-04 | Water | 05/15/18 12:11 | 05/18/18 17:20 |
| 500-145716-5 | MW-05 | Water | 05/15/18 13:31 | 05/18/18 17:20 |
| 500-145716-6 | MW-08 | Water | 05/17/18 13:29 | 05/18/18 17:20 |
| 500-145716-7 | MW-09 | Water | 05/16/18 10:19 | 05/18/18 17:20 |
| 500-145716-8 | MW-10 | Water | 05/16/18 11:41 | 05/18/18 17:20 |
| 500-145716-9 | MW-11 | Water | 05/16/18 13:01 | 05/18/18 17:20 |
| 500-145716-10 | MW-12 | Water | 05/16/18 14:41 | 05/18/18 17:20 |
| 500-145716-11 | MW-15 | Water | 05/17/18 11:58 | 05/18/18 17:20 |
| 500-145716-12 | MW-17 | Water | 05/14/18 14:51 | 05/18/18 17:20 |
| 500-145716-13 | MW-18 | Water | 05/14/18 16:05 | 05/18/18 17:20 |
| 500-145716-14 | MW-19 | Water | 05/14/18 17:35 | 05/18/18 17:20 |
| 500-145716-15 | Duplicate | Water | 05/14/18 00:00 | 05/18/18 17:20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-01**
**Date Collected: 05/17/18 15:15**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-1**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 19:37 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| **Barium** | **0.045** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| **Boron** | **0.15** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:05 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| **Calcium** | **88** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| **Lead** | **0.00068** | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:05 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:46 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:04 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **540** | | 10 | | mg/L | | | 05/21/18 04:13 | 1 |
| **Chloride** | **50** | | 2.0 | | mg/L | | | 05/28/18 18:53 | 1 |
| **Fluoride** | **0.12** | | 0.10 | | mg/L | | | 05/26/18 14:30 | 1 |
| **Sulfate** | **48** | | 20 | | mg/L | | | 05/30/18 12:43 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-02**
**Date Collected: 05/15/18 09:05**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-2**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 19:56 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| **Barium** | **0.065** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| **Boron** | **0.22** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:24 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| **Calcium** | **80** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:12 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.00040** | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:06 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **500** | | 10 | | mg/L | | | 05/21/18 04:20 | 1 |
| **Chloride** | **45** | | 2.0 | | mg/L | | | 05/28/18 18:54 | 1 |
| **Fluoride** | **0.23** | | 0.10 | | mg/L | | | 05/26/18 14:38 | 1 |
| **Sulfate** | **54** | | 20 | | mg/L | | | 05/30/18 12:44 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-03**
**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-3**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:00 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| **Arsenic** | **0.0010** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| **Barium** | **0.059** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| **Boron** | **0.35** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:28 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| **Calcium** | **77** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:16 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:08 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **520** | | 10 | | mg/L | | | 05/21/18 04:26 | 1 |
| **Chloride** | **65** | | 2.0 | | mg/L | | | 05/28/18 18:55 | 1 |
| **Fluoride** | **0.23** | | 0.10 | | mg/L | | | 05/26/18 14:41 | 1 |
| **Sulfate** | **77** | | 20 | | mg/L | | | 06/04/18 12:51 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-04**
**Date Collected: 05/15/18 12:11**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-4**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:04 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| **Barium** | **0.037** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| **Boron** | **0.68** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:32 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| **Calcium** | **87** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:20 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:10 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **630** | | 10 | | mg/L | | | 05/21/18 04:28 | 1 |
| **Chloride** | **66** | | 2.0 | | mg/L | | | 05/28/18 18:56 | 1 |
| **Fluoride** | **0.27** | | 0.10 | | mg/L | | | 05/26/18 14:45 | 1 |
| **Sulfate** | **100** | | 25 | | mg/L | | | 06/04/18 12:52 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-05**
**Date Collected: 05/15/18 13:31**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-5**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:08 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| **Barium** | **0.062** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| **Boron** | **0.61** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:44 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:24 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:23 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **910** | | 10 | | mg/L | | | 05/21/18 04:31 | 1 |
| **Chloride** | **89** | | 10 | | mg/L | | | 05/28/18 18:57 | 5 |
| **Fluoride** | **0.29** | | 0.10 | | mg/L | | | 05/26/18 14:48 | 1 |
| **Sulfate** | **210** | | 50 | | mg/L | | | 06/04/18 12:55 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-08**
**Date Collected: 05/17/18 13:29**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-6**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:12 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Arsenic** | **0.0030** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Barium** | **0.072** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Boron** | **1.2** | | 0.25 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:47 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| **Molybdenum** | **0.024** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:27 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:26 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/21/18 04:33 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 05/28/18 18:58 | 5 |
| **Fluoride** | **0.37** | | 0.10 | | mg/L | | | 05/26/18 14:51 | 1 |
| **Sulfate** | **170** | | 50 | | mg/L | | | 06/04/18 12:56 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-09**
**Date Collected: 05/16/18 10:19**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-7**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:24 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Barium** | **0.038** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Boron** | **4.1** | | 1.0 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:51 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Calcium** | **89** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Molybdenum** | **0.031** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| **Selenium** | **0.0060** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:31 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.00029** | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:28 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **550** | | 10 | | mg/L | | | 05/21/18 04:36 | 1 |
| **Chloride** | **36** | | 2.0 | | mg/L | | | 05/28/18 19:01 | 1 |
| **Fluoride** | **0.15** | | 0.10 | | mg/L | | | 05/26/18 15:04 | 1 |
| **Sulfate** | **180** | | 50 | | mg/L | | | 06/04/18 12:57 | 10 |

## Client Sample ID: MW-10

**Date Collected: 05/16/18 11:41**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-8

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:28 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Arsenic** | **0.0010** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Barium** | **0.22** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Boron** | **0.42** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:55 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Calcium** | **93** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Cobalt** | **0.021** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Lead** | **0.0010** | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| **Selenium** | **0.0050** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:35 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:30 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **530** | | 10 | | mg/L | | | 05/21/18 04:39 | 1 |
| **Chloride** | **44** | | 2.0 | | mg/L | | | 05/28/18 19:02 | 1 |
| **Fluoride** | **0.19** | | 0.10 | | mg/L | | | 05/26/18 15:07 | 1 |
| **Sulfate** | **80** | | 20 | | mg/L | | | 06/04/18 12:58 | 4 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-11**
**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-9**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:32 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Arsenic** | **0.089** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Barium** | **0.47** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Boron** | **2.0** | | 0.50 | | mg/L | | 05/19/18 11:03 | 05/22/18 17:59 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Cobalt** | **0.0041** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| **Molybdenum** | **0.014** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:39 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:33 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/21/18 04:41 | 1 |
| **Chloride** | **88** | | 10 | | mg/L | | | 05/28/18 19:03 | 5 |
| **Fluoride** | **0.61** | | 0.10 | | mg/L | | | 05/26/18 15:10 | 1 |
| **Sulfate** | **270** | | 50 | | mg/L | | | 06/04/18 13:01 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-12**
**Date Collected: 05/16/18 14:41**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-10**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.012** | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:36 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Arsenic** | **0.086** | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Barium** | **0.10** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Boron** | **0.46** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:03 | 1 |
| **Cadmium** | **0.00052** | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Lead** | **0.00067** | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| **Molybdenum** | **0.021** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:43 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:35 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/21/18 04:44 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 05/28/18 19:21 | 5 |
| **Fluoride** | **0.47** | | 0.10 | | mg/L | | | 05/26/18 15:13 | 1 |
| **Sulfate** | **720** | | 130 | | mg/L | | | 06/04/18 13:02 | 25 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-15**
**Date Collected: 05/17/18 11:58**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-11**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.029 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:40 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Arsenic | 0.0081 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Barium | 0.050 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Boron | 2.3 | | 0.50 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:07 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Calcium | 200 | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Molybdenum | 0.030 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Selenium | 0.077 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:54 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:37 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1800 | | 10 | | mg/L | | | 05/21/18 04:46 | 1 |
| Chloride | 160 | | 10 | | mg/L | | | 05/28/18 19:04 | 5 |
| Fluoride | 0.50 | | 0.10 | | mg/L | | | 05/26/18 15:16 | 1 |
| Sulfate | 680 | | 130 | | mg/L | | | 06/04/18 13:03 | 25 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-17**
**Date Collected: 05/14/18 14:51**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-12**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:44 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Arsenic | 0.42 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Barium | 0.17 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Boron | 1.6 | | 0.50 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:11 | 10 |
| Cadmium | 0.0020 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Calcium | 170 | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Cobalt | 0.0029 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Lead | 0.0021 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Molybdenum | 0.13 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |
| Thallium | 0.0068 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 23:58 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:44 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1700 | | 10 | | mg/L | | | 05/21/18 04:49 | 1 |
| Chloride | 220 | | 10 | | mg/L | | | 05/28/18 19:04 | 5 |
| Fluoride | 0.60 | | 0.10 | | mg/L | | | 05/26/18 15:19 | 1 |
| Sulfate | 800 | | 130 | | mg/L | | | 06/04/18 13:04 | 25 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-18**
**Date Collected: 05/14/18 16:05**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-13**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.013** | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:48 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| **Barium** | **0.13** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| **Boron** | **0.57** | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:15 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| **Molybdenum** | **0.0052** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:01 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:46 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1200** | | 10 | | mg/L | | | 05/21/18 04:51 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 05/28/18 19:05 | 5 |
| **Fluoride** | **0.59** | | 0.10 | | mg/L | | | 05/26/18 15:22 | 1 |
| **Sulfate** | **440** | | 100 | | mg/L | | | 06/04/18 13:05 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: MW-19**
**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-14**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:52 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Barium** | **0.079** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Boron** | **4.1** | | 1.0 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:18 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Calcium** | **96** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Molybdenum** | **0.043** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| **Selenium** | **0.0044** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:05 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:49 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **820** | | 10 | | mg/L | | | 05/21/18 04:54 | 1 |
| **Chloride** | **35** | | 2.0 | | mg/L | | | 05/28/18 19:07 | 1 |
| **Fluoride** | **0.16** | | 0.10 | | mg/L | | | 05/26/18 15:25 | 1 |
| **Sulfate** | **180** | | 50 | | mg/L | | | 06/04/18 13:06 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

**Client Sample ID: Duplicate**
**Date Collected: 05/14/18 00:00**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-15**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 20:57 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Barium** | **0.077** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Boron** | **3.9** | | 1.0 | | mg/L | | 05/19/18 11:03 | 05/22/18 18:33 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Calcium** | **95** | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Molybdenum** | **0.042** | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| **Selenium** | **0.0040** | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/22/18 00:09 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 16:51 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **850** | | 10 | | mg/L | | | 05/21/18 04:57 | 1 |
| **Chloride** | **36** | | 2.0 | | mg/L | | | 05/28/18 19:22 | 1 |
| **Fluoride** | **0.15** | | 0.10 | | mg/L | | | 05/26/18 15:29 | 1 |
| **Sulfate** | **190** | | 50 | | mg/L | | | 06/04/18 13:07 | 10 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 433097

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-145716-2 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-145716-3 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-145716-4 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-145716-5 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-145716-6 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-145716-7 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-145716-8 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-145716-9 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-145716-10 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-145716-11 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-145716-12 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-145716-13 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-145716-14 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-145716-15 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-433097/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-433097/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-145716-1 MS | MW-01 | Total Recoverable | Water | 3005A | |
| 500-145716-1 MSD | MW-01 | Total Recoverable | Water | 3005A | |
| 500-145716-1 DU | MW-01 | Total Recoverable | Water | 3005A | |

### Analysis Batch: 433393

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-2 | MW-02 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-3 | MW-03 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-4 | MW-04 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-5 | MW-05 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-6 | MW-08 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-7 | MW-09 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-8 | MW-10 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-9 | MW-11 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-10 | MW-12 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-11 | MW-15 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-12 | MW-17 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-13 | MW-18 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-14 | MW-19 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-15 | Duplicate | Total Recoverable | Water | 6020A | 433097 |
| MB 500-433097/1-A | Method Blank | Total Recoverable | Water | 6020A | 433097 |
| LCS 500-433097/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 MS | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 DU | MW-01 | Total Recoverable | Water | 6020A | 433097 |

### Analysis Batch: 433534

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-2 | MW-02 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-3 | MW-03 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-4 | MW-04 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-5 | MW-05 | Total Recoverable | Water | 6010C | 433097 |

## Metals (Continued)

### Analysis Batch: 433534 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-6 | MW-08 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-7 | MW-09 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-8 | MW-10 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-9 | MW-11 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-10 | MW-12 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-11 | MW-15 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-12 | MW-17 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-13 | MW-18 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-14 | MW-19 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-15 | Duplicate | Total Recoverable | Water | 6010C | 433097 |
| MB 500-433097/1-A | Method Blank | Total Recoverable | Water | 6010C | 433097 |
| LCS 500-433097/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-1 MS | MW-01 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-1 MSD | MW-01 | Total Recoverable | Water | 6010C | 433097 |
| 500-145716-1 DU | MW-01 | Total Recoverable | Water | 6010C | 433097 |

### Analysis Batch: 433604

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-2 | MW-02 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-3 | MW-03 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-4 | MW-04 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-5 | MW-05 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-6 | MW-08 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-7 | MW-09 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-8 | MW-10 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-9 | MW-11 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-10 | MW-12 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-11 | MW-15 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-12 | MW-17 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-13 | MW-18 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-14 | MW-19 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-15 | Duplicate | Total Recoverable | Water | 6020A | 433097 |
| MB 500-433097/1-A | Method Blank | Total Recoverable | Water | 6020A | 433097 |
| LCS 500-433097/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 MS | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 433097 |
| 500-145716-1 DU | MW-01 | Total Recoverable | Water | 6020A | 433097 |

### Prep Batch: 434080

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-145716-2 | MW-02 | Total/NA | Water | 7470A | |
| 500-145716-3 | MW-03 | Total/NA | Water | 7470A | |
| 500-145716-4 | MW-04 | Total/NA | Water | 7470A | |
| 500-145716-5 | MW-05 | Total/NA | Water | 7470A | |
| 500-145716-6 | MW-08 | Total/NA | Water | 7470A | |
| 500-145716-7 | MW-09 | Total/NA | Water | 7470A | |
| 500-145716-8 | MW-10 | Total/NA | Water | 7470A | |
| 500-145716-9 | MW-11 | Total/NA | Water | 7470A | |
| 500-145716-10 | MW-12 | Total/NA | Water | 7470A | |

## Metals (Continued)

### Prep Batch: 434080 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-11 | MW-15 | Total/NA | Water | 7470A | |
| 500-145716-12 | MW-17 | Total/NA | Water | 7470A | |
| 500-145716-13 | MW-18 | Total/NA | Water | 7470A | |
| 500-145716-14 | MW-19 | Total/NA | Water | 7470A | |
| 500-145716-15 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-434080/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-434080/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-145716-4 MS | MW-04 | Total/NA | Water | 7470A | |
| 500-145716-4 MSD | MW-04 | Total/NA | Water | 7470A | |
| 500-145716-4 DU | MW-04 | Total/NA | Water | 7470A | |

### Analysis Batch: 434677

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | 7470A | 434080 |
| 500-145716-2 | MW-02 | Total/NA | Water | 7470A | 434080 |
| 500-145716-3 | MW-03 | Total/NA | Water | 7470A | 434080 |
| 500-145716-4 | MW-04 | Total/NA | Water | 7470A | 434080 |
| 500-145716-5 | MW-05 | Total/NA | Water | 7470A | 434080 |
| 500-145716-6 | MW-08 | Total/NA | Water | 7470A | 434080 |
| 500-145716-7 | MW-09 | Total/NA | Water | 7470A | 434080 |
| 500-145716-8 | MW-10 | Total/NA | Water | 7470A | 434080 |
| 500-145716-9 | MW-11 | Total/NA | Water | 7470A | 434080 |
| 500-145716-10 | MW-12 | Total/NA | Water | 7470A | 434080 |
| 500-145716-11 | MW-15 | Total/NA | Water | 7470A | 434080 |
| 500-145716-12 | MW-17 | Total/NA | Water | 7470A | 434080 |
| 500-145716-13 | MW-18 | Total/NA | Water | 7470A | 434080 |
| 500-145716-14 | MW-19 | Total/NA | Water | 7470A | 434080 |
| 500-145716-15 | Duplicate | Total/NA | Water | 7470A | 434080 |
| MB 500-434080/12-A | Method Blank | Total/NA | Water | 7470A | 434080 |
| LCS 500-434080/13-A | Lab Control Sample | Total/NA | Water | 7470A | 434080 |
| 500-145716-4 MS | MW-04 | Total/NA | Water | 7470A | 434080 |
| 500-145716-4 MSD | MW-04 | Total/NA | Water | 7470A | 434080 |
| 500-145716-4 DU | MW-04 | Total/NA | Water | 7470A | 434080 |

## General Chemistry

### Analysis Batch: 433168

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-145716-2 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-145716-3 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-145716-4 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-145716-5 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-145716-6 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-145716-7 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-145716-8 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-145716-9 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-145716-10 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-145716-11 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-145716-12 | MW-17 | Total/NA | Water | SM 2540C | |

## General Chemistry (Continued)

### Analysis Batch: 433168 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-13 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-145716-14 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-145716-15 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-433168/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-433168/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-145716-1 MS | MW-01 | Total/NA | Water | SM 2540C | |
| 500-145716-1 DU | MW-01 | Total/NA | Water | SM 2540C | |
| 500-145716-2 DU | MW-02 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 434275

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-145716-2 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-145716-3 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-145716-4 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-145716-5 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-145716-6 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-145716-7 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-145716-8 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-145716-9 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-145716-10 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-145716-11 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-145716-12 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-145716-13 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-145716-14 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-145716-15 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-434275/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-434275/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| 500-145716-1 MS | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-145716-1 MSD | MW-01 | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 434300

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-2 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-3 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-4 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-5 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-6 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-7 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-8 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-9 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-10 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-11 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-12 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-13 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-14 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-15 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-434300/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-434300/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-145716-7 MS | MW-09 | Total/NA | Water | SM 4500 Cl- E | |

## General Chemistry (Continued)

### Analysis Batch: 434300 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-7 MSD | MW-09 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 434591

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-2 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-434591/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-434591/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 435221

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-3 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-4 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-5 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-6 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-7 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-8 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-9 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-10 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-11 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-12 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-13 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-14 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-15 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-435221/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-435221/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-4 MS | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-145716-4 MSD | MW-04 | Total/NA | Water | SM 4500 SO4 E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-433097/1-A**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/19/18 11:03 | 05/22/18 19:21 | 1 |

**Lab Sample ID: LCS 500-433097/2-A**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.515 | | mg/L | | 103 | 80 - 120 |

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.545 | | mg/L | | 109 | 75 - 125 |

**Lab Sample ID: 500-145716-1 MSD**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.541 | | mg/L | | 108 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-145716-1 DU**
**Matrix: Water**
**Analysis Batch: 433534**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | <0.010 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-433097/1-A**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/19/18 11:03 | 05/21/18 22:39 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-433097/1-A**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 05/19/18 11:03 | 05/22/18 16:57 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/19/18 11:03 | 05/22/18 16:57 | 1 |

**Lab Sample ID: LCS 500-433097/2-A**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.508 | | mg/L | | 102 | 80 - 120 |
| Arsenic | 0.100 | 0.0952 | | mg/L | | 95 | 80 - 120 |
| Barium | 2.00 | 2.01 | | mg/L | | 100 | 80 - 120 |
| Beryllium | 0.0500 | 0.0518 | | mg/L | | 104 | 80 - 120 |
| Cadmium | 0.0500 | 0.0511 | | mg/L | | 102 | 80 - 120 |
| Calcium | 10.0 | 9.19 | | mg/L | | 92 | 80 - 120 |
| Chromium | 0.200 | 0.211 | | mg/L | | 105 | 80 - 120 |
| Cobalt | 0.500 | 0.533 | | mg/L | | 107 | 80 - 120 |
| Molybdenum | 1.00 | 0.940 | | mg/L | | 94 | 80 - 120 |
| Selenium | 0.100 | 0.0954 | | mg/L | | 95 | 80 - 120 |
| Thallium | 0.100 | 0.106 | | mg/L | | 106 | 80 - 120 |

**Lab Sample ID: LCS 500-433097/2-A**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 0.988 | | mg/L | | 99 | 80 - 120 |
| Lead | 0.100 | 0.109 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.521 | | mg/L | | 104 | 75 - 125 |
| Arsenic | <0.0010 | | 0.100 | 0.0994 | | mg/L | | 99 | 75 - 125 |
| Barium | 0.045 | | 2.00 | 2.06 | | mg/L | | 101 | 75 - 125 |
| Beryllium | <0.0010 | | 0.0500 | 0.0503 | | mg/L | | 101 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0516 | | mg/L | | 103 | 75 - 125 |
| Calcium | 88 | | 10.0 | 95.5 | 4 | mg/L | | 78 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.204 | | mg/L | | 102 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.506 | | mg/L | | 101 | 75 - 125 |
| Molybdenum | <0.0050 | | 1.00 | 0.974 | | mg/L | | 97 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.101 | | mg/L | | 98 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.105 | | mg/L | | 105 | 75 - 125 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.15 | | 1.00 | 1.14 | | mg/L | | 99 | 75 - 125 |
| Lead | 0.00068 | | 0.100 | 0.107 | | mg/L | | 107 | 75 - 125 |

**Lab Sample ID: 500-145716-1 MSD**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.523 | | mg/L | | 105 | 75 - 125 | 0 | 20 |
| Arsenic | <0.0010 | | 0.100 | 0.100 | | mg/L | | 99 | 75 - 125 | 1 | 20 |
| Barium | 0.045 | | 2.00 | 2.05 | | mg/L | | 100 | 75 - 125 | 0 | 20 |
| Beryllium | <0.0010 | | 0.0500 | 0.0494 | | mg/L | | 99 | 75 - 125 | 2 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0517 | | mg/L | | 103 | 75 - 125 | 0 | 20 |
| Calcium | 88 | | 10.0 | 97.1 | 4 | mg/L | | 94 | 75 - 125 | 2 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.206 | | mg/L | | 103 | 75 - 125 | 1 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.511 | | mg/L | | 102 | 75 - 125 | 1 | 20 |
| Molybdenum | <0.0050 | | 1.00 | 0.980 | | mg/L | | 98 | 75 - 125 | 1 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.101 | | mg/L | | 99 | 75 - 125 | 1 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.105 | | mg/L | | 105 | 75 - 125 | 0 | 20 |

**Lab Sample ID: 500-145716-1 MSD**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.15 | | 1.00 | 1.15 | | mg/L | | 101 | 75 - 125 | 1 | 20 |
| Lead | 0.00068 | | 0.100 | 0.109 | | mg/L | | 109 | 75 - 125 | 2 | 20 |

**Lab Sample ID: 500-145716-1 DU**
**Matrix: Water**
**Analysis Batch: 433393**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | <0.0030 | | mg/L | | NC | 20 |
| Arsenic | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Barium | 0.045 | | 0.0459 | | mg/L | | 1 | 20 |
| Beryllium | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Cadmium | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Calcium | 88 | | 89.6 | | mg/L | | 2 | 20 |
| Chromium | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Cobalt | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Molybdenum | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Selenium | <0.0025 | | <0.0025 | | mg/L | | NC | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-145716-1 DU**
**Matrix: Water**
**Analysis Batch: 433604**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 433097**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Boron | 0.15 | | 0.141 | | mg/L | | 5 | 20 |
| Lead | 0.00068 | | 0.000683 | | mg/L | | 1 | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-434080/12-A**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/25/18 12:35 | 05/30/18 15:47 | 1 |

**Lab Sample ID: LCS 500-434080/13-A**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00221 | | mg/L | | 111 | 80 - 120 |

**Lab Sample ID: 500-145716-4 MS**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00110 | | mg/L | | 110 | 75 - 125 |

**Lab Sample ID: 500-145716-4 MSD**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000972 | | mg/L | | 97 | 75 - 125 | 12 | 20 |

**Lab Sample ID: 500-145716-4 DU**
**Matrix: Water**
**Analysis Batch: 434677**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**
**Prep Batch: 434080**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-433168/1**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 05/21/18 04:08 | 1 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: LCS 500-433168/2**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | | | 250 | 296 | | mg/L | | 118 | 80 - 120 | | |

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 540 | | 250 | 788 | | mg/L | | 98 | 75 - 125 | | |

**Lab Sample ID: 500-145716-1 DU**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 540 | | | 554 | | mg/L | | | | 2 | 5 |

**Lab Sample ID: 500-145716-2 DU**
**Matrix: Water**
**Analysis Batch: 433168**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 500 | | | 508 | | mg/L | | | | 1 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-434300/4**
**Matrix: Water**
**Analysis Batch: 434300**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/28/18 18:51 | 1 |

**Lab Sample ID: LCS 500-434300/5**
**Matrix: Water**
**Analysis Batch: 434300**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 49.6 | | mg/L | | 99 | 85 - 115 | | |

**Lab Sample ID: 500-145716-7 MS**
**Matrix: Water**
**Analysis Batch: 434300**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 36 | | 50.0 | 81.0 | | mg/L | | 90 | 75 - 125 | | |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: 500-145716-7 MSD**
**Matrix: Water**
**Analysis Batch: 434300**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 36 | | 50.0 | 80.6 | | mg/L | | 89 | 75 - 125 | 1 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-434275/3**
**Matrix: Water**
**Analysis Batch: 434275**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/26/18 14:23 | 1 |

**Lab Sample ID: LCS 500-434275/4**
**Matrix: Water**
**Analysis Batch: 434275**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.4 | | mg/L | | 104 | 80 - 120 |

**Lab Sample ID: 500-145716-1 MS**
**Matrix: Water**
**Analysis Batch: 434275**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.12 | | 5.00 | 5.21 | | mg/L | | 102 | 75 - 125 |

**Lab Sample ID: 500-145716-1 MSD**
**Matrix: Water**
**Analysis Batch: 434275**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.12 | | 5.00 | 5.29 | | mg/L | | 103 | 75 - 125 | 2 | 20 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-434591/3**
**Matrix: Water**
**Analysis Batch: 434591**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/30/18 12:23 | 1 |

**Lab Sample ID: LCS 500-434591/4**
**Matrix: Water**
**Analysis Batch: 434591**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 20.3 | | mg/L | | 102 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: MB 500-435221/3**
**Matrix: Water**
**Analysis Batch: 435221**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 06/04/18 12:49 | 1 |

**Lab Sample ID: LCS 500-435221/4**
**Matrix: Water**
**Analysis Batch: 435221**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 20.0 | 19.6 | | mg/L | | 98 | 80 - 120 | | |

**Lab Sample ID: 500-145716-4 MS**
**Matrix: Water**
**Analysis Batch: 435221**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 100 | | 200 | 330 | | mg/L | | 113 | 75 - 125 | | |

**Lab Sample ID: 500-145716-4 MSD**
**Matrix: Water**
**Analysis Batch: 435221**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 100 | | 200 | 285 | | mg/L | | 90 | 75 - 125 | 15 | 20 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-01

**Date Collected: 05/17/18 15:15**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-1**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 19:37 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 22:46 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:05 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:04 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:13 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 18:53 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:30 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 434591 | | CLB | TAL CHI |
| | | | | | (Start) | 05/30/18 12:43 | | |
| | | | | | (End) | 05/30/18 12:44 | | |

## Client Sample ID: MW-02

**Date Collected: 05/15/18 09:05**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-2**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 19:56 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:12 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:24 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:06 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:20 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 18:54 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:38 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 434591 | | CLB | TAL CHI |
| | | | | | (Start) | 05/30/18 12:44 | | |
| | | | | | (End) | 05/30/18 12:45 | | |

## Client Sample ID: MW-03

**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-3**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:00 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-03

**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:16 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:28 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:08 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:26 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 18:55 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:41 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:51 | | |
| | | | | | (End) | 06/04/18 12:52 | | |

## Client Sample ID: MW-04

**Date Collected: 05/15/18 12:11**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:04 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:20 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:32 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:10 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:28 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 18:56 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:45 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:52 | | |
| | | | | | (End) | 06/04/18 12:53 | | |

## Client Sample ID: MW-05

**Date Collected: 05/15/18 13:31**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:08 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:24 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:44 | FXG | TAL CHI |

## Client Sample ID: MW-05

**Lab Sample ID: 500-145716-5**

**Date Collected: 05/15/18 13:31**

**Matrix: Water**

**Date Received: 05/18/18 17:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:23 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:31 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 18:57 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:48 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:55 | | |
| | | | | | (End) | 06/04/18 12:56 | | |

## Client Sample ID: MW-08

**Lab Sample ID: 500-145716-6**

**Date Collected: 05/17/18 13:29**

**Matrix: Water**

**Date Received: 05/18/18 17:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:12 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:27 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 433604 | 05/22/18 17:47 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:26 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:33 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 18:58 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 14:51 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:56 | | |
| | | | | | (End) | 06/04/18 12:57 | | |

## Client Sample ID: MW-09

**Lab Sample ID: 500-145716-7**

**Date Collected: 05/16/18 10:19**

**Matrix: Water**

**Date Received: 05/18/18 17:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:24 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:31 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 433604 | 05/22/18 17:51 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:28 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:36 | CLB | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-09

**Date Collected: 05/16/18 10:19**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 19:01 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:04 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:57 | | |
| | | | | | (End) | 06/04/18 12:58 | | |

## Client Sample ID: MW-10

**Date Collected: 05/16/18 11:41**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:28 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:35 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 17:55 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:30 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:39 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 19:02 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:07 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 12:58 | | |
| | | | | | (End) | 06/04/18 12:59 | | |

## Client Sample ID: MW-11

**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:32 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:39 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 433604 | 05/22/18 17:59 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:33 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:41 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:03 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:10 | EAT | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-11

**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:01 | | |
| | | | | | (End) | 06/04/18 13:02 | | |

## Client Sample ID: MW-12

**Date Collected: 05/16/18 14:41**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:36 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:43 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 18:03 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:35 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:44 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:21 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:13 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 25 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:02 | | |
| | | | | | (End) | 06/04/18 13:03 | | |

## Client Sample ID: MW-15

**Date Collected: 05/17/18 11:58**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-11

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:40 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:54 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 433604 | 05/22/18 18:07 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:37 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:46 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:04 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:16 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 25 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:03 | | |
| | | | | | (End) | 06/04/18 13:04 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-17

**Date Collected: 05/14/18 14:51**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-12

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:44 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/21/18 23:58 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 433604 | 05/22/18 18:11 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:44 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:49 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:04 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:19 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 25 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:04 | | |
| | | | | | (End) | 06/04/18 13:05 | | |

## Client Sample ID: MW-18

**Date Collected: 05/14/18 16:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:48 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/22/18 00:01 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433604 | 05/22/18 18:15 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:46 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:51 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 434300 | 05/28/18 19:05 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:22 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:05 | | |
| | | | | | (End) | 06/04/18 13:06 | | |

## Client Sample ID: MW-19

**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:52 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Client Sample ID: MW-19

**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/22/18 00:05 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 433604 | 05/22/18 18:18 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:49 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:54 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 19:07 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:25 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:06 | | |
| | | | | | (End) | 06/04/18 13:07 | | |

## Client Sample ID: Duplicate

**Date Collected: 05/14/18 00:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 433534 | 05/22/18 20:57 | PJ1 | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 433393 | 05/22/18 00:09 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 433097 | 05/19/18 11:03 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 433604 | 05/22/18 18:33 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 434080 | 05/25/18 12:35 | EEN | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 434677 | 05/30/18 16:51 | EEN | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 433168 | 05/21/18 04:57 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 434300 | 05/28/18 19:22 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 434275 | 05/26/18 15:29 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 435221 | | CLB | TAL CHI |
| | | | | | (Start) | 06/04/18 13:07 | | |
| | | | | | (End) | 06/04/18 13:08 | | |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

**Report To:**

| | |
|---|---|
| Contact: | Richard Gnat |
| Company: | KPRG and Associates, Inc |
| Address: | 14665 W. Lisbon Rd., Suite 2B |
| | Brookfield, WI 53005 |
| Phone: | 262-781-0475 |
| Email: | richardg@kprginc.com |

**Bill To:**

| | |
|---|---|
| Contact: | |
| Company: | |
| Address: | |
| | |
| Phone: | |
| Email | |
| PO #: | |

500-145716 COC

**Lab Lot #** 500-145716

| | |
|---|---|
| Package Sealed: Yes / No | Samples Sealed: Yes / No |
| Received on Ice: Yes / No | Samples Intact: Yes / No / N/A |
| Temperature °C of Cooler: 3.9, 4.7, 3.1, 2.1, 2.8 | |
| Within Hold Time: Yes / No | Preserv. Indicated: Yes / No / N/A |
| pH Check OK: Yes / No | Res. $CL_2$ Check OK: Yes / No / N/A |
| Sample Labels and COC Agree: Yes / No / COC not present | |

| | | | |
|---|---|---|---|
| **Sampler Name:** Ian John Howieson | **COMPANY:** KPRG & Associates Inc. | # / Cont. | |
| | | Volume | |
| **Project Name:** Quarterly- Powerton CCR | **TestAmerica Project Number:** 50011612 | Preserv. | |
| **Project Location:** Pekin, IL | **TAT** 15 Days | | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 5-17-18 | 15:15 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-02 | 5-15-18 | 09:05 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-03 | 5-15-18 | 11:00 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-04 | 5-15-18 | 12:11 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-05 | 5-15-18 | 13:31 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-08 | 5-17-18 | 13:29 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-09 | 5-16-18 | 10:19 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-10 | 5-16-18 | 11:41 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-11 | 5-16-18 | 13:01 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-12 | 5-16-18 | 14:41 | W | 5 | X | X | X | X | X | X | |
| 11 | | MW-15 | 5-17-18 | 11:58 | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 5-18-18 | 17:20 | | TA | 5/18/18 | 1720 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received: 05, 18, 18
Courier:
Hand Delivered: X
Bill of Lading:

__1__of__2__

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500145716

| Package Sealed | Samples Sealed |
|---|---|
| (Yes) No | (Yes) No |
| **Received on Ice** | **Samples Intact** |
| (Yes) No | (Yes) No N/A |

**Temperature °C of Cooler** 2.8, 2.1, 3.1, 3.9, 4.7

| Within Hold Time | Preserv. Indicated |
|---|---|
| (Yes) No | (Yes) No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| (Yes) No | (Yes) No N/A |

Sample Labels and COC Agree: (Yes) No COC not present

| Sampler Name: | COMPANY: |
|---|---|
| Ian John Howieson | KPRG & Associates Inc. |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly- Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | | MW-17 | 5-14-18 | 14:51 | W | 5 | X | X | X | X | X | X | |
| 13 | | MW-18 | 5-14-18 | 16:05 | W | 5 | X | X | X | X | X | X | |
| 14 | | MW-19 | 5-14-18 | 17:35 | W | 5 | X | X | X | X | X | X | |
| 15 | | Duplicates | 5-14-18 | -- | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 5-18-18 | 17:20 | | TA | 5/18/18 | 1720 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**
WW = Wastewater, SE = Sediment, W = Water, SO = Solid, S = Soil, DL = Drum Liquid, SL = Sludge, DS = Drum Solid, MS = Miscellaneous, L = Leachate, OL = Oil, W = Wipe, A = Air, O = _____

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 05/18/18
Courier:
Hand Delivered [X]
Bill of Lading:

__2__of__2__

STL-8208 (0600)

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-1

**Login Number: 145716**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.1, 2.8, 3.1, 3.9, 4.7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

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# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-145716-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*6/28/2018 1:30:40 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-145716-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-145716-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/18/2018 5:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 2.1° C, 2.8° C, 3.1° C, 3.9° C and 4.7° C.

**RAD**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-145716-1 | MW-01 | Water | 05/17/18 15:15 | 05/18/18 17:20 |
| 500-145716-2 | MW-02 | Water | 05/15/18 09:05 | 05/18/18 17:20 |
| 500-145716-3 | MW-03 | Water | 05/15/18 11:00 | 05/18/18 17:20 |
| 500-145716-4 | MW-04 | Water | 05/15/18 12:11 | 05/18/18 17:20 |
| 500-145716-5 | MW-05 | Water | 05/15/18 13:31 | 05/18/18 17:20 |
| 500-145716-6 | MW-08 | Water | 05/17/18 13:29 | 05/18/18 17:20 |
| 500-145716-7 | MW-09 | Water | 05/16/18 10:19 | 05/18/18 17:20 |
| 500-145716-8 | MW-10 | Water | 05/16/18 11:41 | 05/18/18 17:20 |
| 500-145716-9 | MW-11 | Water | 05/16/18 13:01 | 05/18/18 17:20 |
| 500-145716-10 | MW-12 | Water | 05/16/18 14:41 | 05/18/18 17:20 |
| 500-145716-11 | MW-15 | Water | 05/17/18 11:58 | 05/18/18 17:20 |
| 500-145716-12 | MW-17 | Water | 05/14/18 14:51 | 05/18/18 17:20 |
| 500-145716-13 | MW-18 | Water | 05/14/18 16:05 | 05/18/18 17:20 |
| 500-145716-14 | MW-19 | Water | 05/14/18 17:35 | 05/18/18 17:20 |
| 500-145716-15 | Duplicate | Water | 05/14/18 00:00 | 05/18/18 17:20 |

## Client Sample ID: MW-01

**Date Collected: 05/17/18 15:15**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.109 | U | 0.143 | 0.143 | 1.00 | 0.238 | pCi/L | 05/29/18 11:58 | 06/20/18 10:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *98.2* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.244 | U | 0.243 | 0.244 | 1.00 | 0.396 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *98.2* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.353 | U | 0.282 | 0.283 | 5.00 | 0.396 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-02

**Date Collected: 05/15/18 09:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0490 | U | 0.132 | 0.132 | 1.00 | 0.244 | pCi/L | 05/29/18 11:58 | 06/20/18 10:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *100* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.0624 | U | 0.224 | 0.224 | 1.00 | 0.408 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *100* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *84.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | -0.0134 | U | 0.260 | 0.260 | 5.00 | 0.408 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-03

**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0740 | U | 0.146 | 0.146 | 1.00 | 0.262 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.5* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.326 | U | 0.302 | 0.303 | 1.00 | 0.489 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *80.7* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.400 | U | 0.335 | 0.336 | 5.00 | 0.489 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-04

**Date Collected: 05/15/18 12:11**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.243 | U | 0.188 | 0.190 | 1.00 | 0.273 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.2* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.418** | | 0.270 | 0.273 | 1.00 | 0.417 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.2* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *81.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.661** | | 0.329 | 0.333 | 5.00 | 0.417 | pCi/L | | 06/23/18 19:42 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

**Client Sample ID: MW-05**
**Date Collected: 05/15/18 13:31**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-5**
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0476 | U | 0.142 | 0.142 | 1.00 | 0.266 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.3* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.337 | U | 0.248 | 0.250 | 1.00 | 0.390 | pCi/L | 05/29/18 13:22 | 06/19/18 10:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.3* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |
| *Y Carrier* | *86.0* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:52* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.385 | U | 0.286 | 0.288 | 5.00 | 0.390 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-08

**Date Collected: 05/17/18 13:29**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.323** | | 0.210 | 0.212 | 1.00 | 0.285 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.5* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.333 | U | 0.265 | 0.267 | 1.00 | 0.420 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.655** | | 0.338 | 0.341 | 5.00 | 0.420 | pCi/L | | 06/23/18 19:42 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

**Client Sample ID: MW-09**
**Date Collected: 05/16/18 10:19**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-7**
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.103 | U | 0.141 | 0.142 | 1.00 | 0.238 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.235 | U | 0.259 | 0.260 | 1.00 | 0.424 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.338 | U | 0.295 | 0.296 | 5.00 | 0.424 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-10

**Date Collected: 05/16/18 11:41**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.780 | | 0.259 | 0.268 | 1.00 | 0.251 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.9* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.766 | | 0.289 | 0.297 | 1.00 | 0.400 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *83.0* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.55 | | 0.388 | 0.400 | 5.00 | 0.400 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-11

**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.625 | | 0.234 | 0.241 | 1.00 | 0.235 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.497 | | 0.263 | 0.267 | 1.00 | 0.395 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *88.6* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.12 | | 0.352 | 0.360 | 5.00 | 0.395 | pCi/L | | 06/23/18 19:42 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

**Client Sample ID: MW-12**
**Date Collected: 05/16/18 14:41**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-10**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.690** | | 0.255 | 0.263 | 1.00 | 0.263 | pCi/L | 05/29/18 11:58 | 06/20/18 10:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 10:43* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0505 | U | 0.229 | 0.229 | 1.00 | 0.401 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *88.2* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.741** | | 0.343 | 0.349 | 5.00 | 0.401 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-15

**Date Collected: 05/17/18 11:58**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-11

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.172 | U | 0.154 | 0.154 | 1.00 | 0.232 | pCi/L | 05/29/18 11:58 | 06/20/18 13:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.6* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 13:17* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.226 | U | 0.217 | 0.218 | 1.00 | 0.351 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.6* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *85.6* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.397** | | 0.266 | 0.267 | 5.00 | 0.351 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-17

**Date Collected: 05/14/18 14:51**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-12

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.27 | | 0.316 | 0.336 | 1.00 | 0.250 | pCi/L | 05/29/18 11:58 | 06/20/18 13:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 13:17* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.755 | | 0.284 | 0.292 | 1.00 | 0.398 | pCi/L | 05/29/18 13:22 | 06/19/18 10:53 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |
| *Y Carrier* | *92.3* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:53* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 2.03 | | 0.425 | 0.445 | 5.00 | 0.398 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-18

**Date Collected: 05/14/18 16:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-13

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.332** | | 0.189 | 0.192 | 1.00 | 0.244 | pCi/L | 05/29/18 11:58 | 06/20/18 12:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 12:47* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.309 | U | 0.206 | 0.208 | 1.00 | 0.317 | pCi/L | 05/29/18 13:22 | 06/19/18 10:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |
| *Y Carrier* | *87.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.641** | | 0.280 | 0.283 | 5.00 | 0.317 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: MW-19

**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-14

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.235 | U | 0.173 | 0.174 | 1.00 | 0.246 | pCi/L | 05/29/18 11:58 | 06/20/18 12:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *104* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 12:47* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.326** | | 0.193 | 0.195 | 1.00 | 0.288 | pCi/L | 05/29/18 13:22 | 06/19/18 10:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *104* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |
| *Y Carrier* | *88.2* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.562** | | 0.259 | 0.261 | 5.00 | 0.288 | pCi/L | | 06/23/18 19:42 | 1 |

## Client Sample ID: Duplicate

**Date Collected: 05/14/18 00:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-15

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.193 | U | 0.166 | 0.166 | 1.00 | 0.249 | pCi/L | 05/29/18 11:58 | 06/20/18 12:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 12:47* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.404** | | 0.210 | 0.213 | 1.00 | 0.307 | pCi/L | 05/29/18 13:22 | 06/19/18 10:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |
| *Y Carrier* | *87.5* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:57* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.597** | | 0.268 | 0.270 | 5.00 | 0.307 | pCi/L | | 06/23/18 19:42 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Rad

### Prep Batch: 367843

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-145716-2 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-145716-3 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-145716-4 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-145716-5 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-145716-6 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-145716-7 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-145716-8 | MW-10 | Total/NA | Water | PrecSep-21 | |
| 500-145716-9 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-145716-10 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-145716-11 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-145716-12 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-145716-13 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-145716-14 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-145716-15 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-367843/23-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-367843/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-145716-10 DU | MW-12 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 367857

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-145716-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-145716-2 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-145716-3 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-145716-4 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-145716-5 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-145716-6 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-145716-7 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-145716-8 | MW-10 | Total/NA | Water | PrecSep_0 | |
| 500-145716-9 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-145716-10 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-145716-11 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-145716-12 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-145716-13 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-145716-14 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-145716-15 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-367857/23-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-367857/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-145716-10 DU | MW-12 | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-367843/23-A**
**Matrix: Water**
**Analysis Batch: 371317**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 367843**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.1840 | U | 0.137 | 0.138 | 1.00 | 0.195 | pCi/L | 05/29/18 11:58 | 06/20/18 12:44 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *05/29/18 11:58* | *06/20/18 12:44* | *1* |

**Lab Sample ID: LCS 160-367843/1-A**
**Matrix: Water**
**Analysis Batch: 371320**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 367843**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.8 | 11.82 | | 1.37 | 1.00 | 0.215 | pCi/L | 100 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *107* | | *40 - 110* |

**Lab Sample ID: 500-145716-10 DU**
**Matrix: Water**
**Analysis Batch: 371320**

**Client Sample ID: MW-12**
**Prep Type: Total/NA**
**Prep Batch: 367843**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.690 | | | 0.4100 | | 0.198 | 1.00 | 0.223 | pCi/L | | | 0.61 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *97.1* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-367857/23-A**
**Matrix: Water**
**Analysis Batch: 371107**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 367857**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.05875 | U | 0.188 | 0.188 | 1.00 | 0.328 | pCi/L | 05/29/18 13:22 | 06/19/18 10:59 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:59* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *05/29/18 13:22* | *06/19/18 10:59* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-367857/1-A**
**Matrix: Water**
**Analysis Batch: 371219**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 367857**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 8.21 | 7.721 | | 0.925 | 1.00 | 0.422 | pCi/L | 94 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *107* | | *40 - 110* |
| *Y Carrier* | *84.5* | | *40 - 110* |

**Lab Sample ID: 500-145716-10 DU**
**Matrix: Water**
**Analysis Batch: 371219**

**Client Sample ID: MW-12**
**Prep Type: Total/NA**
**Prep Batch: 367857**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0505 | U | | 0.1106 | U | 0.228 | 1.00 | 0.388 | pCi/L | | | 0.13 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *97.1* | | *40 - 110* |
| *Y Carrier* | *82.6* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Client Sample ID: MW-01
**Date Collected: 05/17/18 15:15**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:42 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-02
**Date Collected: 05/15/18 09:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:42 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 05/15/18 11:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-04
**Date Collected: 05/15/18 12:11**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Client Sample ID: MW-05

**Date Collected: 05/15/18 13:31**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-5**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:52 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-08

**Date Collected: 05/17/18 13:29**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-6**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-09

**Date Collected: 05/16/18 10:19**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-7**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-10

**Date Collected: 05/16/18 11:41**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-8**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Client Sample ID: MW-11

**Date Collected: 05/16/18 13:01**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-9**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-12

**Date Collected: 05/16/18 14:41**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-10**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 10:43 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 05/17/18 11:58**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-11**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 13:17 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-17

**Date Collected: 05/14/18 14:51**
**Date Received: 05/18/18 17:20**

**Lab Sample ID: 500-145716-12**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 13:17 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371219 | 06/19/18 10:53 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Client Sample ID: MW-18

**Date Collected: 05/14/18 16:05**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 12:47 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371132 | 06/19/18 10:57 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: MW-19

**Date Collected: 05/14/18 17:35**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 12:47 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371132 | 06/19/18 10:57 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

## Client Sample ID: Duplicate

**Date Collected: 05/14/18 00:00**
**Date Received: 05/18/18 17:20**

## Lab Sample ID: 500-145716-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 367843 | 05/29/18 11:58 | TJT | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 371320 | 06/20/18 12:47 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 367857 | 05/29/18 13:22 | TJT | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 371132 | 06/19/18 10:57 | RTM | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 372130 | 06/23/18 19:42 | RTM | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc. TestAmerica Job ID: 500-145716-2
Project/Site: Powerton CCR

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

## Laboratory: TestAmerica St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200023 | 11-30-18 |

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

**Report To:**

| | |
|---|---|
| Contact: | Richard Gnat |
| Company: | KPRG and Associates, Inc |
| Address: | 14665 W. Lisbon Rd., Suite 2B |
| | Brookfield, WI 53005 |
| Phone: | 262-781-0475 |
| Email: | richardg@kprginc.com |

**Bill To:**

| | |
|---|---|
| Contact: | |
| Company: | |
| Address: | |
| | |
| Phone: | |
| Email | |
| PO #: | |

500-145716 COC

**Lab Lot #** 500-145716

| | |
|---|---|
| Package Sealed: Yes / No | Samples Sealed: Yes / No |
| Received on Ice: Yes / No | Samples Intact: Yes / No / N/A |
| Temperature °C of Cooler: 3.9, 4.7, 3.1, 2.1, 2.8 | |
| Within Hold Time: Yes / No | Preserv. Indicated: Yes / No / N/A |
| pH Check OK: Yes / No | Res. $CL_2$ Check OK: Yes / No / N/A |
| Sample Labels and COC Agree: Yes / No / COC not present | |

| | | | |
|---|---|---|---|
| **Sampler Name:** Ian John Howieson | **COMPANY:** KPRG & Associates Inc. | # / Cont. | |
| | | Volume | |
| **Project Name:** Quarterly- Powerton CCR | **TestAmerica Project Number:** 50011612 | Preserv. | |
| **Project Location:** Pekin, IL | **TAT** 15 Days | | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 5-17-18 | 15:15 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-02 | 5-15-18 | 09:05 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-03 | 5-15-18 | 11:00 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-04 | 5-15-18 | 12:11 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-05 | 5-15-18 | 13:31 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-08 | 5-17-18 | 13:29 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-09 | 5-16-18 | 10:19 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-10 | 5-16-18 | 11:41 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-11 | 5-16-18 | 13:01 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-12 | 5-16-18 | 14:41 | W | 5 | X | X | X | X | X | X | |
| 11 | | MW-15 | 5-17-18 | 11:58 | W | 5 | X | X | X | X | X | X | |

| | COMPANY: | DATE: | TIME: | | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| RELINQUISHED BY: IJH | KPRG | 5-18-18 | 17:20 | RECEIVED BY: | TA | 5/18/18 | 1720 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received: 05/18/18
Courier:
Hand Delivered: X
Bill of Lading:

__1__of__2__

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-145716

| Package Sealed | Samples Sealed |
|---|---|
| (Yes) No | (Yes) No |
| **Received on Ice** | **Samples Intact** |
| (Yes) No | (Yes) No N/A |

**Temperature °C of Cooler** 2.8, 2.1, 3.1, 3.9, 4.7

| Within Hold Time | Preserv. Indicated |
|---|---|
| (Yes) No | (Yes) No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| (Yes) No | (Yes) No N/A |

Sample Labels and COC Agree: (Yes) No — COC not present

| Sampler Name: | COMPANY: | # / Cont. |
|---|---|---|
| Ian John Howieson | KPRG & Associates Inc. | Volume |
| **Project Name:** | **TestAmerica Project Number:** | Preserv. |
| Quarterly- Powerton CCR | 50011612 | |
| **Project Location:** | **TAT** | |
| Pekin, IL | 15 Days | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | | MW-17 | 5-14-18 | 14:51 | W | 5 | X | X | X | X | X | X | |
| 13 | | MW-18 | 5-14-18 | 16:05 | W | 5 | X | X | X | X | X | X | |
| 14 | | MW-19 | 5-14-18 | 17:35 | W | 5 | X | X | X | X | X | X | |
| 15 | | Duplicates | 5-14-18 | -- | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 5-18-18 | 17:20 | | TA | 5/18/18 | 1720 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
_____

**Preservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 05/18/18
Courier:
Hand Delivered [X]
Bill of Lading:

__2__of__2__

STL-8208 (0600)

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-104744.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-145716-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 6/19/2018 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-145716-1) | 5/17/18 | 15:15 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-02 (500-145716-2) | 5/15/18 | 09:05 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-145716-3) | 5/15/18 | 11:00 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-145716-4) | 5/15/18 | 12:11 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-145716-5) | 5/15/18 | 13:31 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-08 (500-145716-6) | 5/17/18 | 13:29 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-09 (500-145716-7) | 5/16/18 | 10:19 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-145716-8) | 5/16/18 | 11:41 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-11 (500-145716-9) | 5/16/18 | 13:01 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Relinquished by: | 5/21/18 1315 | TA | Overnight Prem | 05-22-18 0850 | TASTL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-104744.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-145716-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 6/19/2018 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-12 (500-145716-10) | 5/16/18 | 14:41 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-15 (500-145716-11) | 5/17/18 | 11:58 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-17 (500-145716-12) | 5/14/18 | 14:51 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-18 (500-145716-13) | 5/14/18 | 16:05 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-19 (500-145716-14) | 5/14/18 | 17:35 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-145716-15) | 5/14/18 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| *Possible Hazard Identification* | *Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)* |
|---|---|
| *Unconfirmed* | ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 5/21/18 1315 | TA | [signature] | 05-22-18 0850 | TAL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-2

**Login Number: 145716**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.1, 2.8, 3.1, 3.9, 4.7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-2

**Login Number: 145716**
**List Number: 2**
**Creator: Press, Nicholas B**

**List Source: TestAmerica St. Louis**
**List Creation: 05/22/18 11:08 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 12 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-145716-2

**Login Number: 145716**
**List Number: 3**
**Creator: Press, Nicholas B**

**List Source: TestAmerica St. Louis**
**List Creation: 05/22/18 11:23 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 12 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-145716-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) |
| 500-145716-1 | MW-01 | 98.2 |
| 500-145716-2 | MW-02 | 100 |
| 500-145716-3 | MW-03 | 96.5 |
| 500-145716-4 | MW-04 | 93.2 |
| 500-145716-5 | MW-05 | 95.3 |
| 500-145716-6 | MW-08 | 85.5 |
| 500-145716-7 | MW-09 | 92.9 |
| 500-145716-8 | MW-10 | 95.9 |
| 500-145716-9 | MW-11 | 95.0 |
| 500-145716-10 | MW-12 | 93.8 |
| 500-145716-10 DU | MW-12 | 97.1 |
| 500-145716-11 | MW-15 | 97.6 |
| 500-145716-12 | MW-17 | 92.9 |
| 500-145716-13 | MW-18 | 103 |
| 500-145716-14 | MW-19 | 104 |
| 500-145716-15 | Duplicate | 101 |
| LCS 160-367843/1-A | Lab Control Sample | 107 |
| MB 160-367843/23-A | Method Blank | 103 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) | Y Carrier (40-110) |
| 500-145716-1 | MW-01 | 98.2 | 87.1 |
| 500-145716-2 | MW-02 | 100 | 84.5 |
| 500-145716-3 | MW-03 | 96.5 | 80.7 |
| 500-145716-4 | MW-04 | 93.2 | 81.5 |
| 500-145716-5 | MW-05 | 95.3 | 86.0 |
| 500-145716-6 | MW-08 | 85.5 | 87.9 |
| 500-145716-7 | MW-09 | 92.9 | 87.1 |
| 500-145716-8 | MW-10 | 95.9 | 83.0 |
| 500-145716-9 | MW-11 | 95.0 | 88.6 |
| 500-145716-10 | MW-12 | 93.8 | 88.2 |
| 500-145716-10 DU | MW-12 | 97.1 | 82.6 |
| 500-145716-11 | MW-15 | 97.6 | 85.6 |
| 500-145716-12 | MW-17 | 92.9 | 92.3 |
| 500-145716-13 | MW-18 | 103 | 87.5 |
| 500-145716-14 | MW-19 | 104 | 88.2 |
| 500-145716-15 | Duplicate | 101 | 87.5 |
| LCS 160-367857/1-A | Lab Control Sample | 107 | 84.5 |
| MB 160-367857/23-A | Method Blank | 103 | 87.9 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier
Y Carrier = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-149809-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*8/24/2018 2:41:29 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-149809-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-149809-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/10/2018 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 3.6º C, 3.7º C, 5.2º C, 5.4º C and 6.0º C.

**Metals**
Method(s) 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-445195. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth

Method(s) 6020A: The CCV at line 63 and CCVL at line 38, associated with batch 500-445195 recovered above the upper control limit for Beryllium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-149809-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.051 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.14 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 86 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 430 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 48 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 43 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-02 — Lab Sample ID: 500-149809-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0016 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.067 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.5 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 89 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 530 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 54 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.15 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 51 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-149809-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0015 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.067 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.40 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 82 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 67 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 49 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-149809-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.031 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.79 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 84 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-04 (Continued) — Lab Sample ID: 500-149809-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 0.0060 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 510 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 71 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.32 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 49 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-149809-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.054 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.49 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0069 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 890 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 120 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.32 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 180 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-149809-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0055 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.071 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.1 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.019 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1200 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 270 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.32 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 190 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-149809-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.037 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.3 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 86 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.032 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0078 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-09 (Continued) — Lab Sample ID: 500-149809-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 690 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 39 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.14 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 180 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-149809-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0012 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.22 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.39 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 99 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00079 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0062 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 550 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 58 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.19 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 60 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-149809-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.68 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 3.0 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.4 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Cadmium | 0.00082 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 160 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0053 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0012 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.013 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 120 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.65 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 220 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-149809-10

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-149809-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.12 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.15 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.61 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00084 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00072 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.026 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 190 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.44 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 480 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-149809-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.026 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0083 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.048 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.3 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 200 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.033 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.060 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1700 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.48 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 520 | | 130 | | mg/L | 25 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-149809-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.019 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.087 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.055 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.3 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Cadmium | 0.00094 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-17 (Continued) — Lab Sample ID: 500-149809-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Calcium | 170 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0015 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.084 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Thallium | 0.0023 | | 0.0020 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1600 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 230 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.60 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 620 | | 250 | | mg/L | 50 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-149809-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.58 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0052 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1100 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 230 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.57 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 270 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-149809-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.078 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.8 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.032 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0052 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 720 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 37 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-149809-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: Duplicate (Continued)

## Lab Sample ID: 500-149809-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.067 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.6 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 91 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 560 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 55 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.14 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 70 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-149809-1 | MW-01 | Water | 08/08/18 09:49 | 08/10/18 16:50 |
| 500-149809-2 | MW-02 | Water | 08/07/18 09:30 | 08/10/18 16:50 |
| 500-149809-3 | MW-03 | Water | 08/07/18 10:54 | 08/10/18 16:50 |
| 500-149809-4 | MW-04 | Water | 08/07/18 12:27 | 08/10/18 16:50 |
| 500-149809-5 | MW-05 | Water | 08/07/18 13:30 | 08/10/18 16:50 |
| 500-149809-6 | MW-08 | Water | 08/08/18 11:11 | 08/10/18 16:50 |
| 500-149809-7 | MW-09 | Water | 08/08/18 12:46 | 08/10/18 16:50 |
| 500-149809-8 | MW-10 | Water | 08/08/18 14:44 | 08/10/18 16:50 |
| 500-149809-9 | MW-11 | Water | 08/09/18 14:03 | 08/10/18 16:50 |
| 500-149809-10 | MW-12 | Water | 08/09/18 15:46 | 08/10/18 16:50 |
| 500-149809-11 | MW-15 | Water | 08/09/18 11:42 | 08/10/18 16:50 |
| 500-149809-12 | MW-17 | Water | 08/06/18 14:41 | 08/10/18 16:50 |
| 500-149809-13 | MW-18 | Water | 08/06/18 15:46 | 08/10/18 16:50 |
| 500-149809-14 | MW-19 | Water | 08/06/18 16:48 | 08/10/18 16:50 |
| 500-149809-15 | Duplicate | Water | 08/07/18 00:00 | 08/10/18 16:50 |

## Client Sample ID: MW-01

**Date Collected: 08/08/18 09:49**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| **Barium** | **0.051** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| **Boron** | **0.14** | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 16:41 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| **Calcium** | **86** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:01 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:30 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **430** | | 10 | | mg/L | | | 08/12/18 22:38 | 1 |
| **Chloride** | **48** | | 2.0 | | mg/L | | | 08/20/18 14:07 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 08/13/18 18:53 | 1 |
| **Sulfate** | **43** | | 10 | | mg/L | | | 08/15/18 05:38 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

**Client Sample ID: MW-02**
**Date Collected: 08/07/18 09:30**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-2**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| **Arsenic** | **0.0016** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| **Barium** | **0.067** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| **Boron** | **1.5** | | 0.25 | | mg/L | | 08/11/18 12:28 | 08/13/18 16:45 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| **Calcium** | **89** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:04 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:36 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **530** | | 10 | | mg/L | | | 08/12/18 22:43 | 1 |
| **Chloride** | **54** | | 2.0 | | mg/L | | | 08/20/18 14:08 | 1 |
| **Fluoride** | **0.15** | | 0.10 | | mg/L | | | 08/13/18 18:57 | 1 |
| **Sulfate** | **51** | | 25 | | mg/L | | | 08/15/18 05:39 | 5 |

**Client Sample ID: MW-03**
**Date Collected: 08/07/18 10:54**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-3**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| **Arsenic** | **0.0015** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| **Barium** | **0.067** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| **Boron** | **0.40** | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 16:48 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| **Calcium** | **82** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:08 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:38 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **500** | | 10 | | mg/L | | | 08/12/18 22:46 | 1 |
| **Chloride** | **67** | | 10 | | mg/L | | | 08/20/18 14:42 | 5 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 08/13/18 19:00 | 1 |
| **Sulfate** | **49** | | 25 | | mg/L | | | 08/15/18 05:42 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

**Client Sample ID: MW-04**
**Date Collected: 08/07/18 12:27**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-4**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:20 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| **Arsenic** | **0.0011** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| **Barium** | **0.031** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| **Boron** | **0.79** | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 16:52 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| **Calcium** | **84** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| **Molybdenum** | **0.0060** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:12 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:39 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **510** | | 10 | | mg/L | | | 08/12/18 22:48 | 1 |
| **Chloride** | **71** | | 2.0 | | mg/L | | | 08/20/18 14:10 | 1 |
| **Fluoride** | **0.32** | | 0.10 | | mg/L | | | 08/13/18 19:03 | 1 |
| **Sulfate** | **49** | | 25 | | mg/L | | | 08/15/18 05:43 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

**Client Sample ID: MW-05**
**Date Collected: 08/07/18 13:30**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-5**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:23 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| **Barium** | **0.054** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| **Boron** | **0.49** | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 16:56 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| **Molybdenum** | **0.0069** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:16 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:41 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **890** | | 10 | | mg/L | | | 08/12/18 22:51 | 1 |
| **Chloride** | **120** | | 10 | | mg/L | | | 08/20/18 14:11 | 5 |
| **Fluoride** | **0.32** | | 0.10 | | mg/L | | | 08/13/18 19:06 | 1 |
| **Sulfate** | **180** | | 50 | | mg/L | | | 08/15/18 05:44 | 10 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-08

**Date Collected: 08/08/18 11:11**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-6

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:27 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| **Arsenic** | **0.0055** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| **Barium** | **0.071** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| **Boron** | **1.1** | | 0.25 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:00 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| **Calcium** | **140** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| **Molybdenum** | **0.019** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:19 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:43 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1200** | | 10 | | mg/L | | | 08/12/18 22:54 | 1 |
| **Chloride** | **270** | | 10 | | mg/L | | | 08/20/18 14:12 | 5 |
| **Fluoride** | **0.32** | | 0.10 | | mg/L | | | 08/13/18 19:10 | 1 |
| **Sulfate** | **190** | | 50 | | mg/L | | | 08/15/18 05:45 | 10 |

## Client Sample ID: MW-09

**Date Collected: 08/08/18 12:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-7

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:32 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| **Barium** | **0.037** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| **Boron** | **4.3** | | 1.0 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:03 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| **Calcium** | **86** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| **Molybdenum** | **0.032** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| **Selenium** | **0.0078** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:34 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:44 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **690** | | 10 | | mg/L | | | 08/12/18 22:56 | 1 |
| **Chloride** | **39** | | 2.0 | | mg/L | | | 08/20/18 14:16 | 1 |
| **Fluoride** | **0.14** | | 0.10 | | mg/L | | | 08/13/18 19:13 | 1 |
| **Sulfate** | **180** | | 50 | | mg/L | | | 08/15/18 05:46 | 10 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-10

**Date Collected: 08/08/18 14:44**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-8

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:36 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| **Arsenic** | **0.0012** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| **Barium** | **0.22** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| **Boron** | **0.39** | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:07 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| **Calcium** | **99** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| **Cobalt** | **0.014** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| **Lead** | **0.00079** | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| **Selenium** | **0.0062** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:38 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:46 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **550** | | 10 | | mg/L | | | 08/12/18 22:59 | 1 |
| **Chloride** | **58** | | 2.0 | | mg/L | | | 08/20/18 14:18 | 1 |
| **Fluoride** | **0.19** | | 0.10 | | mg/L | | | 08/23/18 16:03 | 1 |
| **Sulfate** | **60** | | 20 | | mg/L | | | 08/15/18 05:47 | 4 |

## Client Sample ID: MW-11

**Date Collected: 08/09/18 14:03**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-9

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:40 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| **Arsenic** | **0.68** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| **Barium** | **3.0** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| **Boron** | **1.4** | | 0.50 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:19 | 10 |
| **Cadmium** | **0.00082** | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| **Calcium** | **160** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| **Cobalt** | **0.0053** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| **Lead** | **0.0012** | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| **Molybdenum** | **0.013** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:42 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:57 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 08/12/18 23:01 | 1 |
| **Chloride** | **120** | | 10 | | mg/L | | | 08/20/18 14:19 | 5 |
| **Fluoride** | **0.65** | | 0.10 | | mg/L | | | 08/23/18 16:06 | 1 |
| **Sulfate** | **220** | | 50 | | mg/L | | | 08/15/18 05:48 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

**Client Sample ID: MW-12**
**Date Collected: 08/09/18 15:46**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-10**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:56 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| **Arsenic** | **0.12** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| **Barium** | **0.15** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| **Boron** | **0.61** | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:22 | 1 |
| **Cadmium** | **0.00084** | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| **Lead** | **0.00072** | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| **Molybdenum** | **0.026** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:46 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:59 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1300** | | 10 | | mg/L | | | 08/12/18 23:04 | 1 |
| **Chloride** | **190** | | 10 | | mg/L | | | 08/20/18 14:20 | 5 |
| **Fluoride** | **0.44** | | 0.10 | | mg/L | | | 08/23/18 16:09 | 1 |
| **Sulfate** | **480** | | 100 | | mg/L | | | 08/15/18 05:49 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

**Client Sample ID: MW-15**
**Date Collected: 08/09/18 11:42**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-11**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.026** | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:00 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| **Arsenic** | **0.0083** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| **Barium** | **0.048** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| **Boron** | **2.3** | | 0.50 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:26 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| **Calcium** | **200** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| **Molybdenum** | **0.033** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| **Selenium** | **0.060** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:49 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 11:00 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1700** | | 10 | | mg/L | | | 08/12/18 23:06 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 08/20/18 14:20 | 5 |
| **Fluoride** | **0.48** | | 0.10 | | mg/L | | | 08/23/18 16:12 | 1 |
| **Sulfate** | **520** | | 130 | | mg/L | | | 08/15/18 05:50 | 25 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

**Client Sample ID: MW-17**
**Date Collected: 08/06/18 14:41**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-12**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.019 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:04 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Arsenic | 0.087 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Barium | 0.055 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Boron | 1.3 | | 0.50 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:30 | 10 |
| Cadmium | 0.00094 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Calcium | 170 | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Cobalt | 0.0015 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Molybdenum | 0.084 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |
| Thallium | 0.0023 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:53 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 11:02 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1600 | | 10 | | mg/L | | | 08/12/18 23:09 | 1 |
| Chloride | 230 | | 10 | | mg/L | | | 08/20/18 14:21 | 5 |
| Fluoride | 0.60 | | 0.10 | | mg/L | | | 08/23/18 16:24 | 1 |
| Sulfate | 620 | | 250 | | mg/L | | | 08/15/18 05:51 | 50 |

**Client Sample ID: MW-18**
**Date Collected: 08/06/18 15:46**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-13**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.013** | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:08 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| **Barium** | **0.12** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| **Boron** | **0.58** | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:34 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| **Molybdenum** | **0.0052** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 14:57 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 11:03 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1100** | | 10 | | mg/L | | | 08/12/18 23:12 | 1 |
| **Chloride** | **230** | | 10 | | mg/L | | | 08/20/18 14:21 | 5 |
| **Fluoride** | **0.57** | | 0.10 | | mg/L | | | 08/23/18 16:32 | 1 |
| **Sulfate** | **270** | | 50 | | mg/L | | | 08/22/18 05:36 | 10 |

**Client Sample ID: MW-19**
**Date Collected: 08/06/18 16:48**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-14**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:12 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| **Barium** | **0.078** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| **Boron** | **3.8** | | 1.0 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:38 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| **Molybdenum** | **0.032** | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| **Selenium** | **0.0052** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:01 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 11:05 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **720** | | 10 | | mg/L | | | 08/12/18 23:14 | 1 |
| **Chloride** | **37** | | 2.0 | | mg/L | | | 08/20/18 14:43 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 08/23/18 16:45 | 1 |
| **Sulfate** | **170** | | 50 | | mg/L | | | 08/22/18 05:37 | 10 |

**Client Sample ID: Duplicate**
**Date Collected: 08/07/18 00:00**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-15**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:16 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| **Arsenic** | **0.0014** | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| **Barium** | **0.067** | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| **Boron** | **1.6** | | 0.50 | | mg/L | | 08/11/18 12:28 | 08/13/18 17:41 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| **Calcium** | **91** | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 15:05 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 11:06 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **560** | | 10 | | mg/L | | | 08/12/18 23:17 | 1 |
| **Chloride** | **55** | | 2.0 | | mg/L | | | 08/20/18 14:24 | 1 |
| **Fluoride** | **0.14** | | 0.10 | | mg/L | | | 08/23/18 16:49 | 1 |
| **Sulfate** | **70** | | 20 | | mg/L | | | 08/22/18 05:40 | 4 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| ^ | ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 445039

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-149809-2 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-149809-3 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-149809-4 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-149809-5 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-149809-6 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-149809-7 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-149809-8 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-149809-9 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-149809-10 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-149809-11 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-149809-12 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-149809-13 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-149809-14 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-149809-15 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-445039/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-445039/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 445195

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-2 | MW-02 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-3 | MW-03 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-4 | MW-04 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-5 | MW-05 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-6 | MW-08 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-7 | MW-09 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-8 | MW-10 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-9 | MW-11 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-10 | MW-12 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-11 | MW-15 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-12 | MW-17 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-13 | MW-18 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-14 | MW-19 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-15 | Duplicate | Total Recoverable | Water | 6020A | 445039 |
| MB 500-445039/1-A | Method Blank | Total Recoverable | Water | 6020A | 445039 |
| LCS 500-445039/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 445039 |

### Analysis Batch: 445254

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-2 | MW-02 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-3 | MW-03 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-4 | MW-04 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-5 | MW-05 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-6 | MW-08 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-7 | MW-09 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-8 | MW-10 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-9 | MW-11 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-10 | MW-12 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-11 | MW-15 | Total Recoverable | Water | 6010C | 445039 |

## Metals (Continued)

### Analysis Batch: 445254 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-12 | MW-17 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-13 | MW-18 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-14 | MW-19 | Total Recoverable | Water | 6010C | 445039 |
| 500-149809-15 | Duplicate | Total Recoverable | Water | 6010C | 445039 |
| MB 500-445039/1-A | Method Blank | Total Recoverable | Water | 6010C | 445039 |
| LCS 500-445039/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 445039 |

### Analysis Batch: 445305

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-2 | MW-02 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-3 | MW-03 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-4 | MW-04 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-5 | MW-05 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-6 | MW-08 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-7 | MW-09 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-8 | MW-10 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-9 | MW-11 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-10 | MW-12 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-11 | MW-15 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-12 | MW-17 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-13 | MW-18 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-14 | MW-19 | Total Recoverable | Water | 6020A | 445039 |
| 500-149809-15 | Duplicate | Total Recoverable | Water | 6020A | 445039 |
| MB 500-445039/1-A | Method Blank | Total Recoverable | Water | 6020A | 445039 |
| LCS 500-445039/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 445039 |

### Prep Batch: 445342

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-149809-2 | MW-02 | Total/NA | Water | 7470A | |
| 500-149809-3 | MW-03 | Total/NA | Water | 7470A | |
| 500-149809-4 | MW-04 | Total/NA | Water | 7470A | |
| 500-149809-5 | MW-05 | Total/NA | Water | 7470A | |
| 500-149809-6 | MW-08 | Total/NA | Water | 7470A | |
| 500-149809-7 | MW-09 | Total/NA | Water | 7470A | |
| 500-149809-8 | MW-10 | Total/NA | Water | 7470A | |
| 500-149809-9 | MW-11 | Total/NA | Water | 7470A | |
| 500-149809-10 | MW-12 | Total/NA | Water | 7470A | |
| 500-149809-11 | MW-15 | Total/NA | Water | 7470A | |
| 500-149809-12 | MW-17 | Total/NA | Water | 7470A | |
| 500-149809-13 | MW-18 | Total/NA | Water | 7470A | |
| 500-149809-14 | MW-19 | Total/NA | Water | 7470A | |
| 500-149809-15 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-445342/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-445342/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-149809-8 MS | MW-10 | Total/NA | Water | 7470A | |
| 500-149809-8 MSD | MW-10 | Total/NA | Water | 7470A | |
| 500-149809-8 DU | MW-10 | Total/NA | Water | 7470A | |

## Metals (Continued)

### Analysis Batch: 445532

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | 7470A | 445342 |
| 500-149809-2 | MW-02 | Total/NA | Water | 7470A | 445342 |
| 500-149809-3 | MW-03 | Total/NA | Water | 7470A | 445342 |
| 500-149809-4 | MW-04 | Total/NA | Water | 7470A | 445342 |
| 500-149809-5 | MW-05 | Total/NA | Water | 7470A | 445342 |
| 500-149809-6 | MW-08 | Total/NA | Water | 7470A | 445342 |
| 500-149809-7 | MW-09 | Total/NA | Water | 7470A | 445342 |
| 500-149809-8 | MW-10 | Total/NA | Water | 7470A | 445342 |
| 500-149809-9 | MW-11 | Total/NA | Water | 7470A | 445342 |
| 500-149809-10 | MW-12 | Total/NA | Water | 7470A | 445342 |
| 500-149809-11 | MW-15 | Total/NA | Water | 7470A | 445342 |
| 500-149809-12 | MW-17 | Total/NA | Water | 7470A | 445342 |
| 500-149809-13 | MW-18 | Total/NA | Water | 7470A | 445342 |
| 500-149809-14 | MW-19 | Total/NA | Water | 7470A | 445342 |
| 500-149809-15 | Duplicate | Total/NA | Water | 7470A | 445342 |
| MB 500-445342/12-A | Method Blank | Total/NA | Water | 7470A | 445342 |
| LCS 500-445342/13-A | Lab Control Sample | Total/NA | Water | 7470A | 445342 |
| 500-149809-8 MS | MW-10 | Total/NA | Water | 7470A | 445342 |
| 500-149809-8 MSD | MW-10 | Total/NA | Water | 7470A | 445342 |
| 500-149809-8 DU | MW-10 | Total/NA | Water | 7470A | 445342 |

## General Chemistry

### Analysis Batch: 445061

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-149809-2 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-149809-3 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-149809-4 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-149809-5 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-149809-6 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-149809-7 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-149809-8 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-149809-9 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-149809-10 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-149809-11 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-149809-12 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-149809-13 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-149809-14 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-149809-15 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-445061/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-445061/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-149809-1 DU | MW-01 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 445284

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-149809-2 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-149809-3 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-149809-4 | MW-04 | Total/NA | Water | SM 4500 F C | |

## General Chemistry (Continued)

### Analysis Batch: 445284 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-5 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-149809-6 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-149809-7 | MW-09 | Total/NA | Water | SM 4500 F C | |
| MB 500-445284/31 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-445284/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 445449

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-2 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-3 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-4 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-5 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-6 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-7 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-8 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-9 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-10 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-11 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-12 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-445449/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-445449/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 446204

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-2 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-3 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-4 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-5 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-6 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-7 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-8 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-9 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-10 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-11 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-12 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-13 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-14 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-15 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-446204/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-446204/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-7 MS | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-149809-7 MSD | MW-09 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 446448

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-13 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-14 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-149809-15 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-446448/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |

## General Chemistry (Continued)

### Analysis Batch: 446448 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-446448/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 446883

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-8 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-149809-9 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-149809-10 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-149809-11 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-149809-12 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-149809-13 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-149809-14 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-149809-15 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-446883/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| MB 500-446883/31 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-446883/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| LCS 500-446883/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| 500-149809-12 MS | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-149809-12 MSD | MW-17 | Total/NA | Water | SM 4500 F C | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-445039/1-A**
**Matrix: Water**
**Analysis Batch: 445254**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 445039**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/11/18 12:28 | 08/13/18 13:52 | 1 |

**Lab Sample ID: LCS 500-445039/2-A**
**Matrix: Water**
**Analysis Batch: 445254**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 445039**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.496 | | mg/L | | 99 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-445039/1-A**
**Matrix: Water**
**Analysis Batch: 445195**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 445039**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/11/18 12:28 | 08/13/18 12:59 | 1 |

**Lab Sample ID: MB 500-445039/1-A**
**Matrix: Water**
**Analysis Batch: 445305**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 445039**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 08/11/18 12:28 | 08/13/18 16:33 | 1 |

**Lab Sample ID: LCS 500-445039/2-A**
**Matrix: Water**
**Analysis Batch: 445195**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 445039**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.486 | | mg/L | | 97 | 80 - 120 |
| Arsenic | 0.100 | 0.0987 | | mg/L | | 99 | 80 - 120 |
| Barium | 2.00 | 2.09 | | mg/L | | 104 | 80 - 120 |
| Beryllium | 0.0500 | 0.0526 | ^ | mg/L | | 105 | 80 - 120 |
| Cadmium | 0.0500 | 0.0499 | | mg/L | | 100 | 80 - 120 |
| Calcium | 10.0 | 9.26 | | mg/L | | 93 | 80 - 120 |
| Chromium | 0.200 | 0.199 | | mg/L | | 99 | 80 - 120 |
| Cobalt | 0.500 | 0.512 | | mg/L | | 102 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-445039/2-A**
**Matrix: Water**
**Analysis Batch: 445195**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 445039**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lead | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |
| Molybdenum | 1.00 | 0.962 | | mg/L | | 96 | 80 - 120 |
| Selenium | 0.100 | 0.0975 | | mg/L | | 97 | 80 - 120 |
| Thallium | 0.100 | 0.102 | | mg/L | | 102 | 80 - 120 |

**Lab Sample ID: LCS 500-445039/2-A**
**Matrix: Water**
**Analysis Batch: 445305**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 445039**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 0.999 | | mg/L | | 100 | 80 - 120 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-445342/12-A**
**Matrix: Water**
**Analysis Batch: 445532**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 445342**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 08/14/18 11:53 | 08/15/18 10:27 | 1 |

**Lab Sample ID: LCS 500-445342/13-A**
**Matrix: Water**
**Analysis Batch: 445532**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 445342**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00183 | | mg/L | | 91 | 80 - 120 |

**Lab Sample ID: 500-149809-8 MS**
**Matrix: Water**
**Analysis Batch: 445532**

**Client Sample ID: MW-10**
**Prep Type: Total/NA**
**Prep Batch: 445342**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00104 | | mg/L | | 104 | 75 - 125 |

**Lab Sample ID: 500-149809-8 MSD**
**Matrix: Water**
**Analysis Batch: 445532**

**Client Sample ID: MW-10**
**Prep Type: Total/NA**
**Prep Batch: 445342**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00110 | | mg/L | | 110 | 75 - 125 | 5 | 20 |

**Lab Sample ID: 500-149809-8 DU**
**Matrix: Water**
**Analysis Batch: 445532**

**Client Sample ID: MW-10**
**Prep Type: Total/NA**
**Prep Batch: 445342**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-445061/1**
**Matrix: Water**
**Analysis Batch: 445061**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 08/12/18 22:23 | 1 |

**Lab Sample ID: LCS 500-445061/2**
**Matrix: Water**
**Analysis Batch: 445061**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 294 | | mg/L | | 118 | 80 - 120 |

**Lab Sample ID: 500-149809-1 DU**
**Matrix: Water**
**Analysis Batch: 445061**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 430 | | 448 | | mg/L | | 3 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-446204/4**
**Matrix: Water**
**Analysis Batch: 446204**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 08/20/18 14:06 | 1 |

**Lab Sample ID: LCS 500-446204/5**
**Matrix: Water**
**Analysis Batch: 446204**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 51.4 | | mg/L | | 103 | 85 - 115 |

**Lab Sample ID: 500-149809-7 MS**
**Matrix: Water**
**Analysis Batch: 446204**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 39 | | 50.0 | 82.0 | | mg/L | | 86 | 75 - 125 |

**Lab Sample ID: 500-149809-7 MSD**
**Matrix: Water**
**Analysis Batch: 446204**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 39 | | 50.0 | 83.5 | | mg/L | | 89 | 75 - 125 | 2 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-445284/31**
**Matrix: Water**
**Analysis Batch: 445284**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 08/13/18 18:24 | 1 |

**Lab Sample ID: LCS 500-445284/32**
**Matrix: Water**
**Analysis Batch: 445284**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.3 | | mg/L | | 103 | 80 - 120 |

**Lab Sample ID: MB 500-446883/3**
**Matrix: Water**
**Analysis Batch: 446883**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 08/23/18 14:41 | 1 |

**Lab Sample ID: MB 500-446883/31**
**Matrix: Water**
**Analysis Batch: 446883**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 08/23/18 16:19 | 1 |

**Lab Sample ID: LCS 500-446883/32**
**Matrix: Water**
**Analysis Batch: 446883**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.4 | | mg/L | | 104 | 80 - 120 |

**Lab Sample ID: LCS 500-446883/4**
**Matrix: Water**
**Analysis Batch: 446883**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.5 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: 500-149809-12 MS**
**Matrix: Water**
**Analysis Batch: 446883**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.60 | | 5.00 | 5.80 | | mg/L | | 104 | 75 - 125 |

**Lab Sample ID: 500-149809-12 MSD**
**Matrix: Water**
**Analysis Batch: 446883**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.60 | | 5.00 | 5.69 | | mg/L | | 102 | 75 - 125 | 2 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-445449/3**
**Matrix: Water**
**Analysis Batch: 445449**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 08/15/18 05:30 | 1 |

**Lab Sample ID: LCS 500-445449/4**
**Matrix: Water**
**Analysis Batch: 445449**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 20.2 | | mg/L | | 101 | 80 - 120 |

**Lab Sample ID: MB 500-446448/3**
**Matrix: Water**
**Analysis Batch: 446448**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 08/22/18 05:28 | 1 |

**Lab Sample ID: LCS 500-446448/4**
**Matrix: Water**
**Analysis Batch: 446448**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 21.8 | | mg/L | | 109 | 80 - 120 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-01

**Date Collected: 08/08/18 09:49**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:08 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:01 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445305 | 08/13/18 16:41 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:30 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:38 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 446204 | 08/20/18 14:07 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 445284 | 08/13/18 18:53 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:38 | | |
| | | | | | (End) | 08/15/18 05:39 | | |

## Client Sample ID: MW-02

**Date Collected: 08/07/18 09:30**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:12 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:04 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 445305 | 08/13/18 16:45 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:36 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:43 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 446204 | 08/20/18 14:08 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 445284 | 08/13/18 18:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:39 | | |
| | | | | | (End) | 08/15/18 05:40 | | |

## Client Sample ID: MW-03

**Date Collected: 08/07/18 10:54**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:16 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-03

**Date Collected: 08/07/18 10:54**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:08 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445305 | 08/13/18 16:48 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:38 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:46 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:42 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 445284 | 08/13/18 19:00 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:42 | | |
| | | | | | (End) | 08/15/18 05:43 | | |

## Client Sample ID: MW-04

**Date Collected: 08/07/18 12:27**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:20 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:12 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445305 | 08/13/18 16:52 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:39 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:48 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 446204 | 08/20/18 14:10 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 445284 | 08/13/18 19:03 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:43 | | |
| | | | | | (End) | 08/15/18 05:44 | | |

## Client Sample ID: MW-05

**Date Collected: 08/07/18 13:30**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:23 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:16 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445305 | 08/13/18 16:56 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-05

**Date Collected: 08/07/18 13:30**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:41 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:51 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:11 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 445284 | 08/13/18 19:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:44 | | |
| | | | | | (End) | 08/15/18 05:45 | | |

## Client Sample ID: MW-08

**Date Collected: 08/08/18 11:11**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:27 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:19 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 445305 | 08/13/18 17:00 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:43 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:54 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:12 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 445284 | 08/13/18 19:10 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:45 | | |
| | | | | | (End) | 08/15/18 05:46 | | |

## Client Sample ID: MW-09

**Date Collected: 08/08/18 12:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:32 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:34 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 445305 | 08/13/18 17:03 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:44 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:56 | CLB | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-09

**Date Collected: 08/08/18 12:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 446204 | 08/20/18 14:16 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 445284 | 08/13/18 19:13 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:46 | | |
| | | | | | (End) | 08/15/18 05:47 | | |

## Client Sample ID: MW-10

**Date Collected: 08/08/18 14:44**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:36 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:38 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445305 | 08/13/18 17:07 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:46 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 22:59 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 446204 | 08/20/18 14:18 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:03 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:47 | | |
| | | | | | (End) | 08/15/18 05:48 | | |

## Client Sample ID: MW-11

**Date Collected: 08/09/18 14:03**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:40 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:42 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 445305 | 08/13/18 17:19 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:57 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 23:01 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:19 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:06 | EAT | TAL CHI |

## Client Sample ID: MW-11

**Date Collected: 08/09/18 14:03**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:48 | | |
| | | | | | (End) | 08/15/18 05:49 | | |

## Client Sample ID: MW-12

**Date Collected: 08/09/18 15:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 14:56 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:46 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445305 | 08/13/18 17:22 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 10:59 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 23:04 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:20 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:09 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:49 | | |
| | | | | | (End) | 08/15/18 05:50 | | |

## Client Sample ID: MW-15

**Date Collected: 08/09/18 11:42**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-11

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 15:00 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:49 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 445305 | 08/13/18 17:26 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 11:00 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 23:06 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:20 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 25 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:50 | | |
| | | | | | (End) | 08/15/18 05:51 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-17

**Date Collected: 08/06/18 14:41**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-12

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 15:04 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:53 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 445305 | 08/13/18 17:30 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 11:02 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 23:09 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:21 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:24 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 50 | 445449 | | CLB | TAL CHI |
| | | | | | (Start) | 08/15/18 05:51 | | |
| | | | | | (End) | 08/15/18 05:52 | | |

## Client Sample ID: MW-18

**Date Collected: 08/06/18 15:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 15:08 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 14:57 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445305 | 08/13/18 17:34 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 11:03 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 23:12 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 446204 | 08/20/18 14:21 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:32 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 446448 | | CLB | TAL CHI |
| | | | | | (Start) | 08/22/18 05:36 | | |
| | | | | | (End) | 08/22/18 05:37 | | |

## Client Sample ID: MW-19

**Date Collected: 08/06/18 16:48**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 15:12 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Client Sample ID: MW-19

**Date Collected: 08/06/18 16:48**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 15:01 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 445305 | 08/13/18 17:38 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 11:05 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 23:14 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 446204 | 08/20/18 14:43 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:45 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 446448 | | CLB | TAL CHI |
| | | | | | (Start) | 08/22/18 05:37 | | |
| | | | | | (End) | 08/22/18 05:38 | | |

## Client Sample ID: Duplicate

**Date Collected: 08/07/18 00:00**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 445254 | 08/13/18 15:16 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 445195 | 08/13/18 15:05 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 445039 | 08/11/18 12:28 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 445305 | 08/13/18 17:41 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 445342 | 08/14/18 11:53 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 445532 | 08/15/18 11:06 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 445061 | 08/12/18 23:17 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 446204 | 08/20/18 14:24 | HMW | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 446883 | 08/23/18 16:49 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 446448 | | CLB | TAL CHI |
| | | | | | (Start) | 08/22/18 05:40 | | |
| | | | | | (End) | 08/22/18 05:41 | | |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: |
|---|---|---|
| Contact: | Richard Gnat | Contact: |
| Company: | KPRG and Associates, Inc | Company: |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: |
| | Brookfield, WI 53005 | |
| Phone: | 262-781-0475 | Phone: |
| Email: | richardg@kprginc.com | Email |
| | | PO #: |

500-149809 COC

**Lab Lot #** 500-149809

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No N/A |

**Temperature °C of Cooler** 3.6, 3.7, 10.0, 5.2, 5.4

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| Yes No | Yes No N/A |

Sample Labels and COC Agree
Yes No COC not present

| Sampler Name: | COMPANY: |
|---|---|
| Ian John Howieson | KPRG & Associates Inc. |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly- Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 8-8-18 | 09:49 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-02 | 8-7-18 | 09:30 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-03 | 8-7-18 | 10:54 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-04 | 8-7-18 | 12:27 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-05 | 8-7-18 | 13:30 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-08 | 8-8-18 | 11:11 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-09 | 8-8-18 | 12:46 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-10 | 8-8-18 | 14:44 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-11 | 8-9-18 | 14:03 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-12 | 8-9-18 | 15:46 | W | 5 | X | X | X | X | X | X | |
| 11 | | MW-13 | 8-9-18 | 11:42 | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 8-10-18 | 16:50 | | TA | 8/10/18 | 1650 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other

_____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 08/10/18
Courier:
Hand Delivered [X]
Bill of Lading:

__1__of__2__

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-149809

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No N/A |

**Temperature °C of Cooler** 3.6, 3.7, 6.0, 5.2, 5.4

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| Yes No | Yes No N/A |

**Sample Labels and COC Agree**
Yes No COC not present

| Sampler Name: | COMPANY: |
|---|---|
| Ian John Howieson | KPRG & Associates Inc. |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly- Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | | MW-17 | 8-6-18 | 14:41 | W | 5 | X | X | X | X | X | X | |
| 13 | | MW-18 | 8-6-18 | 15:46 | W | 5 | X | X | X | X | X | X | |
| 14 | | MW-19 | 8-6-18 | 16:48 | W | 5 | X | X | X | X | X | X | |
| 15 | | Duplicates | 8-7-18 | -- | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 8-10-18 | 16:50 | | TA | 8/10/18 | 1650 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
_____

**reservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 08,10,18
Courier:
Hand Delivered X
Bill of Lading:

__2__of__2__

STL-8208 (0600)

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-149809-1

**Login Number: 149809**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.6, 3.7, 5.2, 5.4, 6.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica

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# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-149809-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*9/26/2018 7:15:47 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-149809-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-149809-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/10/2018 4:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 3.6º C, 3.7º C, 5.2º C, 5.4º C and 6.0º C.

**RAD**
Method(s) PrecSep_0: Radium 228 Prep Batch 160-382531:

Sample aliquot 280-113076-1 reduced due to potential matrix interference. Sample was black, opaque, contained heavy sediment levels, and contained plant material.

Sample aliquots 500-149809-8 and 500-149809-12 reduced due to potential matrix interference. Samples contained heavy levels of black sediment.

Sample aliquot 500-149809-9 reduced due to potential matrix interference. Sample was yellow, murky, and contained sediment.

Sample aliquot 500-149809-10 reduced due to potential matrix interference. Sample contained brown floating debris.

Sample aliquot 500-149809-13 reduced due to potential matrix interference. Sample had a strong odor similar to that of sulfur.

MW-10 (500-149809-8), MW-11 (500-149809-9), MW-12 (500-149809-10), MW-17 (500-149809-12) and MW-18 (500-149809-13)

Method(s) PrecSep-21: Radium 226 Prep Batch 160-382525:

Sample aliquot 280-113076-1 reduced due to potential matrix interference. Sample was black, opaque, contained heavy sediment levels, and contained plant material.

Sample aliquots 500-149809-8 and 500-149809-12 reduced due to potential matrix interference. Samples contained heavy levels of black sediment.

Sample aliquot 500-149809-9 reduced due to potential matrix interference. Sample was yellow, murky, and contained sediment.

Sample aliquot 500-149809-10 reduced due to potential matrix interference. Sample contained brown floating debris.

Sample aliquot 500-149809-13 reduced due to potential matrix interference. Sample had a strong odor similar to that of sulfur.

MW-10 (500-149809-8), MW-11 (500-149809-9), MW-12 (500-149809-10), MW-17 (500-149809-12) and MW-18 (500-149809-13)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-149809-1 | MW-01 | Water | 08/08/18 09:49 | 08/10/18 16:50 |
| 500-149809-2 | MW-02 | Water | 08/07/18 09:30 | 08/10/18 16:50 |
| 500-149809-3 | MW-03 | Water | 08/07/18 10:54 | 08/10/18 16:50 |
| 500-149809-4 | MW-04 | Water | 08/07/18 12:27 | 08/10/18 16:50 |
| 500-149809-5 | MW-05 | Water | 08/07/18 13:30 | 08/10/18 16:50 |
| 500-149809-6 | MW-08 | Water | 08/08/18 11:11 | 08/10/18 16:50 |
| 500-149809-7 | MW-09 | Water | 08/08/18 12:46 | 08/10/18 16:50 |
| 500-149809-8 | MW-10 | Water | 08/08/18 14:44 | 08/10/18 16:50 |
| 500-149809-9 | MW-11 | Water | 08/09/18 14:03 | 08/10/18 16:50 |
| 500-149809-10 | MW-12 | Water | 08/09/18 15:46 | 08/10/18 16:50 |
| 500-149809-11 | MW-15 | Water | 08/09/18 11:42 | 08/10/18 16:50 |
| 500-149809-12 | MW-17 | Water | 08/06/18 14:41 | 08/10/18 16:50 |
| 500-149809-13 | MW-18 | Water | 08/06/18 15:46 | 08/10/18 16:50 |
| 500-149809-14 | MW-19 | Water | 08/06/18 16:48 | 08/10/18 16:50 |
| 500-149809-15 | Duplicate | Water | 08/07/18 00:00 | 08/10/18 16:50 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

## Client Sample ID: MW-01

**Date Collected: 08/08/18 09:49**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.218** | | 0.0846 | 0.0868 | 1.00 | 0.0848 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.5* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.361 | U | 0.246 | 0.249 | 1.00 | 0.384 | pCi/L | 08/15/18 10:00 | 08/22/18 09:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.5* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |
| *Y Carrier* | *93.1* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.579** | | 0.260 | 0.264 | 5.00 | 0.384 | pCi/L | | 09/11/18 02:43 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

**Client Sample ID: MW-02**
**Date Collected: 08/07/18 09:30**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-2**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.293 | | 0.0924 | 0.0961 | 1.00 | 0.0714 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.1* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.330 | U | 0.241 | 0.243 | 1.00 | 0.376 | pCi/L | 08/15/18 10:00 | 08/22/18 09:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.1* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |
| *Y Carrier* | *85.6* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.622 | | 0.258 | 0.261 | 5.00 | 0.376 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-03

**Date Collected: 08/07/18 10:54**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.214 | | 0.0803 | 0.0825 | 1.00 | 0.0767 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0137 | U | 0.191 | 0.191 | 1.00 | 0.341 | pCi/L | 08/15/18 10:00 | 08/22/18 09:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |
| *Y Carrier* | *89.3* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.227 | U | 0.207 | 0.208 | 5.00 | 0.341 | pCi/L | | 09/11/18 02:43 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

**Client Sample ID: MW-04**
**Date Collected: 08/07/18 12:27**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-4**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.198** | | 0.0801 | 0.0821 | 1.00 | 0.0789 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.2* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0210 | U | 0.186 | 0.186 | 1.00 | 0.334 | pCi/L | 08/15/18 10:00 | 08/22/18 09:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.2* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |
| *Y Carrier* | *90.1* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.219 | U | 0.203 | 0.203 | 5.00 | 0.334 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-05

**Date Collected: 08/07/18 13:30**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.220** | | 0.0870 | 0.0892 | 1.00 | 0.0905 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.303 | U | 0.263 | 0.265 | 1.00 | 0.423 | pCi/L | 08/15/18 10:00 | 08/22/18 09:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |
| *Y Carrier* | *86.4* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.523** | | 0.277 | 0.280 | 5.00 | 0.423 | pCi/L | | 09/11/18 02:43 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

## Client Sample ID: MW-08

**Date Collected: 08/08/18 11:11**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.309** | | 0.0962 | 0.100 | 1.00 | 0.0786 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0582 | U | 0.234 | 0.234 | 1.00 | 0.410 | pCi/L | 08/15/18 10:00 | 08/22/18 09:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |
| *Y Carrier* | *80.4* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.367 | U | 0.253 | 0.254 | 5.00 | 0.410 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-09

**Date Collected: 08/08/18 12:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.266** | | 0.0889 | 0.0921 | 1.00 | 0.0739 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.9* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.173 | U | 0.207 | 0.208 | 1.00 | 0.342 | pCi/L | 08/15/18 10:00 | 08/22/18 09:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.9* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |
| *Y Carrier* | *88.6* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:16* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.440** | | 0.225 | 0.227 | 5.00 | 0.342 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-10

**Date Collected: 08/08/18 14:44**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.557** | | 0.149 | 0.157 | 1.00 | 0.121 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.0123 | U | 0.306 | 0.306 | 1.00 | 0.551 | pCi/L | 08/15/18 10:00 | 08/22/18 09:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |
| *Y Carrier* | *80.0* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.545 | U | 0.340 | 0.344 | 5.00 | 0.551 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-11

**Date Collected: 08/09/18 14:03**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.940 | | 0.187 | 0.205 | 1.00 | 0.108 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.536 | | 0.332 | 0.336 | 1.00 | 0.507 | pCi/L | 08/15/18 10:00 | 08/22/18 09:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.8* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.48 | | 0.381 | 0.394 | 5.00 | 0.507 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-12

**Date Collected: 08/09/18 15:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-10

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.456** | | 0.135 | 0.141 | 1.00 | 0.105 | pCi/L | 08/15/18 08:57 | 09/07/18 05:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.2* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:35* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.279 | U | 0.331 | 0.332 | 1.00 | 0.546 | pCi/L | 08/15/18 10:00 | 08/22/18 09:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.2* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |
| *Y Carrier* | *81.9* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.735** | | 0.357 | 0.361 | 5.00 | 0.546 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-15

**Date Collected: 08/09/18 11:42**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-11

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.246** | | 0.0895 | 0.0922 | 1.00 | 0.0884 | pCi/L | 08/15/18 08:57 | 09/07/18 05:36 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.6* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:36* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.320 | U | 0.212 | 0.214 | 1.00 | 0.323 | pCi/L | 08/15/18 10:00 | 08/22/18 09:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.6* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |
| *Y Carrier* | *85.2* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.566** | | 0.230 | 0.233 | 5.00 | 0.323 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-17

**Date Collected: 08/06/18 14:41**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-12

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.619 | | 0.156 | 0.166 | 1.00 | 0.117 | pCi/L | 08/15/18 08:57 | 09/07/18 05:36 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.3* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:36* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.720 | | 0.340 | 0.347 | 1.00 | 0.491 | pCi/L | 08/15/18 10:00 | 08/22/18 09:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.3* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |
| *Y Carrier* | *84.1* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:17* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.34 | | 0.374 | 0.385 | 5.00 | 0.491 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-18

**Date Collected: 08/06/18 15:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-13

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.325 | | 0.112 | 0.116 | 1.00 | 0.0992 | pCi/L | 08/15/18 08:57 | 09/07/18 05:37 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.6* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:37* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.695 | | 0.365 | 0.371 | 1.00 | 0.541 | pCi/L | 08/15/18 10:00 | 08/22/18 09:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.6* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |
| *Y Carrier* | *79.3* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.02 | | 0.382 | 0.389 | 5.00 | 0.541 | pCi/L | | 09/11/18 02:43 | 1 |

## Client Sample ID: MW-19

**Date Collected: 08/06/18 16:48**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-14

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.268 | | 0.0900 | 0.0932 | 1.00 | 0.0790 | pCi/L | 08/15/18 08:57 | 09/07/18 05:37 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:37* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.567 | | 0.287 | 0.292 | 1.00 | 0.415 | pCi/L | 08/15/18 10:00 | 08/22/18 09:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |
| *Y Carrier* | *74.0* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.835 | | 0.301 | 0.307 | 5.00 | 0.415 | pCi/L | | 09/11/18 02:43 | 1 |

**Client Sample ID: Duplicate**
**Date Collected: 08/07/18 00:00**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-15**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.206 | | 0.0779 | 0.0801 | 1.00 | 0.0620 | pCi/L | 08/15/18 08:57 | 09/07/18 05:38 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.9* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:38* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.204 | U | 0.282 | 0.283 | 1.00 | 0.471 | pCi/L | 08/15/18 10:00 | 08/22/18 09:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.9* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |
| *Y Carrier* | *68.8* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.410 | U | 0.293 | 0.294 | 5.00 | 0.471 | pCi/L | | 09/11/18 02:43 | 1 |

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Rad

### Prep Batch: 382525

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-149809-2 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-149809-3 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-149809-4 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-149809-5 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-149809-6 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-149809-7 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-149809-8 | MW-10 | Total/NA | Water | PrecSep-21 | |
| 500-149809-9 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-149809-10 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-149809-11 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-149809-12 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-149809-13 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-149809-14 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-149809-15 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-382525/22-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-382525/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-149809-15 DU | Duplicate | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 382531

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-149809-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-149809-2 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-149809-3 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-149809-4 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-149809-5 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-149809-6 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-149809-7 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-149809-8 | MW-10 | Total/NA | Water | PrecSep_0 | |
| 500-149809-9 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-149809-10 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-149809-11 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-149809-12 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-149809-13 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-149809-14 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-149809-15 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-382531/22-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-382531/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-149809-15 DU | Duplicate | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-382525/22-A**
**Matrix: Water**
**Analysis Batch: 387770**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 382525**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.1537 | | 0.0721 | 0.0734 | 1.00 | 0.0777 | pCi/L | 08/15/18 08:57 | 09/07/18 05:38 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.0* | | *40 - 110* | *08/15/18 08:57* | *09/07/18 05:38* | *1* |

**Lab Sample ID: LCS 160-382525/1-A**
**Matrix: Water**
**Analysis Batch: 387769**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 382525**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 10.54 | | 1.09 | 1.00 | 0.0673 | pCi/L | 93 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *97.3* | | *40 - 110* |

**Lab Sample ID: 500-149809-15 DU**
**Matrix: Water**
**Analysis Batch: 387770**

**Client Sample ID: Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 382525**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.206 | | | 0.2069 | | 0.0824 | 1.00 | 0.0767 | pCi/L | | | 0 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *96.5* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-382531/22-A**
**Matrix: Water**
**Analysis Batch: 384512**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 382531**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.05685 | U | 0.219 | 0.219 | 1.00 | 0.386 | pCi/L | 08/15/18 10:00 | 08/22/18 09:18 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.0* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |
| *Y Carrier* | *82.2* | | *40 - 110* | *08/15/18 10:00* | *08/22/18 09:18* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-382531/1-A**
**Matrix: Water**
**Analysis Batch: 384512**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 382531**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 11.1 | 11.55 | | 1.28 | 1.00 | 0.359 | pCi/L | 104 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *97.3* | | *40 - 110* |
| *Y Carrier* | *88.2* | | *40 - 110* |

**Lab Sample ID: 500-149809-15 DU**
**Matrix: Water**
**Analysis Batch: 384512**

**Client Sample ID: Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 382531**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.204 | U | | 0.07311 | U | 0.232 | 1.00 | 0.402 | pCi/L | | | 0.25 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *96.5* | | *40 - 110* |
| *Y Carrier* | *85.2* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

## Client Sample ID: MW-01
**Date Collected: 08/08/18 09:49**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:16 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-02
**Date Collected: 08/07/18 09:30**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:16 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 08/07/18 10:54**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:16 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-04
**Date Collected: 08/07/18 12:27**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:16 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

## Client Sample ID: MW-05

**Date Collected: 08/07/18 13:30**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:16 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-08

**Date Collected: 08/08/18 11:11**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:16 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-09

**Date Collected: 08/08/18 12:46**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:16 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-10

**Date Collected: 08/08/18 14:44**
**Date Received: 08/10/18 16:50**

## Lab Sample ID: 500-149809-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:17 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

## Client Sample ID: MW-11

**Date Collected: 08/09/18 14:03**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-9**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:17 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-12

**Date Collected: 08/09/18 15:46**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-10**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:35 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:17 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 08/09/18 11:42**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-11**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:36 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:17 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-17

**Date Collected: 08/06/18 14:41**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-12**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387769 | 09/07/18 05:36 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:17 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

## Client Sample ID: MW-18

**Date Collected: 08/06/18 15:46**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-13**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387770 | 09/07/18 05:37 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:18 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: MW-19

**Date Collected: 08/06/18 16:48**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-14**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387770 | 09/07/18 05:37 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:18 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

## Client Sample ID: Duplicate

**Date Collected: 08/07/18 00:00**
**Date Received: 08/10/18 16:50**

**Lab Sample ID: 500-149809-15**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 382525 | 08/15/18 08:57 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 387770 | 09/07/18 05:38 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 382531 | 08/15/18 10:00 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 384512 | 08/22/18 09:18 | MAR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 388346 | 09/11/18 02:43 | MAR | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc. TestAmerica Job ID: 500-149809-2
Project/Site: Powerton CCR

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

## Laboratory: TestAmerica St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200023 | 11-30-18 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING


**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211


| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

500-149809 COC

**Lab Lot #** 500-149809

| | |
|---|---|
| Package Sealed: Yes / No | Samples Sealed: Yes / No |
| Received on Ice: Yes / No | Samples Intact: Yes / No / N/A |
| Temperature °C of Cooler: 3.6, 3.7, 10.0, 5.2, 5.4 | |
| Within Hold Time: Yes / No | Preserv. Indicated: Yes / No / N/A |
| pH Check OK: Yes / No | Res $Cl_2$ Check OK: Yes / No / N/A |
| Sample Labels and COC Agree: Yes / No / COC not present | |

| | | | |
|---|---|---|---|
| **Sampler Name:** Ian John Howieson | **COMPANY:** KPRG & Associates Inc. | **# / Cont.** | |
| | | **Volume** | |
| **Project Name:** Quarterly- Powerton CCR | **TestAmerica Project Number:** 50011612 | **Preserv.** | |
| **Project Location:** Pekin, IL | **TAT** 15 Days | | |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com | | |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C - TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 8-8-18 | 09:49 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-02 | 8-7-18 | 09:30 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-03 | 8-7-18 | 10:54 | W | 5 | X | X | X | X | X | X | |
| 4 | | MW-04 | 8-7-18 | 12:27 | W | 5 | X | X | X | X | X | X | |
| 5 | | MW-05 | 8-7-18 | 13:30 | W | 5 | X | X | X | X | X | X | |
| 6 | | MW-08 | 8-8-18 | 11:11 | W | 5 | X | X | X | X | X | X | |
| 7 | | MW-09 | 8-8-18 | 12:46 | W | 5 | X | X | X | X | X | X | |
| 8 | | MW-10 | 8-8-18 | 14:44 | W | 5 | X | X | X | X | X | X | |
| 9 | | MW-11 | 8-9-18 | 14:03 | W | 5 | X | X | X | X | X | X | |
| 10 | | MW-12 | 8-9-18 | 15:46 | W | 5 | X | X | X | X | X | X | |
| 11 | | MW-13 | 8-9-18 | 11:42 | W | 5 | X | X | X | X | X | X | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| RELINQUISHED BY: IJH | | COMPANY: KPRG | DATE: 8-10-18 | TIME: 16:50 | RECEIVED BY: | COMPANY: TA | DATE: 8/10/18 | TIME: 1650 |
| RELINQUISHED BY: | | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**

1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other _____

**Preservative Key**

1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 08/10/18
Courier:
Hand Delivered [X]
Bill of Lading:

__1__of__2__

STL-8208 (0600)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING


**TestAmerica Chicago**
2417 Bond St.
University Park, IL 60484
708-534-5200
Fax. 708-534-5211


| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

**Lab Lot #** 500-149809

| Package Sealed | Samples Sealed |
|---|---|
| Yes No | Yes No |
| **Received on Ice** | **Samples Intact** |
| Yes No | Yes No N/A |

**Temperature °C of Cooler** 3.6, 3.7, 6.0, 5.2, 5.4

| Within Hold Time | Preserv. Indicated |
|---|---|
| Yes No | Yes No N/A |
| **pH Check OK** | **Res $Cl_2$ Check OK** |
| Yes No | Yes No N/A |

**Sample Labels and COC Agree**
Yes No COC not present

| Sampler Name: | COMPANY: |
|---|---|
| Ian John Howieson | KPRG & Associates Inc. |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly- Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C -TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | | MW-17 | 8-6-18 | 14:41 | W | 5 | X | X | X | X | X | X | |
| 13 | | MW-18 | 8-6-18 | 15:46 | W | 5 | X | X | X | X | X | X | |
| 14 | | MW-19 | 8-6-18 | 16:48 | W | 5 | X | X | X | X | X | X | |
| 15 | | Duplicates | 8-7-18 | -- | W | 5 | X | X | X | X | X | X | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 8-10-18 | 16:50 | | TA | 8/10/18 | 1650 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**

| | |
|---|---|
| WW = Wastewater | SE = Sediment |
| W = Water | SO = Solid |
| S = Soil | DL = Drum Liquid |
| SL = Sludge | DS = Drum Solid |
| MS = Miscellaneous | L = Leachate |
| OL = Oil | W = Wipe |
| A = Air | O = _____ |

**Container Key**
1. Plastic
2. VOA Vial
3. Sterile Plastic
4. Amber Glass
5. Widemouth Glass
6. Other
_____

**Preservative Key**
1. HCl, Cool to 4°
2. $H_2SO_4$, Cool to 4°
3. $HNO_3$, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. Cool to 4°
7. None

COMMENTS:

Date Received 08,10,18
Courier:
Hand Delivered X
Bill of Lading:

__2__of__2__

STL-8208 (0600)

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-108777.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-149809-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 9/10/2018 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-149809-1) | 8/8/18 | 09:49 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-02 (500-149809-2) | 8/7/18 | 09:30 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-149809-3) | 8/7/18 | 10:54 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-149809-4) | 8/7/18 | 12:27 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-149809-5) | 8/7/18 | 13:30 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-08 (500-149809-6) | 8/8/18 | 11:11 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-09 (500-149809-7) | 8/8/18 | 12:46 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-149809-8) | 8/8/18 | 14:44 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-11 (500-149809-9) | 8/9/18 | 14:03 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: | | | | |
|---|---|---|---|---|---|---|---|
| Relinquished by: | Date/Time: 8/13/18 1600 | Company TA | Received by: | Date/Time: 8.14.18 0905 | Company TA SRL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016



9/26/2018

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| | | | | |
|---|---|---|---|---|
| **Client Information (Sub Contract Lab)** | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-108777.2 |
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-149809-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 9/10/2018 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-12 (500-149809-10) | 8/9/18 | 15:46 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-15 (500-149809-11) | 8/9/18 | 11:42 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-17 (500-149809-12) | 8/6/18 | 14:41 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-18 (500-149809-13) | 8/6/18 | 15:46 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-19 (500-149809-14) | 8/6/18 | 16:48 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-149809-15) | 8/7/18 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| | |
|---|---|
| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| | | | |
|---|---|---|---|
| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
| Relinquished by: [signature] | Date/Time: 8/13/18 1600 | Company: TA | Received by: [signature] |
| Relinquished by: | Date/Time: | Company | Received by: |
| Relinquished by: | Date/Time: | Company | Received by: |

| | | | | |
|---|---|---|---|---|
| | | | Date/Time: 8-14-18 0905 | Company: TA SRL |
| | | | Date/Time: | Company |
| | | | Date/Time: | Company |

| | | |
|---|---|---|
| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |

Ver: 09/20/2016



9/26/2018

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-149809-2

**Login Number: 149809**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.6, 3.7, 5.2, 5.4, 6.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-149809-2

**Login Number: 149809**
**List Number: 2**
**Creator: Hellm, Michael**

**List Source: TestAmerica St. Louis**
**List Creation: 08/14/18 11:55 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | False | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 16.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-149809-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) |
| 500-149809-1 | MW-01 | 93.5 |
| 500-149809-2 | MW-02 | 94.1 |
| 500-149809-3 | MW-03 | 101 |
| 500-149809-4 | MW-04 | 93.2 |
| 500-149809-5 | MW-05 | 95.0 |
| 500-149809-6 | MW-08 | 95.0 |
| 500-149809-7 | MW-09 | 95.9 |
| 500-149809-8 | MW-10 | 95.0 |
| 500-149809-9 | MW-11 | 93.8 |
| 500-149809-10 | MW-12 | 91.2 |
| 500-149809-11 | MW-15 | 95.6 |
| 500-149809-12 | MW-17 | 97.3 |
| 500-149809-13 | MW-18 | 95.6 |
| 500-149809-14 | MW-19 | 92.9 |
| 500-149809-15 | Duplicate | 90.9 |
| 500-149809-15 DU | Duplicate | 96.5 |
| LCS 160-382525/1-A | Lab Control Sample | 97.3 |
| MB 160-382525/22-A | Method Blank | 90.0 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) | Y Carrier (40-110) |
| 500-149809-1 | MW-01 | 93.5 | 93.1 |
| 500-149809-2 | MW-02 | 94.1 | 85.6 |
| 500-149809-3 | MW-03 | 101 | 89.3 |
| 500-149809-4 | MW-04 | 93.2 | 90.1 |
| 500-149809-5 | MW-05 | 95.0 | 86.4 |
| 500-149809-6 | MW-08 | 95.0 | 80.4 |
| 500-149809-7 | MW-09 | 95.9 | 88.6 |
| 500-149809-8 | MW-10 | 95.0 | 80.0 |
| 500-149809-9 | MW-11 | 93.8 | 87.9 |
| 500-149809-10 | MW-12 | 91.2 | 81.9 |
| 500-149809-11 | MW-15 | 95.6 | 85.2 |
| 500-149809-12 | MW-17 | 97.3 | 84.1 |
| 500-149809-13 | MW-18 | 95.6 | 79.3 |
| 500-149809-14 | MW-19 | 92.9 | 74.0 |
| 500-149809-15 | Duplicate | 90.9 | 68.8 |
| 500-149809-15 DU | Duplicate | 96.5 | 85.2 |
| LCS 160-382531/1-A | Lab Control Sample | 97.3 | 88.2 |
| MB 160-382531/22-A | Method Blank | 90.0 | 82.2 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier
Y Carrier = Y Carrier

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-154226-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*11/16/2018 2:18:26 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-154226-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-154226-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 11/2/2018 11:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8º C.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-1

## Client Sample ID: MW-02 — Lab Sample ID: 500-154226-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0015 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.067 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.23 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 86 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 480 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 43 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 34 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-154226-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.056 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.20 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 74 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 400 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 44 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.25 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 26 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-154226-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.049 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.54 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 690 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 80 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.24 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 91 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-154226-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.017 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.41 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.34 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-1

## Client Sample ID: MW-10 (Continued)

## Lab Sample ID: 500-154226-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cadmium | 0.00084 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Chromium | 0.024 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.047 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.023 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0046 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 510 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 49 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 49 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-154226-1 | MW-02 | Water | 10/30/18 09:42 | 11/02/18 11:20 |
| 500-154226-2 | MW-03 | Water | 10/30/18 11:08 | 11/02/18 11:20 |
| 500-154226-3 | MW-04 | Water | 10/30/18 12:34 | 11/02/18 11:20 |
| 500-154226-4 | MW-10 | Water | 10/30/18 14:23 | 11/02/18 11:20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-1

**Client Sample ID: MW-02**
**Date Collected: 10/30/18 09:42**
**Date Received: 11/02/18 11:20**

**Lab Sample ID: 500-154226-1**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/06/18 07:27 | 11/06/18 18:47 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:14 | 1 |
| **Arsenic** | **0.0015** | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:14 | 1 |
| **Barium** | **0.067** | | 0.0025 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:14 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:14 | 1 |
| **Boron** | **0.23** | | 0.050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:14 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:14 | 1 |
| **Calcium** | **86** | | 0.20 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:14 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:14 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:14 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:14 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:14 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:14 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:14 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/07/18 10:35 | 11/08/18 10:09 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **480** | | 10 | | mg/L | | | 11/05/18 00:49 | 1 |
| **Chloride** | **43** | | 2.0 | | mg/L | | | 11/09/18 19:06 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 11/10/18 00:22 | 1 |
| **Sulfate** | **34** | | 10 | | mg/L | | | 11/15/18 12:56 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-1

**Client Sample ID: MW-03**
**Date Collected: 10/30/18 11:08**
**Date Received: 11/02/18 11:20**

**Lab Sample ID: 500-154226-2**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/06/18 07:27 | 11/06/18 18:51 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:17 | 1 |
| **Arsenic** | **0.0014** | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:17 | 1 |
| **Barium** | **0.056** | | 0.0025 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:17 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:17 | 1 |
| **Boron** | **0.20** | | 0.050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:17 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:17 | 1 |
| **Calcium** | **74** | | 0.20 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:17 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:17 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:17 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:17 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:17 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:17 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:17 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/07/18 10:35 | 11/08/18 10:12 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **400** | | 10 | | mg/L | | | 11/05/18 00:51 | 1 |
| **Chloride** | **44** | | 2.0 | | mg/L | | | 11/09/18 19:06 | 1 |
| **Fluoride** | **0.25** | | 0.10 | | mg/L | | | 11/10/18 00:26 | 1 |
| **Sulfate** | **26** | | 5.0 | | mg/L | | | 11/12/18 15:24 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-1

**Client Sample ID: MW-04**
**Date Collected: 10/30/18 12:34**
**Date Received: 11/02/18 11:20**

**Lab Sample ID: 500-154226-3**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/06/18 07:27 | 11/06/18 18:55 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:33 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:33 | 1 |
| **Barium** | **0.049** | | 0.0025 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:33 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:33 | 1 |
| **Boron** | **0.54** | | 0.050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:33 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:33 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:33 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:33 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:33 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:33 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:33 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:33 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:33 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/07/18 10:35 | 11/08/18 10:14 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **690** | | 10 | | mg/L | | | 11/05/18 00:54 | 1 |
| **Chloride** | **80** | | 10 | | mg/L | | | 11/09/18 20:59 | 5 |
| **Fluoride** | **0.24** | | 0.10 | | mg/L | | | 11/10/18 00:29 | 1 |
| **Sulfate** | **91** | | 50 | | mg/L | | | 11/12/18 15:27 | 10 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-1

**Client Sample ID: MW-10**
**Date Collected: 10/30/18 14:23**
**Date Received: 11/02/18 11:20**

**Lab Sample ID: 500-154226-4**
**Matrix: Water**

## Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.017** | | 0.010 | | mg/L | | 11/06/18 07:27 | 11/06/18 18:59 | 1 |

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:37 | 1 |
| **Arsenic** | **0.011** | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:37 | 1 |
| **Barium** | **0.41** | | 0.0025 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:37 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:37 | 1 |
| **Boron** | **0.34** | | 0.050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:37 | 1 |
| **Cadmium** | **0.00084** | | 0.00050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:37 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:37 | 1 |
| **Chromium** | **0.024** | | 0.0050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:37 | 1 |
| **Cobalt** | **0.047** | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:37 | 1 |
| **Lead** | **0.023** | | 0.00050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:37 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:37 | 1 |
| **Selenium** | **0.0046** | | 0.0025 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:37 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:37 | 1 |

## Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/07/18 10:35 | 11/08/18 10:16 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **510** | | 10 | | mg/L | | | 11/05/18 00:57 | 1 |
| **Chloride** | **49** | | 2.0 | | mg/L | | | 11/09/18 20:27 | 1 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 11/10/18 00:42 | 1 |
| **Sulfate** | **49** | | 10 | | mg/L | | | 11/12/18 15:28 | 2 |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 458314

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-154226-1 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-154226-2 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-154226-3 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-154226-4 | MW-10 | Total Recoverable | Water | 3005A | |
| MB 500-458314/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-458314/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Prep Batch: 458598

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-154226-1 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-154226-2 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-154226-3 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-154226-4 | MW-10 | Total Recoverable | Water | 3005A | |
| MB 500-458598/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-458598/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| LCSD 500-458598/3-A | Lab Control Sample Dup | Total Recoverable | Water | 3005A | |

### Analysis Batch: 458665

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-154226-1 | MW-02 | Total Recoverable | Water | 6020A | 458314 |
| 500-154226-2 | MW-03 | Total Recoverable | Water | 6020A | 458314 |
| 500-154226-3 | MW-04 | Total Recoverable | Water | 6020A | 458314 |
| 500-154226-4 | MW-10 | Total Recoverable | Water | 6020A | 458314 |
| MB 500-458314/1-A | Method Blank | Total Recoverable | Water | 6020A | 458314 |
| LCS 500-458314/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 458314 |

### Analysis Batch: 458826

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-154226-1 | MW-02 | Total Recoverable | Water | 6010C | 458598 |
| 500-154226-2 | MW-03 | Total Recoverable | Water | 6010C | 458598 |
| 500-154226-3 | MW-04 | Total Recoverable | Water | 6010C | 458598 |
| 500-154226-4 | MW-10 | Total Recoverable | Water | 6010C | 458598 |
| MB 500-458598/1-A | Method Blank | Total Recoverable | Water | 6010C | 458598 |
| LCS 500-458598/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 458598 |
| LCSD 500-458598/3-A | Lab Control Sample Dup | Total Recoverable | Water | 6010C | 458598 |

### Prep Batch: 458906

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-154226-1 | MW-02 | Total/NA | Water | 7470A | |
| 500-154226-2 | MW-03 | Total/NA | Water | 7470A | |
| 500-154226-3 | MW-04 | Total/NA | Water | 7470A | |
| 500-154226-4 | MW-10 | Total/NA | Water | 7470A | |
| MB 500-458906/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-458906/13-A | Lab Control Sample | Total/NA | Water | 7470A | |

### Analysis Batch: 459122

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-154226-1 | MW-02 | Total/NA | Water | 7470A | 458906 |
| 500-154226-2 | MW-03 | Total/NA | Water | 7470A | 458906 |
| 500-154226-3 | MW-04 | Total/NA | Water | 7470A | 458906 |
| 500-154226-4 | MW-10 | Total/NA | Water | 7470A | 458906 |

## Metals (Continued)

### Analysis Batch: 459122 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 500-458906/12-A | Method Blank | Total/NA | Water | 7470A | 458906 |
| LCS 500-458906/13-A | Lab Control Sample | Total/NA | Water | 7470A | 458906 |

## General Chemistry

### Analysis Batch: 458404

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-154226-1 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-154226-2 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-154226-3 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-154226-4 | MW-10 | Total/NA | Water | SM 2540C | |
| MB 500-458404/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-458404/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 459453

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-154226-1 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| 500-154226-2 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-459453/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-459453/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 459467

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-154226-3 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-154226-4 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-459467/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-459467/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 459516

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-154226-1 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-154226-2 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-154226-3 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-154226-4 | MW-10 | Total/NA | Water | SM 4500 F C | |
| MB 500-459516/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| MB 500-459516/31 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-459516/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| LCS 500-459516/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 459765

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-154226-2 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-154226-3 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-154226-4 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-459765/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-459765/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-154226-2 MS | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-154226-2 MSD | MW-03 | Total/NA | Water | SM 4500 SO4 E | |

## General Chemistry (Continued)

### Analysis Batch: 460378

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-154226-1 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-460378/3 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-460378/4 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-458598/1-A**
**Matrix: Water**
**Analysis Batch: 458826**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 458598**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/06/18 07:27 | 11/06/18 18:30 | 1 |

**Lab Sample ID: LCS 500-458598/2-A**
**Matrix: Water**
**Analysis Batch: 458826**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 458598**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.535 | | mg/L | | 107 | 80 - 120 |

**Lab Sample ID: LCSD 500-458598/3-A**
**Matrix: Water**
**Analysis Batch: 458826**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total Recoverable**
**Prep Batch: 458598**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.540 | | mg/L | | 108 | 80 - 120 | 1 | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-458314/1-A**
**Matrix: Water**
**Analysis Batch: 458665**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 458314**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:02 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:02 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:02 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:02 | 1 |
| Boron | <0.050 | | 0.050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:02 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:02 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:02 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:02 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:02 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:02 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:02 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:02 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/03/18 10:57 | 11/05/18 16:02 | 1 |

**Lab Sample ID: LCS 500-458314/2-A**
**Matrix: Water**
**Analysis Batch: 458665**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 458314**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.507 | | mg/L | | 101 | 80 - 120 |
| Arsenic | 0.100 | 0.103 | | mg/L | | 103 | 80 - 120 |
| Barium | 0.500 | 0.529 | | mg/L | | 106 | 80 - 120 |
| Beryllium | 0.0500 | 0.0500 | | mg/L | | 100 | 80 - 120 |
| Boron | 1.00 | 0.965 | | mg/L | | 97 | 80 - 120 |
| Cadmium | 0.0500 | 0.0523 | | mg/L | | 105 | 80 - 120 |
| Calcium | 10.0 | 9.34 | | mg/L | | 93 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-458314/2-A**
**Matrix: Water**
**Analysis Batch: 458665**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 458314**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chromium | 0.200 | 0.210 | | mg/L | | 105 | 80 - 120 |
| Cobalt | 0.500 | 0.523 | | mg/L | | 105 | 80 - 120 |
| Lead | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |
| Molybdenum | 1.00 | 0.982 | | mg/L | | 98 | 80 - 120 |
| Selenium | 0.100 | 0.100 | | mg/L | | 100 | 80 - 120 |
| Thallium | 0.100 | 0.105 | | mg/L | | 105 | 80 - 120 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-458906/12-A**
**Matrix: Water**
**Analysis Batch: 459122**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 458906**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/07/18 10:35 | 11/08/18 10:05 | 1 |

**Lab Sample ID: LCS 500-458906/13-A**
**Matrix: Water**
**Analysis Batch: 459122**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 458906**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00188 | | mg/L | | 94 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-458404/1**
**Matrix: Water**
**Analysis Batch: 458404**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 11/05/18 00:08 | 1 |

**Lab Sample ID: LCS 500-458404/2**
**Matrix: Water**
**Analysis Batch: 458404**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 276 | | mg/L | | 110 | 80 - 120 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-459453/4**
**Matrix: Water**
**Analysis Batch: 459453**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 11/09/18 18:45 | 1 |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: LCS 500-459453/5**
**Matrix: Water**
**Analysis Batch: 459453**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 49.2 | | mg/L | | 98 | 85 - 115 |

**Lab Sample ID: MB 500-459467/4**
**Matrix: Water**
**Analysis Batch: 459467**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 11/09/18 20:08 | 1 |

**Lab Sample ID: LCS 500-459467/5**
**Matrix: Water**
**Analysis Batch: 459467**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 49.7 | | mg/L | | 99 | 85 - 115 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-459516/3**
**Matrix: Water**
**Analysis Batch: 459516**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 11/09/18 22:59 | 1 |

**Lab Sample ID: MB 500-459516/31**
**Matrix: Water**
**Analysis Batch: 459516**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 11/10/18 00:36 | 1 |

**Lab Sample ID: LCS 500-459516/32**
**Matrix: Water**
**Analysis Batch: 459516**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.5 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: LCS 500-459516/4**
**Matrix: Water**
**Analysis Batch: 459516**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.4 | | mg/L | | 104 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-459765/3**
**Matrix: Water**
**Analysis Batch: 459765**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 11/12/18 15:21 | 1 |

**Lab Sample ID: LCS 500-459765/4**
**Matrix: Water**
**Analysis Batch: 459765**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 18.4 | | mg/L | | 92 | 80 - 120 |

**Lab Sample ID: 500-154226-2 MS**
**Matrix: Water**
**Analysis Batch: 459765**

**Client Sample ID: MW-03**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 26 | | 40.0 | 63.3 | | mg/L | | 93 | 75 - 125 |

**Lab Sample ID: 500-154226-2 MSD**
**Matrix: Water**
**Analysis Batch: 459765**

**Client Sample ID: MW-03**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 26 | | 40.0 | 69.5 | | mg/L | | 108 | 75 - 125 | 9 | 20 |

**Lab Sample ID: MB 500-460378/3**
**Matrix: Water**
**Analysis Batch: 460378**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 11/15/18 12:35 | 1 |

**Lab Sample ID: LCS 500-460378/4**
**Matrix: Water**
**Analysis Batch: 460378**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 21.5 | | mg/L | | 107 | 80 - 120 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-1

## Client Sample ID: MW-02

**Date Collected: 10/30/18 09:42**
**Date Received: 11/02/18 11:20**

## Lab Sample ID: 500-154226-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 458598 | 11/06/18 07:27 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 458826 | 11/06/18 18:47 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 458314 | 11/03/18 10:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 458665 | 11/05/18 16:14 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 458906 | 11/07/18 10:35 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 459122 | 11/08/18 10:09 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 458404 | 11/05/18 00:49 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 459453 | 11/09/18 19:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 459516 | 11/10/18 00:22 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 460378 | | CLB | TAL CHI |
| | | | | | (Start) | 11/15/18 12:56 | | |
| | | | | | (End) | 11/15/18 12:57 | | |

## Client Sample ID: MW-03

**Date Collected: 10/30/18 11:08**
**Date Received: 11/02/18 11:20**

## Lab Sample ID: 500-154226-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 458598 | 11/06/18 07:27 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 458826 | 11/06/18 18:51 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 458314 | 11/03/18 10:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 458665 | 11/05/18 16:17 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 458906 | 11/07/18 10:35 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 459122 | 11/08/18 10:12 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 458404 | 11/05/18 00:51 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 459453 | 11/09/18 19:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 459516 | 11/10/18 00:26 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 459765 | | CLB | TAL CHI |
| | | | | | (Start) | 11/12/18 15:24 | | |
| | | | | | (End) | 11/12/18 15:25 | | |

## Client Sample ID: MW-04

**Date Collected: 10/30/18 12:34**
**Date Received: 11/02/18 11:20**

## Lab Sample ID: 500-154226-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 458598 | 11/06/18 07:27 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 458826 | 11/06/18 18:55 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 458314 | 11/03/18 10:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 458665 | 11/05/18 16:33 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 458906 | 11/07/18 10:35 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 459122 | 11/08/18 10:14 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 458404 | 11/05/18 00:54 | CLB | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-1

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 459467 | 11/09/18 20:59 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 459516 | 11/10/18 00:29 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 459765 | | CLB | TAL CHI |
| | | | | | (Start) | 11/12/18 15:27 | | |
| | | | | | (End) | 11/12/18 15:28 | | |

## Client Sample ID: MW-10

**Date Collected: 10/30/18 14:23**
**Date Received: 11/02/18 11:20**

## Lab Sample ID: 500-154226-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 458598 | 11/06/18 07:27 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 458826 | 11/06/18 18:59 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 458314 | 11/03/18 10:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 458665 | 11/05/18 16:37 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 458906 | 11/07/18 10:35 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 459122 | 11/08/18 10:16 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 458404 | 11/05/18 00:57 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 459467 | 11/09/18 20:27 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 459516 | 11/10/18 00:42 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 459765 | | CLB | TAL CHI |
| | | | | | (Start) | 11/12/18 15:28 | | |
| | | | | | (End) | 11/12/18 15:29 | | |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

TestAmerica

THE LEADER IN ' ING

TestAmerica C
2417 Bond St.
University Park
708-534-5200
Fax. 708-534-5

500-154226 COC

| Report To: | | Bill To: |
|---|---|---|
| Contact: | Richard Gnat | Contact: |
| Company: | KPRG and Associates, Inc | Company: |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: |
| | Brookfield, WI 53005 | |
| Phone: | 262-781-0475 | Phone: |
| Email: | richardg@kprginc.com | Email |
| | | PO #: |

Lab Lot # 500-154226

| | |
|---|---|
| Package Sealed: Yes / No | Samples Sealed: Yes / No |
| Received on Ice: Yes / No | Samples Intact: Yes / No / N/A |

Temperature °C of Cooler: 0.3 → 1.8

| | |
|---|---|
| Within Hold Time: Yes / No | Preserv. Indicated: Yes / No / N/A |
| pH Check OK: Yes / No | Res $Cl_2$ Check OK: Yes / No / N/A |

Sample Labels and COC Agree: Yes / No — COC not present

| Sampler Name: | COMPANY: |
|---|---|
| Ian John Howieson | KPRG & Associates Inc. |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly- Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C - TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ~~MW-01~~ | — | — | ~~W~~ | ~~5~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | |
| 1 | | MW-02 | 10-30-18 | 09:42 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-03 | 10-30-18 | 11:08 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-04 | 10-30-18 | 12:34 | W | 5 | X | X | X | X | X | X | |
| | | ~~MW-05~~ | — | — | ~~W~~ | ~~5~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | |
| | | ~~MW-08~~ | — | — | ~~W~~ | ~~5~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | |
| | | ~~MW-09~~ | — | — | ~~W~~ | ~~5~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | |
| 4 | | MW-10 | 10-30-18 | 14:23 | W | 5 | X | X | X | X | X | X | |
| | | ~~MW-11~~ | — | — | ~~W~~ | ~~5~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | |
| | | ~~MW-12~~ | — | — | ~~W~~ | ~~5~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | |
| | | ~~MW-15~~ | — | — | ~~W~~ | ~~5~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 11-2-18 | 11:20 | | TA | 11/2/18 | 1120 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**
WW = Wastewater, W = Water, S = Soil, SL = Sludge, MS = Miscellaneous, OL = Oil, A = Air, SE = Sediment, SO = Solid, DL = Drum Liquid, DS = Drum Solid, L = Leachate, W = Wipe, O = _____

**Container Key**
1. Plastic, 2. VOA Vial, 3. Sterile Plastic, 4. Amber Glass, 5. Widemouth Glass, 6. Other _____

**Preservative Key**
1. HCl, Cool to 4°, 2. $H_2SO_4$, Cool to 4°, 3. $HNO_3$, Cool to 4°, 4. NaOH, Cool to 4°, 5. NaOH/Zn, Cool to 4°, 6. Cool to 4°, 7. None

COMMENTS:

Date Received ___/___/___
Courier:
Hand Delivered X
Bill of Lading:

1 of 1

STL-8208 (0600)

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-112779.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-154226-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 11/14/2018 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-02 (500-154226-1) | 10/30/18 | 09:42 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-154226-2) | 10/30/18 | 11:08 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-154226-3) | 10/30/18 | 12:34 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-154226-4) | 10/30/18 | 14:23 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| *Possible Hazard Identification* | *Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)* |
|---|---|
| *Unconfirmed* | ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | Sherri Scott | 11/2/18 1600 | TA CHI | Michael Heem | 11/3/18 0845 | TA SLT |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016



11/16/2018

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-154226-1

**Login Number: 154226**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.8 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica

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# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-154226-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*11/30/2018 1:52:52 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-154226-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-154226-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 11/2/2018 11:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8º C.

**RAD**
Method(s) 903.0, 9315: Ra-226 Prep Batch 160-399572

The following sample has a barium recovery above the 110% QC limit; 500-154226-1 DU. The LCS (laboratory control sample) has an acceptable spike recovery demonstrating acceptable sample preparation and instrument performance. The original sample had a barium recovery of 101%, and the RER was 0.34, also demonstrating acceptable sample preparation and instrument performance. The data have been reported with this narrative. (500-154226-E-1-A DU)

Method(s) 904.0, 9320: Ra-228 Prep Batch 160-399585

The following sample has a barium recovery above the 110% QC limit; 500-154226-1 DU. The LCS (laboratory control sample) has an acceptable spike recovery demonstrating acceptable sample preparation and instrument performance. The original sample had a barium recovery of 101%, and the RER was 0.33, also demonstrating acceptable sample preparation and instrument performance. The data have been reported with this narrative. (500-154226-E-1-B DU)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-399585:

The following samples were prepared at a reduced aliquot due to potential matrix interference. Sample aliquot 180-83599-1 had a strong odor. Sample aliquot 500-154226-4 was brown, opaque, and contained heavy sediment levels. MW-10 (500-154226-4)

Sample aliquot 240-103772-1 reduced due to limited sample volume.

Method(s) PrecSep_0: Radium 228 Prep Batch 160-399585:

The barium carrier recovery is outside the upper control limit (110%) for the following sample: (500-154226-E-1 DU).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-399572:

The following samples were prepared at a reduced aliquot due to potential matrix interference. Sample aliquot 180-83599-1 had a strong odor. Sample aliquot 500-154226-4 was brown, opaque, and contained heavy sediment levels. MW-10 (500-154226-4)

Sample aliquot 240-103772-1 reduced due to limited sample volume.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-399572:

The barium carrier recovery is outside the upper control limit (110%) for the following sample: (500-154226-E-1 DU).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-154226-1 | MW-02 | Water | 10/30/18 09:42 | 11/02/18 11:20 |
| 500-154226-2 | MW-03 | Water | 10/30/18 11:08 | 11/02/18 11:20 |
| 500-154226-3 | MW-04 | Water | 10/30/18 12:34 | 11/02/18 11:20 |
| 500-154226-4 | MW-10 | Water | 10/30/18 14:23 | 11/02/18 11:20 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-2

**Client Sample ID: MW-02**
**Date Collected: 10/30/18 09:42**
**Date Received: 11/02/18 11:20**

**Lab Sample ID: 500-154226-1**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.392** | | 0.155 | 0.159 | 1.00 | 0.148 | pCi/L | 11/06/18 10:06 | 11/28/18 14:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *11/06/18 10:06* | *11/28/18 14:12* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.171 | U | 0.209 | 0.210 | 1.00 | 0.346 | pCi/L | 11/06/18 11:06 | 11/26/18 11:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *11/06/18 11:06* | *11/26/18 11:18* | *1* |
| *Y Carrier* | *85.2* | | *40 - 110* | *11/06/18 11:06* | *11/26/18 11:18* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.564** | | 0.260 | 0.263 | 5.00 | 0.346 | pCi/L | | 11/30/18 11:32 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-2

## Client Sample ID: MW-03

**Date Collected: 10/30/18 11:08**
**Date Received: 11/02/18 11:20**

## Lab Sample ID: 500-154226-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.303** | | 0.161 | 0.163 | 1.00 | 0.195 | pCi/L | 11/06/18 10:06 | 11/28/18 08:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.8* | | *40 - 110* | *11/06/18 10:06* | *11/28/18 08:00* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0456 | U | 0.201 | 0.202 | 1.00 | 0.354 | pCi/L | 11/06/18 11:06 | 11/26/18 11:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.8* | | *40 - 110* | *11/06/18 11:06* | *11/26/18 11:18* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *11/06/18 11:06* | *11/26/18 11:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.348 | U | 0.258 | 0.260 | 5.00 | 0.354 | pCi/L | | 11/30/18 11:32 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-2

## Client Sample ID: MW-04

**Date Collected: 10/30/18 12:34**
**Date Received: 11/02/18 11:20**

## Lab Sample ID: 500-154226-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.209** | | 0.126 | 0.127 | 1.00 | 0.152 | pCi/L | 11/06/18 10:06 | 11/28/18 08:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *11/06/18 10:06* | *11/28/18 08:00* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.214 | U | 0.204 | 0.205 | 1.00 | 0.330 | pCi/L | 11/06/18 11:06 | 11/26/18 11:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *11/06/18 11:06* | *11/26/18 11:18* | *1* |
| *Y Carrier* | *83.7* | | *40 - 110* | *11/06/18 11:06* | *11/26/18 11:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.423** | | 0.240 | 0.241 | 5.00 | 0.330 | pCi/L | | 11/30/18 11:32 | 1 |

## Client Sample ID: MW-10

**Date Collected: 10/30/18 14:23**
**Date Received: 11/02/18 11:20**

## Lab Sample ID: 500-154226-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.61 | | 0.443 | 0.466 | 1.00 | 0.352 | pCi/L | 11/06/18 10:06 | 11/28/18 08:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *100* | | *40 - 110* | *11/06/18 10:06* | *11/28/18 08:00* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.40 | | 0.549 | 0.564 | 1.00 | 0.754 | pCi/L | 11/06/18 11:06 | 11/26/18 11:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *100* | | *40 - 110* | *11/06/18 11:06* | *11/26/18 11:18* | *1* |
| *Y Carrier* | *73.6* | | *40 - 110* | *11/06/18 11:06* | *11/26/18 11:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 3.00 | | 0.705 | 0.732 | 5.00 | 0.754 | pCi/L | | 11/30/18 11:32 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |
| X | Carrier  is outside acceptance limits. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-2

## Rad

### Prep Batch: 399572

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-154226-1 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-154226-2 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-154226-3 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-154226-4 | MW-10 | Total/NA | Water | PrecSep-21 | |
| MB 160-399572/19-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-399572/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-154226-1 DU | MW-02 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 399585

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-154226-1 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-154226-2 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-154226-3 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-154226-4 | MW-10 | Total/NA | Water | PrecSep_0 | |
| MB 160-399585/19-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-399585/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-154226-1 DU | MW-02 | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-399572/19-A**
**Matrix: Water**
**Analysis Batch: 403078**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 399572**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.2344 | | 0.129 | 0.131 | 1.00 | 0.151 | pCi/L | 11/06/18 10:06 | 11/28/18 08:00 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *106* | | *40 - 110* | *11/06/18 10:06* | *11/28/18 08:00* | *1* |

**Lab Sample ID: LCS 160-399572/1-A**
**Matrix: Water**
**Analysis Batch: 403059**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 399572**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 10.76 | | 1.23 | 1.00 | 0.160 | pCi/L | 95 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *94.7* | | *40 - 110* |

**Lab Sample ID: 500-154226-1 DU**
**Matrix: Water**
**Analysis Batch: 403078**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**
**Prep Batch: 399572**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.392 | | | 0.2933 | | 0.130 | 1.00 | 0.120 | pCi/L | | | 0.34 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *112* | *X* | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-399585/19-A**
**Matrix: Water**
**Analysis Batch: 402623**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 399585**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.05486 | U | 0.222 | 0.222 | 1.00 | 0.386 | pCi/L | 11/06/18 11:06 | 11/26/18 11:19 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *106* | | *40 - 110* | *11/06/18 11:06* | *11/26/18 11:19* | *1* |
| *Y Carrier* | *84.9* | | *40 - 110* | *11/06/18 11:06* | *11/26/18 11:19* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-399585/1-A**
**Matrix: Water**
**Analysis Batch: 402684**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 399585**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.18 | 10.17 | | 1.16 | 1.00 | 0.379 | pCi/L | 111 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *94.7* | | *40 - 110* |
| *Y Carrier* | *83.0* | | *40 - 110* |

**Lab Sample ID: 500-154226-1 DU**
**Matrix: Water**
**Analysis Batch: 402684**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**
**Prep Batch: 399585**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.171 | U | | 0.04699 | U | 0.165 | 1.00 | 0.289 | pCi/L | | | 0.33 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *112* | *X* | *40 - 110* |
| *Y Carrier* | *86.4* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-2

## Client Sample ID: MW-02
**Date Collected: 10/30/18 09:42**
**Date Received: 11/02/18 11:20**

## Lab Sample ID: 500-154226-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 399572 | 11/06/18 10:06 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 403078 | 11/28/18 14:12 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 399585 | 11/06/18 11:06 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 402684 | 11/26/18 11:18 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 403608 | 11/30/18 11:32 | RTM | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 10/30/18 11:08**
**Date Received: 11/02/18 11:20**

## Lab Sample ID: 500-154226-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 399572 | 11/06/18 10:06 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 403078 | 11/28/18 08:00 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 399585 | 11/06/18 11:06 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 402623 | 11/26/18 11:18 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 403608 | 11/30/18 11:32 | RTM | TAL SL |

## Client Sample ID: MW-04
**Date Collected: 10/30/18 12:34**
**Date Received: 11/02/18 11:20**

## Lab Sample ID: 500-154226-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 399572 | 11/06/18 10:06 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 403078 | 11/28/18 08:00 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 399585 | 11/06/18 11:06 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 402623 | 11/26/18 11:18 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 403608 | 11/30/18 11:32 | RTM | TAL SL |

## Client Sample ID: MW-10
**Date Collected: 10/30/18 14:23**
**Date Received: 11/02/18 11:20**

## Lab Sample ID: 500-154226-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 399572 | 11/06/18 10:06 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 403078 | 11/28/18 08:00 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 399585 | 11/06/18 11:06 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 402623 | 11/26/18 11:18 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 403608 | 11/30/18 11:32 | RTM | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc. TestAmerica Job ID: 500-154226-2
Project/Site: Powerton CCR

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

## Laboratory: TestAmerica St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200023 | 11-30-18 * |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica

THE LEADER IN ' ING

TestAmerica C
2417 Bond St.
University Park
708-534-5200
Fax. 708-534-5

500-154226 COC

| Report To: | | Bill To: | |
|---|---|---|---|
| Contact: | Richard Gnat | Contact: | |
| Company: | KPRG and Associates, Inc | Company: | |
| Address: | 14665 W. Lisbon Rd., Suite 2B | Address: | |
| | Brookfield, WI 53005 | | |
| Phone: | 262-781-0475 | Phone: | |
| Email: | richardg@kprginc.com | Email | |
| | | PO #: | |

Lab Lot # 500-154226

| | |
|---|---|
| Package Sealed: Yes / No | Samples Sealed: Yes / No |
| Received on Ice: Yes / No | Samples Intact: Yes / No / N/A |
| Temperature °C of Cooler: 0.3 → 1.8 | |
| Within Hold Time: Yes / No | Preserv. Indicated: Yes / No / N/A |
| pH Check OK: Yes / No | Res $Cl_2$ Check OK: Yes / No / N/A |
| Sample Labels and COC Agree: Yes / No / COC not present | |

| Sampler Name: | COMPANY: |
|---|---|
| Ian John Howieson | KPRG & Associates Inc. |
| **Project Name:** | **TestAmerica Project Number:** |
| Quarterly- Powerton CCR | 50011612 |
| **Project Location:** | **TAT** |
| Pekin, IL | 15 Days |
| **Lab PM:** Eric Lang | eric.lang@testamerica.com |

| Laboratory ID | MS-MSD | Client Sample ID | Sampling Date | Sampling Time | Matrix | # of Cont | 903.0, 904.0 Radium 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C - TDS | 4500_F_C - Fluoride | SM4500_Cl_E Chloride | SM4500_SO4_E - Sulfate | Additional Analyses / Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ~~MW-01~~ | — | — | ~~W~~ | ~~5~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | |
| 1 | | MW-02 | 10-30-18 | 09:42 | W | 5 | X | X | X | X | X | X | |
| 2 | | MW-03 | 10-30-18 | 11:08 | W | 5 | X | X | X | X | X | X | |
| 3 | | MW-04 | 10-30-18 | 12:34 | W | 5 | X | X | X | X | X | X | |
| | | ~~MW-05~~ | — | — | ~~W~~ | ~~5~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | |
| | | ~~MW-08~~ | — | — | ~~W~~ | ~~5~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | |
| | | ~~MW-09~~ | — | — | ~~W~~ | ~~5~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | |
| 4 | | MW-10 | 10-30-18 | 14:23 | W | 5 | X | X | X | X | X | X | |
| | | ~~MW-11~~ | — | — | ~~W~~ | ~~5~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | |
| | | ~~MW-12~~ | — | — | ~~W~~ | ~~5~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | |
| | | ~~MW-15~~ | — | — | ~~W~~ | ~~5~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | ~~X~~ | |

| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |
|---|---|---|---|---|---|---|---|
| IJH | KPRG | 11-2-18 | 11:20 | | TA | 11/2/18 | 1120 |
| RELINQUISHED BY: | COMPANY: | DATE: | TIME: | RECEIVED BY: | COMPANY: | DATE: | TIME: |

**Matrix Key**
WW = Wastewater, W = Water, S = Soil, SL = Sludge, MS = Miscellaneous, OL = Oil, A = Air, SE = Sediment, SO = Solid, DL = Drum Liquid, DS = Drum Solid, L = Leachate, W = Wipe, O = _____

**Container Key**
1. Plastic, 2. VOA Vial, 3. Sterile Plastic, 4. Amber Glass, 5. Widemouth Glass, 6. Other _____

**Preservative Key**
1. HCl, Cool to 4°, 2. $H_2SO_4$, Cool to 4°, 3. $HNO_3$, Cool to 4°, 4. NaOH, Cool to 4°, 5. NaOH/Zn, Cool to 4°, 6. Cool to 4°, 7. None

COMMENTS:

Date Received ___/___/___
Courier:
Hand Delivered X
Bill of Lading:

1 of 1

STL-8208 (0600)

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-112779.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-154226-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 11/14/2018 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-02 (500-154226-1) | 10/30/18 | 09:42 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-154226-2) | 10/30/18 | 11:08 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-154226-3) | 10/30/18 | 12:34 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-154226-4) | 10/30/18 | 14:23 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| *Possible Hazard Identification* | *Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)* |
|---|---|
| *Unconfirmed* | ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | Sherri Scott | 11/2/18 1600 | TA-CHI | Michael Heem | 11/3/18 0845 | TA STL |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016



11/30/2018

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-154226-2

**Login Number: 154226**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.8 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-154226-2

**Login Number: 154226**
**List Number: 2**
**Creator: Hellm, Michael**

**List Source: TestAmerica St. Louis**
**List Creation: 11/03/18 10:39 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | False | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 19.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-154226-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) |
| 500-154226-1 | MW-02 | 101 |
| 500-154226-1 DU | MW-02 | 112 X |
| 500-154226-2 | MW-03 | 96.8 |
| 500-154226-3 | MW-04 | 101 |
| 500-154226-4 | MW-10 | 100 |
| LCS 160-399572/1-A | Lab Control Sample | 94.7 |
| MB 160-399572/19-A | Method Blank | 106 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) | Y Carrier (40-110) |
| 500-154226-1 | MW-02 | 101 | 85.2 |
| 500-154226-1 DU | MW-02 | 112 X | 86.4 |
| 500-154226-2 | MW-03 | 96.8 | 87.1 |
| 500-154226-3 | MW-04 | 101 | 83.7 |
| 500-154226-4 | MW-10 | 100 | 73.6 |
| LCS 160-399585/1-A | Lab Control Sample | 94.7 | 83.0 |
| MB 160-399585/19-A | Method Blank | 106 | 84.9 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

Y Carrier = Y Carrier

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-159262-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*3/7/2019 11:26:45 AM*
Richard Wright, Senior Project Manager
richard.wright@testamericainc.com

Designee for

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

## Job ID: 500-159262-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-159262-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 2/27/2019 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.4º C and 3.5º C.

**Metals**
Method(s) 6020A: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample: MW-10 (500-159262-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
Method(s) 9038, SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-04 (500-159262-3) and MW-10 (500-159262-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

## Client Sample ID: MW-02 — Lab Sample ID: 500-159262-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0026 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.041 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.073 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 69 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0013 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 400 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 49 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.16 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 23 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-159262-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.054 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.056 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 74 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00072 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 410 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 56 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.24 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 25 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-159262-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.033 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.38 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 79 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0012 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0012 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 490 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 55 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.25 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 52 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-159262-4

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

## Client Sample ID: MW-10 (Continued)

## Lab Sample ID: 500-159262-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.032 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.022 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.59 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.39 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Cadmium | 0.0015 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 150 | | 1.0 | | mg/L | 5 | | 6020A | Total Recoverable |
| Chromium | 0.063 | | 0.025 | | mg/L | 5 | | 6020A | Total Recoverable |
| Cobalt | 0.081 | | 0.0050 | | mg/L | 5 | | 6020A | Total Recoverable |
| Lead | 0.036 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0066 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0041 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 540 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 48 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.21 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 36 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL PEN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-159262-1 | MW-02 | Water | 02/26/19 09:20 | 02/27/19 10:20 |
| 500-159262-2 | MW-03 | Water | 02/26/19 10:55 | 02/27/19 10:20 |
| 500-159262-3 | MW-04 | Water | 02/26/19 12:25 | 02/27/19 10:20 |
| 500-159262-4 | MW-10 | Water | 02/26/19 14:45 | 02/27/19 10:20 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

## Client Sample ID: MW-02

**Date Collected: 02/26/19 09:20**
**Date Received: 02/27/19 10:20**

## Lab Sample ID: 500-159262-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/28/19 16:21 | 03/06/19 23:01 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| **Arsenic** | **0.0026** | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| **Barium** | **0.041** | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| **Boron** | **0.073** | | 0.050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| **Calcium** | **69** | | 0.20 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| **Lead** | **0.0013** | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/04/19 10:25 | 03/05/19 08:18 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **400** | | 10 | | mg/L | | | 02/28/19 10:48 | 1 |
| **Chloride** | **49** | | 2.0 | | mg/L | | | 03/02/19 16:33 | 1 |
| **Fluoride** | **0.16** | | 0.10 | | mg/L | | | 03/01/19 21:36 | 1 |
| **Sulfate** | **23** | | 5.0 | | mg/L | | | 03/06/19 10:46 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

**Client Sample ID: MW-03**
**Date Collected: 02/26/19 10:55**
**Date Received: 02/27/19 10:20**

**Lab Sample ID: 500-159262-2**
**Matrix: Water**

## Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/28/19 16:21 | 03/06/19 23:30 | 1 |

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| **Barium** | **0.054** | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| **Boron** | **0.056** | | 0.050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| **Calcium** | **74** | | 0.20 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| **Lead** | **0.00072** | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |

## Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/04/19 10:25 | 03/05/19 08:20 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **410** | | 10 | | mg/L | | | 02/28/19 10:50 | 1 |
| **Chloride** | **56** | | 2.0 | | mg/L | | | 03/04/19 13:43 | 1 |
| **Fluoride** | **0.24** | | 0.10 | | mg/L | | | 03/01/19 21:39 | 1 |
| **Sulfate** | **25** | | 5.0 | | mg/L | | | 03/06/19 10:46 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

**Client Sample ID: MW-04**
**Date Collected: 02/26/19 12:25**
**Date Received: 02/27/19 10:20**

**Lab Sample ID: 500-159262-3**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/28/19 16:21 | 03/06/19 23:34 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| **Barium** | **0.033** | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| **Boron** | **0.38** | | 0.050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| **Calcium** | **79** | | 0.20 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| **Cobalt** | **0.0012** | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| **Lead** | **0.0012** | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/04/19 10:25 | 03/05/19 08:30 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **490** | | 10 | | mg/L | | | 02/28/19 10:51 | 1 |
| **Chloride** | **55** | | 2.0 | | mg/L | | | 03/04/19 13:43 | 1 |
| **Fluoride** | **0.25** | | 0.10 | | mg/L | | | 03/01/19 21:42 | 1 |
| **Sulfate** | **52** | | 10 | | mg/L | | | 03/06/19 10:55 | 2 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

**Client Sample ID: MW-10**
**Date Collected: 02/26/19 14:45**
**Date Received: 02/27/19 10:20**

**Lab Sample ID: 500-159262-4**
**Matrix: Water**

## Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.032** | | 0.010 | | mg/L | | 02/28/19 16:21 | 03/06/19 23:38 | 1 |

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |
| **Arsenic** | **0.022** | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |
| **Barium** | **0.59** | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |
| Beryllium | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 11:30 | 5 |
| **Boron** | **0.39** | | 0.25 | | mg/L | | 02/28/19 16:21 | 03/01/19 11:30 | 5 |
| **Cadmium** | **0.0015** | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |
| **Calcium** | **150** | | 1.0 | | mg/L | | 02/28/19 16:21 | 03/01/19 11:30 | 5 |
| **Chromium** | **0.063** | | 0.025 | | mg/L | | 02/28/19 16:21 | 03/01/19 11:30 | 5 |
| **Cobalt** | **0.081** | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 11:30 | 5 |
| **Lead** | **0.036** | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |
| **Molybdenum** | **0.0066** | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |
| **Selenium** | **0.0041** | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |

## Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/04/19 10:25 | 03/05/19 08:32 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **540** | | 10 | | mg/L | | | 02/28/19 10:53 | 1 |
| **Chloride** | **48** | | 2.0 | | mg/L | | | 03/04/19 13:44 | 1 |
| **Fluoride** | **0.21** | | 0.10 | | mg/L | | | 03/01/19 21:45 | 1 |
| **Sulfate** | **36** | | 10 | | mg/L | | | 03/06/19 11:11 | 2 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 474292

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-159262-2 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-159262-3 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-159262-4 | MW-10 | Total Recoverable | Water | 3005A | |
| MB 500-474292/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-474292/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-159262-1 MS | MW-02 | Total Recoverable | Water | 3005A | |
| 500-159262-1 MSD | MW-02 | Total Recoverable | Water | 3005A | |
| 500-159262-1 DU | MW-02 | Total Recoverable | Water | 3005A | |

### Analysis Batch: 474590

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total Recoverable | Water | 6020A | 474292 |
| 500-159262-2 | MW-03 | Total Recoverable | Water | 6020A | 474292 |
| 500-159262-3 | MW-04 | Total Recoverable | Water | 6020A | 474292 |
| 500-159262-4 | MW-10 | Total Recoverable | Water | 6020A | 474292 |
| 500-159262-4 | MW-10 | Total Recoverable | Water | 6020A | 474292 |
| MB 500-474292/1-A | Method Blank | Total Recoverable | Water | 6020A | 474292 |
| LCS 500-474292/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 474292 |
| 500-159262-1 MS | MW-02 | Total Recoverable | Water | 6020A | 474292 |
| 500-159262-1 MSD | MW-02 | Total Recoverable | Water | 6020A | 474292 |
| 500-159262-1 DU | MW-02 | Total Recoverable | Water | 6020A | 474292 |

### Prep Batch: 474601

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total/NA | Water | 7470A | |
| 500-159262-2 | MW-03 | Total/NA | Water | 7470A | |
| 500-159262-3 | MW-04 | Total/NA | Water | 7470A | |
| 500-159262-4 | MW-10 | Total/NA | Water | 7470A | |
| MB 500-474601/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-474601/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-159262-2 MS | MW-03 | Total/NA | Water | 7470A | |
| 500-159262-2 MSD | MW-03 | Total/NA | Water | 7470A | |
| 500-159262-2 DU | MW-03 | Total/NA | Water | 7470A | |

### Analysis Batch: 474768

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total/NA | Water | 7470A | 474601 |
| 500-159262-2 | MW-03 | Total/NA | Water | 7470A | 474601 |
| 500-159262-3 | MW-04 | Total/NA | Water | 7470A | 474601 |
| 500-159262-4 | MW-10 | Total/NA | Water | 7470A | 474601 |
| MB 500-474601/12-A | Method Blank | Total/NA | Water | 7470A | 474601 |
| LCS 500-474601/13-A | Lab Control Sample | Total/NA | Water | 7470A | 474601 |
| 500-159262-2 MS | MW-03 | Total/NA | Water | 7470A | 474601 |
| 500-159262-2 MSD | MW-03 | Total/NA | Water | 7470A | 474601 |
| 500-159262-2 DU | MW-03 | Total/NA | Water | 7470A | 474601 |

### Analysis Batch: 475099

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total Recoverable | Water | 6010C | 474292 |
| 500-159262-2 | MW-03 | Total Recoverable | Water | 6010C | 474292 |

## Metals (Continued)

### Analysis Batch: 475099 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-3 | MW-04 | Total Recoverable | Water | 6010C | 474292 |
| 500-159262-4 | MW-10 | Total Recoverable | Water | 6010C | 474292 |
| MB 500-474292/1-A | Method Blank | Total Recoverable | Water | 6010C | 474292 |
| LCS 500-474292/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 474292 |
| 500-159262-1 MS | MW-02 | Total Recoverable | Water | 6010C | 474292 |
| 500-159262-1 MSD | MW-02 | Total Recoverable | Water | 6010C | 474292 |
| 500-159262-1 DU | MW-02 | Total Recoverable | Water | 6010C | 474292 |

## General Chemistry

### Analysis Batch: 432314

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-159262-2 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-159262-3 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-159262-4 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-432314/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-432314/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-432314/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 474186

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-159262-2 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-159262-3 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-159262-4 | MW-10 | Total/NA | Water | SM 2540C | |
| MB 500-474186/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-474186/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 474484

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-159262-2 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-159262-3 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-159262-4 | MW-10 | Total/NA | Water | SM 4500 F C | |
| MB 500-474484/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-474484/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 474498

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-474498/50 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-474498/51 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 474641

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-2 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-159262-3 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-159262-4 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-474641/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |

## General Chemistry (Continued)

### Analysis Batch: 474641 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-474641/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-474292/1-A**
**Matrix: Water**
**Analysis Batch: 475099**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/28/19 16:21 | 03/06/19 22:53 | 1 |

**Lab Sample ID: LCS 500-474292/2-A**
**Matrix: Water**
**Analysis Batch: 475099**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.504 | | mg/L | | 101 | 80 - 120 |

**Lab Sample ID: 500-159262-1 MS**
**Matrix: Water**
**Analysis Batch: 475099**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.538 | | mg/L | | 108 | 75 - 125 |

**Lab Sample ID: 500-159262-1 MSD**
**Matrix: Water**
**Analysis Batch: 475099**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.526 | | mg/L | | 105 | 75 - 125 | 2 | 20 |

**Lab Sample ID: 500-159262-1 DU**
**Matrix: Water**
**Analysis Batch: 475099**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | <0.010 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-474292/1-A**
**Matrix: Water**
**Analysis Batch: 474590**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Boron | <0.050 | | 0.050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-474292/1-A**
**Matrix: Water**
**Analysis Batch: 474590**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |

**Lab Sample ID: LCS 500-474292/2-A**
**Matrix: Water**
**Analysis Batch: 474590**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.476 | | mg/L | | 95 | 80 - 120 |
| Arsenic | 0.100 | 0.0952 | | mg/L | | 95 | 80 - 120 |
| Barium | 2.00 | 1.90 | | mg/L | | 95 | 80 - 120 |
| Beryllium | 0.0500 | 0.0448 | | mg/L | | 90 | 80 - 120 |
| Boron | 1.00 | 0.926 | | mg/L | | 93 | 80 - 120 |
| Cadmium | 0.0500 | 0.0475 | | mg/L | | 95 | 80 - 120 |
| Calcium | 10.0 | 9.25 | | mg/L | | 92 | 80 - 120 |
| Chromium | 0.200 | 0.189 | | mg/L | | 94 | 80 - 120 |
| Cobalt | 0.500 | 0.478 | | mg/L | | 96 | 80 - 120 |
| Lead | 0.100 | 0.102 | | mg/L | | 102 | 80 - 120 |
| Molybdenum | 1.00 | 0.906 | | mg/L | | 91 | 80 - 120 |
| Selenium | 0.100 | 0.0861 | | mg/L | | 86 | 80 - 120 |
| Thallium | 0.100 | 0.0900 | | mg/L | | 90 | 80 - 120 |

**Lab Sample ID: 500-159262-1 MS**
**Matrix: Water**
**Analysis Batch: 474590**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.486 | | mg/L | | 97 | 75 - 125 |
| Arsenic | 0.0026 | | 0.100 | 0.101 | | mg/L | | 98 | 75 - 125 |
| Barium | 0.041 | | 2.00 | 1.92 | | mg/L | | 94 | 75 - 125 |
| Beryllium | <0.0010 | | 0.0500 | 0.0436 | | mg/L | | 87 | 75 - 125 |
| Boron | 0.073 | | 1.00 | 0.958 | | mg/L | | 89 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0481 | | mg/L | | 96 | 75 - 125 |
| Calcium | 69 | | 10.0 | 75.2 | 4 | mg/L | | 59 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.180 | | mg/L | | 89 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.446 | | mg/L | | 89 | 75 - 125 |
| Lead | 0.0013 | | 0.100 | 0.101 | | mg/L | | 100 | 75 - 125 |
| Molybdenum | <0.0050 | | 1.00 | 0.936 | | mg/L | | 93 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.0891 | | mg/L | | 89 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.0879 | | mg/L | | 88 | 75 - 125 |

**Lab Sample ID: 500-159262-1 MSD**
**Matrix: Water**
**Analysis Batch: 474590**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.482 | | mg/L | | 96 | 75 - 125 | 1 | 20 |
| Arsenic | 0.0026 | | 0.100 | 0.100 | | mg/L | | 98 | 75 - 125 | 0 | 20 |
| Barium | 0.041 | | 2.00 | 1.89 | | mg/L | | 92 | 75 - 125 | 2 | 20 |
| Beryllium | <0.0010 | | 0.0500 | 0.0420 | | mg/L | | 84 | 75 - 125 | 4 | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-159262-1 MSD**
**Matrix: Water**
**Analysis Batch: 474590**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.073 | | 1.00 | 0.956 | | mg/L | | 88 | 75 - 125 | 0 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0482 | | mg/L | | 96 | 75 - 125 | 0 | 20 |
| Calcium | 69 | | 10.0 | 74.7 | 4 | mg/L | | 54 | 75 - 125 | 1 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.177 | | mg/L | | 88 | 75 - 125 | 2 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.439 | | mg/L | | 88 | 75 - 125 | 2 | 20 |
| Lead | 0.0013 | | 0.100 | 0.0999 | | mg/L | | 99 | 75 - 125 | 1 | 20 |
| Molybdenum | <0.0050 | | 1.00 | 0.935 | | mg/L | | 93 | 75 - 125 | 0 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.0886 | | mg/L | | 89 | 75 - 125 | 1 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.0874 | | mg/L | | 87 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-159262-1 DU**
**Matrix: Water**
**Analysis Batch: 474590**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | <0.0030 | | mg/L | | | | NC | 20 |
| Arsenic | 0.0026 | | 0.00272 | | mg/L | | | | 3 | 20 |
| Barium | 0.041 | | 0.0412 | | mg/L | | | | 0.8 | 20 |
| Beryllium | <0.0010 | | <0.0010 | | mg/L | | | | NC | 20 |
| Boron | 0.073 | | 0.0651 | | mg/L | | | | 11 | 20 |
| Cadmium | <0.00050 | | <0.00050 | | mg/L | | | | NC | 20 |
| Calcium | 69 | | 68.3 | | mg/L | | | | 1 | 20 |
| Chromium | <0.0050 | | <0.0050 | | mg/L | | | | NC | 20 |
| Cobalt | <0.0010 | | <0.0010 | | mg/L | | | | NC | 20 |
| Lead | 0.0013 | | 0.00124 | | mg/L | | | | 2 | 20 |
| Molybdenum | <0.0050 | | <0.0050 | | mg/L | | | | NC | 20 |
| Selenium | <0.0025 | | <0.0025 | | mg/L | | | | NC | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | | | NC | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-474601/12-A**
**Matrix: Water**
**Analysis Batch: 474768**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 474601**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/04/19 10:25 | 03/05/19 07:59 | 1 |

**Lab Sample ID: LCS 500-474601/13-A**
**Matrix: Water**
**Analysis Batch: 474768**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 474601**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | | | 0.00200 | 0.00195 | | mg/L | | 98 | 80 - 120 | | |

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: 500-159262-2 MS**
**Matrix: Water**
**Analysis Batch: 474768**

**Client Sample ID: MW-03**
**Prep Type: Total/NA**
**Prep Batch: 474601**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000982 | | mg/L | | 98 | 75 - 125 |

**Lab Sample ID: 500-159262-2 MSD**
**Matrix: Water**
**Analysis Batch: 474768**

**Client Sample ID: MW-03**
**Prep Type: Total/NA**
**Prep Batch: 474601**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000934 | | mg/L | | 93 | 75 - 125 | 5 | 20 |

**Lab Sample ID: 500-159262-2 DU**
**Matrix: Water**
**Analysis Batch: 474768**

**Client Sample ID: MW-03**
**Prep Type: Total/NA**
**Prep Batch: 474601**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-474186/1**
**Matrix: Water**
**Analysis Batch: 474186**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 02/28/19 10:20 | 1 |

**Lab Sample ID: LCS 500-474186/2**
**Matrix: Water**
**Analysis Batch: 474186**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 286 | | mg/L | | 114 | 80 - 120 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-474498/50**
**Matrix: Water**
**Analysis Batch: 474498**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 03/02/19 16:11 | 1 |

**Lab Sample ID: LCS 500-474498/51**
**Matrix: Water**
**Analysis Batch: 474498**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 53.0 | | mg/L | | 106 | 85 - 115 |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: MB 500-474641/12**
**Matrix: Water**
**Analysis Batch: 474641**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 03/04/19 13:21 | 1 |

**Lab Sample ID: LCS 500-474641/13**
**Matrix: Water**
**Analysis Batch: 474641**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 52.8 | | mg/L | | 106 | 85 - 115 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-474484/3**
**Matrix: Water**
**Analysis Batch: 474484**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 03/01/19 20:39 | 1 |

**Lab Sample ID: LCS 500-474484/4**
**Matrix: Water**
**Analysis Batch: 474484**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.2 | | mg/L | | 102 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-432314/6**
**Matrix: Water**
**Analysis Batch: 432314**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 03/06/19 10:18 | 1 |

**Lab Sample ID: LCS 400-432314/7**
**Matrix: Water**
**Analysis Batch: 432314**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 15.0 | 13.9 | | mg/L | | 92 | 90 - 110 |

**Lab Sample ID: MRL 400-432314/3**
**Matrix: Water**
**Analysis Batch: 432314**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 5.00 | <5.0 | | mg/L | | 79 | 50 - 150 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

## Client Sample ID: MW-02

**Lab Sample ID: 500-159262-1**

**Date Collected: 02/26/19 09:20**

**Matrix: Water**

**Date Received: 02/27/19 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 475099 | 03/06/19 23:01 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 474590 | 03/01/19 10:15 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 474601 | 03/04/19 10:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 474768 | 03/05/19 08:18 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 474186 | 02/28/19 10:48 | MTB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 474498 | 03/02/19 16:33 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 474484 | 03/01/19 21:36 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 432314 | 03/06/19 10:46 | RRC | TAL PEN |

## Client Sample ID: MW-03

**Lab Sample ID: 500-159262-2**

**Date Collected: 02/26/19 10:55**

**Matrix: Water**

**Date Received: 02/27/19 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 475099 | 03/06/19 23:30 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 474590 | 03/01/19 10:34 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 474601 | 03/04/19 10:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 474768 | 03/05/19 08:20 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 474186 | 02/28/19 10:50 | MTB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 474641 | 03/04/19 13:43 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 474484 | 03/01/19 21:39 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 432314 | 03/06/19 10:46 | RRC | TAL PEN |

## Client Sample ID: MW-04

**Lab Sample ID: 500-159262-3**

**Date Collected: 02/26/19 12:25**

**Matrix: Water**

**Date Received: 02/27/19 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 475099 | 03/06/19 23:34 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 474590 | 03/01/19 10:38 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 474601 | 03/04/19 10:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 474768 | 03/05/19 08:30 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 474186 | 02/28/19 10:51 | MTB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 474641 | 03/04/19 13:43 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 474484 | 03/01/19 21:42 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 432314 | 03/06/19 10:55 | RRC | TAL PEN |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

## Client Sample ID: MW-10

**Date Collected: 02/26/19 14:45**
**Date Received: 02/27/19 10:20**

## Lab Sample ID: 500-159262-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 475099 | 03/06/19 23:38 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 474590 | 03/01/19 10:42 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 474590 | 03/01/19 11:30 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 474601 | 03/04/19 10:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 474768 | 03/05/19 08:32 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 474186 | 02/28/19 10:53 | MTB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 474641 | 03/04/19 13:44 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 474484 | 03/01/19 21:45 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 432314 | 03/06/19 11:11 | RRC | TAL PEN |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Alabama | State Program | 4 | 40150 | 06-30-19 |
| ANAB | ISO/IEC 17025 | | L2471 | 02-22-20 |
| Arizona | State Program | 9 | AZ0710 | 01-12-20 |
| Arkansas DEQ | State Program | 6 | 88-0689 | 09-01-19 |
| California | State Program | 9 | 2510 | 06-30-19 |
| Florida | NELAP | 4 | E81010 | 06-30-19 |
| Georgia | State Program | 4 | E81010 (FL) | 06-30-19 |
| Illinois | NELAP | 5 | 200041 | 10-09-19 |
| Iowa | State Program | 7 | 367 | 08-01-20 |
| Kansas | NELAP | 7 | E-10253 | 10-31-19 |
| Kentucky (UST) | State Program | 4 | 53 | 06-30-19 |
| Kentucky (WW) | State Program | 4 | 98030 | 12-31-19 |
| Louisiana | NELAP | 6 | 30976 | 06-30-19 |
| Louisiana (DW) | NELAP | 6 | LA017 | 12-31-19 |
| Maryland | State Program | 3 | 233 | 09-30-19 |
| Massachusetts | State Program | 1 | M-FL094 | 06-30-19 |
| Michigan | State Program | 5 | 9912 | 06-30-19 |
| New Jersey | NELAP | 2 | FL006 | 06-30-19 |
| North Carolina (WW/SW) | State Program | 4 | 314 | 12-31-19 |
| Oklahoma | State Program | 6 | 9810 | 08-31-19 |
| Pennsylvania | NELAP | 3 | 68-00467 | 01-31-20 |
| Rhode Island | State Program | 1 | LAO00307 | 12-30-19 |
| South Carolina | State Program | 4 | 96026 | 06-30-19 |
| Tennessee | State Program | 4 | TN02907 | 06-30-19 |
| Texas | NELAP | 6 | T104704286-18-15 | 09-30-19 |
| US Fish & Wildlife | Federal | | LE058448-0 | 07-31-19 |
| USDA | Federal | | P330-18-00148 | 05-17-21 |
| Virginia | NELAP | 3 | 460166 | 06-14-19 |
| Washington | State Program | 10 | C915 | 05-15-19 |
| West Virginia DEP | State Program | 3 | 136 | 07-31-19 |

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 2-26-19 | COC No: 1 |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Eric Lang | Carrier: FedEx | 1 of 1 COCs |
| 14665 West Lisbon Road, Suite 1A | Analysis Turnaround Time | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| (262) 781-0475 Phone | TAT if different from Below _____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR | ☐ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: 500-159262 |
| P O # 12313.1 | ☐ 1 day | | | |

| | Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y / N) | Perform MS / MSD (Y / N) | Total Metals | Cl, Fl, SO4, TDS | Radium 226/228 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-02 | 2-26-19 | 0920 | G | W | 5 | N | N | x | x | x | |
| 2 | MW-03 | 2-26-19 | 1055 | G | W | 5 | N | N | x | x | x | |
| 3 | MW-04 | 2-26-19 | 1225 | G | W | 5 | N | N | x | x | x | |
| 4 | MW-10 | 2-26-19 | 1445 | G | W | 5 | N | N | x | x | x | |
| | | | | | | | | | 4 | 1 | 4 | |

500-159262 COC

**Preservation Used:** 1=Ice, 2=HCl; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Other _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:**

AS 02/27/19
~~3.5~~ 3.5, 3.4

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | | Therm ID No.: _____ |
|---|---|---|---|---|---|
| Relinquished by: Mitchel Dolan | Company: KPRG | Date/Time: 2-26-19/1600 | Received by: FEDEX | Company: | Date/Time: 2-26-19 / 1600 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: TALHE | Date/Time: 02/27/19 1020 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018


ORIGIN ID:PIAA (000) 000-0000
TEST AMERICA
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 26FEB19
ACTWGT: 47.00 LB
CAD: 006994779/SSFE1922
DIMS: 24x18x12 IN
BILL THIRD PARTY
TO ERIC LANG
TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(708) 534-5200
REF:
DEPT:
FedEx
Express
1 of 3
TRK# 0201 7857 1738 3280
## MASTER ##
XH JOTA
WED - 27 FEB 10:30A
PRIORITY OVERNIGHT
60484
IL-US ORD
ORIGIN ID:PIAA (000) 000-0000
AMERICA
SHIP DATE: 26FEB19
ACTWGT: 24.00 LB
CAD: 006994779/SSFE1922
DIMS: 18x15x10 IN
2 of 3
MPS# 0263 7857 1738 3291
Mstr# 7857 1738 3280
XH JOTA
0201
WED - 27 FEB 10:30A
PRIORITY OVERNIGHT
60484
IL-US ORD
3 of 3
MPS# 0263 7857 1738 3306
Mstr# 7857 1738 3280
XH JOTA
0201
WED - 27 FEB 10:30A
PRIORITY OVERNIGHT
60484
IL-US ORD
500-159262 Wayf

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-118390.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-159262-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 3/11/2019 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-02 (500-159262-1) | 2/26/19 | 09:20 Central | | Water | | | X | 1 | |
| MW-03 (500-159262-2) | 2/26/19 | 10:55 Central | | Water | | | X | 1 | |
| MW-04 (500-159262-3) | 2/26/19 | 12:25 Central | | Water | | | X | 1 | |
| MW-10 (500-159262-4) | 2/26/19 | 14:45 Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Paula Buckley | 2/27/19 1600 | TA CHI | | 2/28/19 931 | TA Pen |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 2.6°C IR 8 |
|---|---|---|

Ver: 01/16/2019

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3/7/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-159262-1

**Login Number: 159262**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.4, 3.5 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-159262-1

**Login Number: 159262**
**List Number: 3**
**Creator: Perez, Trina M**

**List Source: TestAmerica Pensacola**
**List Creation: 02/28/19 05:18 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.6°C IR-8 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing TestAmerica



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-162824-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*5/22/2019 9:30:12 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-162824-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-162824-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/4/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.3º C, 3.7º C, 4.7º C and 5.3º C.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
Method(s) 375.4, SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample, the MS/MSD was diluted after the spike. The spike amount was adjusted by the dilution factor.

(500-162824-F-13 MS) and (500-162824-F-13 MSD)

Method(s) 375.4, SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-440971 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 375.4, SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-03 (500-162824-3), MW-05 (500-162824-5), MW-09 (500-162824-7), MW-11 (500-162824-9), MW-12 (500-162824-10), MW-15 (500-162824-11), MW-17 (500-162824-12), MW-18 (500-162824-13), MW-19 (500-162824-14), Duplicate (500-162824-15), (500-162824-F-13 MS) and (500-162824-F-13 MSD). Elevated reporting limits (RLs) are provided.

Method(s) 375.4, SM 4500 SO4 E: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-08 (500-162824-6). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-162824-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.039 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.070 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 78 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0017 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 450 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 54 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 27 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-02 — Lab Sample ID: 500-162824-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.048 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.12 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 79 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 440 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 48 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.16 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 30 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-162824-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.060 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.28 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 74 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 390 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 49 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 38 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-162824-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.026 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.36 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 74 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 380 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 48 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-04 (Continued) — Lab Sample ID: 500-162824-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.25 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 35 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-162824-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.041 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.56 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 84 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0061 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 590 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 73 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.36 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 120 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-162824-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.021 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0018 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.068 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.54 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 95 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0069 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 600 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 73 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.35 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 85 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-162824-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.038 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.6 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 79 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.031 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0036 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 640 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 37 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-10 — Lab Sample ID: 500-162824-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0023 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.27 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.35 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 92 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0028 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0037 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 470 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 50 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 30 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-162824-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.11 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.60 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.3 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0026 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0011 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.014 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 730 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 60 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.62 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 200 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-162824-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.041 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.13 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.40 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00054 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-162824-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 0.0012 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.011 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 170 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.38 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 330 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-162824-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.027 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0045 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.052 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.5 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 180 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.023 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.52 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 420 | | 150 | | mg/L | 30 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-162824-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.042 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.040 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.98 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00052 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 150 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00069 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.060 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 190 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.66 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 660 | | 150 | | mg/L | 30 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-18 — Lab Sample ID: 500-162824-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.54 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.61 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-162824-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.076 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.7 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.031 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0035 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 700 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 39 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 160 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-162824-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.024 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0021 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.052 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.6 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 190 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.024 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.53 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 470 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL PEN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Assest ID |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Water | 04/30/19 13:25 | 05/04/19 09:30 | |
| 500-162824-2 | MW-02 | Water | 04/30/19 09:45 | 05/04/19 09:30 | |
| 500-162824-3 | MW-03 | Water | 04/30/19 10:50 | 05/04/19 09:30 | |
| 500-162824-4 | MW-04 | Water | 04/30/19 11:40 | 05/04/19 09:30 | |
| 500-162824-5 | MW-05 | Water | 04/30/19 12:30 | 05/04/19 09:30 | |
| 500-162824-6 | MW-08 | Water | 05/01/19 15:35 | 05/04/19 09:30 | |
| 500-162824-7 | MW-09 | Water | 05/01/19 13:15 | 05/04/19 09:30 | |
| 500-162824-8 | MW-10 | Water | 05/01/19 09:30 | 05/04/19 09:30 | |
| 500-162824-9 | MW-11 | Water | 05/01/19 10:25 | 05/04/19 09:30 | |
| 500-162824-10 | MW-12 | Water | 05/01/19 11:55 | 05/04/19 09:30 | |
| 500-162824-11 | MW-15 | Water | 05/02/19 12:15 | 05/04/19 09:30 | |
| 500-162824-12 | MW-17 | Water | 04/29/19 15:20 | 05/04/19 09:30 | |
| 500-162824-13 | MW-18 | Water | 04/29/19 14:25 | 05/04/19 09:30 | |
| 500-162824-14 | MW-19 | Water | 05/02/19 10:30 | 05/04/19 09:30 | |
| 500-162824-15 | Duplicate | Water | 04/29/19 00:00 | 05/04/19 09:30 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-01

**Date Collected: 04/30/19 13:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:33 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Arsenic** | **0.0014** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Barium** | **0.039** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:00 | 1 |
| **Boron** | **0.070** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:00 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Calcium** | **78** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Lead** | **0.0017** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:00 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:22 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **450** | | 10 | | mg/L | | | 05/06/19 02:06 | 1 |
| **Chloride** | **54** | | 2.0 | | mg/L | | | 05/11/19 09:12 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 05/11/19 13:06 | 1 |
| **Sulfate** | **27** | | 5.0 | | mg/L | | | 05/14/19 12:33 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-02

**Date Collected: 04/30/19 09:45**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-2

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:53 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| **Barium** | **0.048** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:30 | 1 |
| **Boron** | **0.12** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:30 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| **Calcium** | **79** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:30 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:28 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **440** | | 10 | | mg/L | | | 05/06/19 02:12 | 1 |
| **Chloride** | **48** | | 2.0 | | mg/L | | | 05/11/19 09:12 | 1 |
| **Fluoride** | **0.16** | | 0.10 | | mg/L | | | 05/13/19 20:22 | 1 |
| **Sulfate** | **30** | | 5.0 | | mg/L | | | 05/14/19 12:33 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-03

**Date Collected: 04/30/19 10:50**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-3

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:57 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| **Barium** | **0.060** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:34 | 1 |
| **Boron** | **0.28** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:34 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| **Calcium** | **74** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:34 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:29 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **390** | | 10 | | mg/L | | | 05/06/19 02:14 | 1 |
| **Chloride** | **49** | | 2.0 | | mg/L | | | 05/17/19 22:02 | 1 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 05/13/19 20:25 | 1 |
| **Sulfate** | **38** | | 10 | | mg/L | | | 05/14/19 13:57 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-04

**Date Collected: 04/30/19 11:40**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-4

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:01 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| **Barium** | **0.026** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:38 | 1 |
| **Boron** | **0.36** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:38 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| **Calcium** | **74** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:38 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:31 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **380** | | 10 | | mg/L | | | 05/06/19 02:17 | 1 |
| **Chloride** | **48** | | 2.0 | | mg/L | | | 05/17/19 22:03 | 1 |
| **Fluoride** | **0.25** | | 0.10 | | mg/L | | | 05/13/19 20:28 | 1 |
| **Sulfate** | **35** | | 5.0 | | mg/L | | | 05/14/19 12:40 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-05

**Date Collected: 04/30/19 12:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-5

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:05 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| **Barium** | **0.041** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:42 | 1 |
| **Boron** | **0.56** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:42 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| **Calcium** | **84** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:42 | 1 |
| **Molybdenum** | **0.0061** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:32 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **590** | | 10 | | mg/L | | | 05/06/19 02:19 | 1 |
| **Chloride** | **73** | | 2.0 | | mg/L | | | 05/17/19 22:06 | 1 |
| **Fluoride** | **0.36** | | 0.10 | | mg/L | | | 05/13/19 20:31 | 1 |
| **Sulfate** | **120** | | 25 | | mg/L | | | 05/14/19 13:57 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-08

**Date Collected: 05/01/19 15:35**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-6

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.021** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:09 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| **Arsenic** | **0.0018** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| **Barium** | **0.068** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:45 | 1 |
| **Boron** | **0.54** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:45 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| **Calcium** | **95** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:45 | 1 |
| **Molybdenum** | **0.0069** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:34 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **600** | | 10 | | mg/L | | | 05/06/19 02:22 | 1 |
| **Chloride** | **73** | | 2.0 | | mg/L | | | 05/17/19 22:06 | 1 |
| **Fluoride** | **0.35** | | 0.10 | | mg/L | | | 05/13/19 20:34 | 1 |
| **Sulfate** | **85** | | 25 | | mg/L | | | 05/16/19 11:37 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-09

**Date Collected: 05/01/19 13:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-7

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:21 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| **Barium** | **0.038** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:42 | 1 |
| **Boron** | **4.6** | | 0.50 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:49 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| **Calcium** | **79** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:42 | 1 |
| **Molybdenum** | **0.031** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| **Selenium** | **0.0036** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:40 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **640** | | 10 | | mg/L | | | 05/06/19 02:25 | 1 |
| **Chloride** | **37** | | 2.0 | | mg/L | | | 05/17/19 20:32 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 05/13/19 20:38 | 1 |
| **Sulfate** | **170** | | 25 | | mg/L | | | 05/14/19 14:02 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-10

**Date Collected: 05/01/19 09:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-8

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:25 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Arsenic** | **0.0023** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Barium** | **0.27** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:00 | 1 |
| **Boron** | **0.35** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:00 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Calcium** | **92** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Cobalt** | **0.011** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Lead** | **0.0028** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:00 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Selenium** | **0.0037** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:42 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **470** | | 10 | | mg/L | | | 05/06/19 02:27 | 1 |
| **Chloride** | **50** | | 2.0 | | mg/L | | | 05/17/19 20:32 | 1 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 05/13/19 20:41 | 1 |
| **Sulfate** | **30** | | 5.0 | | mg/L | | | 05/14/19 12:40 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-11

**Date Collected: 05/01/19 10:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-9

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:29 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Arsenic** | **0.11** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Barium** | **0.60** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:46 | 1 |
| **Boron** | **2.3** | | 0.25 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:04 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Cobalt** | **0.0026** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Lead** | **0.0011** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:46 | 1 |
| **Molybdenum** | **0.014** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:48 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **730** | | 10 | | mg/L | | | 05/06/19 02:30 | 1 |
| **Chloride** | **60** | | 2.0 | | mg/L | | | 05/17/19 20:33 | 1 |
| **Fluoride** | **0.62** | | 0.10 | | mg/L | | | 05/13/19 20:45 | 1 |
| **Sulfate** | **200** | | 50 | | mg/L | | | 05/14/19 14:06 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-12

**Date Collected: 05/01/19 11:55**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-10

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.014** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:33 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Arsenic** | **0.041** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Barium** | **0.13** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:08 | 1 |
| **Boron** | **0.40** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:08 | 1 |
| **Cadmium** | **0.00054** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Lead** | **0.0012** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:08 | 1 |
| **Molybdenum** | **0.011** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:49 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/06/19 02:32 | 1 |
| **Chloride** | **170** | | 10 | | mg/L | | | 05/17/19 20:57 | 5 |
| **Fluoride** | **0.38** | | 0.10 | | mg/L | | | 05/13/19 20:57 | 1 |
| **Sulfate** | **330** | | 50 | | mg/L | | | 05/14/19 14:06 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-15

**Date Collected: 05/02/19 12:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-11

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.027** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:37 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| **Arsenic** | **0.0045** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| **Barium** | **0.052** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:49 | 1 |
| **Boron** | **1.5** | | 0.25 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:12 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| **Calcium** | **180** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:49 | 1 |
| **Molybdenum** | **0.023** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:51 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/06/19 02:35 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 05/17/19 22:57 | 5 |
| **Fluoride** | **0.52** | | 0.10 | | mg/L | | | 05/13/19 21:00 | 1 |
| **Sulfate** | **420** | | 150 | | mg/L | | | 05/14/19 17:14 | 30 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-17

**Date Collected: 04/29/19 15:20**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-12

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.015** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:42 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Arsenic** | **0.042** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Barium** | **0.040** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:16 | 1 |
| **Boron** | **0.98** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:16 | 1 |
| **Cadmium** | **0.00052** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Calcium** | **150** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Lead** | **0.00069** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:16 | 1 |
| **Molybdenum** | **0.060** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:52 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/06/19 02:37 | 1 |
| **Chloride** | **190** | | 10 | | mg/L | | | 05/17/19 22:57 | 5 |
| **Fluoride** | **0.66** | | 0.10 | | mg/L | | | 05/13/19 21:04 | 1 |
| **Sulfate** | **660** | | 150 | | mg/L | | | 05/15/19 10:19 | 30 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-18

**Date Collected: 04/29/19 14:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-13

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.013** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:46 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| **Barium** | **0.12** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:19 | 1 |
| **Boron** | **0.54** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:19 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:19 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:54 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/06/19 02:40 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 05/17/19 20:56 | 5 |
| **Fluoride** | **0.61** | | 0.10 | | mg/L | | | 05/13/19 21:07 | 1 |
| **Sulfate** | **170** | | 25 | | mg/L | | | 05/14/19 14:02 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-19

**Date Collected: 05/02/19 10:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-14

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:50 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| **Barium** | **0.076** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:53 | 1 |
| **Boron** | **3.7** | | 0.50 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:23 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:53 | 1 |
| **Molybdenum** | **0.031** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| **Selenium** | **0.0035** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:55 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **700** | | 10 | | mg/L | | | 05/06/19 02:43 | 1 |
| **Chloride** | **39** | | 2.0 | | mg/L | | | 05/17/19 20:27 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 05/13/19 21:10 | 1 |
| **Sulfate** | **160** | | 25 | | mg/L | | | 05/14/19 14:06 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: Duplicate

**Date Collected: 04/29/19 00:00**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-15

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.024** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:54 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| **Arsenic** | **0.0021** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| **Barium** | **0.052** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:57 | 1 |
| **Boron** | **1.6** | | 0.25 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:27 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| **Calcium** | **190** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:57 | 1 |
| **Molybdenum** | **0.024** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:57 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/06/19 02:45 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 05/17/19 20:56 | 5 |
| **Fluoride** | **0.53** | | 0.10 | | mg/L | | | 05/13/19 21:12 | 1 |
| **Sulfate** | **470** | | 100 | | mg/L | | | 05/15/19 10:19 | 20 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 483975

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-162824-6 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 3005A | |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 3005A | |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 3005A | |

### Analysis Batch: 484171

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-6 | MW-08 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6010C | 483975 |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 6010C | 483975 |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 6010C | 483975 |

### Analysis Batch: 484720

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 6020A | 483975 |

## Metals (Continued)

### Analysis Batch: 484720 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-6 | MW-08 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6020A | 483975 |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 6020A | 483975 |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 6020A | 483975 |

### Analysis Batch: 484965

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-6 | MW-08 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6020A | 483975 |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 6020A | 483975 |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 6020A | 483975 |

### Prep Batch: 485450

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-162824-2 | MW-02 | Total/NA | Water | 7470A | |
| 500-162824-3 | MW-03 | Total/NA | Water | 7470A | |
| 500-162824-4 | MW-04 | Total/NA | Water | 7470A | |
| 500-162824-5 | MW-05 | Total/NA | Water | 7470A | |

## Metals (Continued)

### Prep Batch: 485450 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-6 | MW-08 | Total/NA | Water | 7470A | |
| 500-162824-7 | MW-09 | Total/NA | Water | 7470A | |
| 500-162824-8 | MW-10 | Total/NA | Water | 7470A | |
| 500-162824-9 | MW-11 | Total/NA | Water | 7470A | |
| 500-162824-10 | MW-12 | Total/NA | Water | 7470A | |
| 500-162824-11 | MW-15 | Total/NA | Water | 7470A | |
| 500-162824-12 | MW-17 | Total/NA | Water | 7470A | |
| 500-162824-13 | MW-18 | Total/NA | Water | 7470A | |
| 500-162824-14 | MW-19 | Total/NA | Water | 7470A | |
| 500-162824-15 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-485450/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-485450/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-162824-6 MS | MW-08 | Total/NA | Water | 7470A | |
| 500-162824-6 MSD | MW-08 | Total/NA | Water | 7470A | |
| 500-162824-6 DU | MW-08 | Total/NA | Water | 7470A | |

### Analysis Batch: 485704

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | 7470A | 485450 |
| 500-162824-2 | MW-02 | Total/NA | Water | 7470A | 485450 |
| 500-162824-3 | MW-03 | Total/NA | Water | 7470A | 485450 |
| 500-162824-4 | MW-04 | Total/NA | Water | 7470A | 485450 |
| 500-162824-5 | MW-05 | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 | MW-08 | Total/NA | Water | 7470A | 485450 |
| 500-162824-7 | MW-09 | Total/NA | Water | 7470A | 485450 |
| 500-162824-8 | MW-10 | Total/NA | Water | 7470A | 485450 |
| 500-162824-9 | MW-11 | Total/NA | Water | 7470A | 485450 |
| 500-162824-10 | MW-12 | Total/NA | Water | 7470A | 485450 |
| 500-162824-11 | MW-15 | Total/NA | Water | 7470A | 485450 |
| 500-162824-12 | MW-17 | Total/NA | Water | 7470A | 485450 |
| 500-162824-13 | MW-18 | Total/NA | Water | 7470A | 485450 |
| 500-162824-14 | MW-19 | Total/NA | Water | 7470A | 485450 |
| 500-162824-15 | Duplicate | Total/NA | Water | 7470A | 485450 |
| MB 500-485450/12-A | Method Blank | Total/NA | Water | 7470A | 485450 |
| LCS 500-485450/13-A | Lab Control Sample | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 MS | MW-08 | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 MSD | MW-08 | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 DU | MW-08 | Total/NA | Water | 7470A | 485450 |

## General Chemistry

### Analysis Batch: 440971

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-2 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-3 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-7 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |

## General Chemistry (Continued)

### Analysis Batch: 440971 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-10 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-440971/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-440971/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-440971/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-13 MS | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-13 MSD | MW-18 | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 441150

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-6 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-441150/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-441150/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-441150/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 483709

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-162824-2 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-162824-3 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-162824-6 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-162824-7 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-162824-10 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-483709/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-483709/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-162824-1 DU | MW-01 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 484846

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-2 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-484846/83 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-484846/84 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 485004

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| MB 500-485004/31 | Method Blank | Total/NA | Water | SM 4500 F C | |

## General Chemistry (Continued)

### Analysis Batch: 485004 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-485004/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 485172

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-2 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-162824-3 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-162824-6 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-162824-7 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-162824-10 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-485172/31 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-485172/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 485974

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-7 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-10 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-485974/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-485974/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 485996

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-3 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-6 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-485996/9 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-485996/10 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-4 MS | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-4 MSD | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-12 MS | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-12 MSD | MW-17 | Total/NA | Water | SM 4500 Cl- E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-483975/1-A**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:13 | 1 |

**Lab Sample ID: LCS 500-483975/2-A**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.544 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: 500-162824-1 MS**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.554 | | mg/L | | 111 | 75 - 125 |

**Lab Sample ID: 500-162824-1 MSD**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.557 | | mg/L | | 111 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | <0.010 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-483975/1-A**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-483975/1-A**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 17:53 | 1 |
| Boron | <0.050 | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 17:53 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 17:53 | 1 |

**Lab Sample ID: LCS 500-483975/2-A**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.504 | | mg/L | | 101 | 80 - 120 |
| Arsenic | 0.100 | 0.0997 | | mg/L | | 100 | 80 - 120 |
| Barium | 2.00 | 2.02 | | mg/L | | 101 | 80 - 120 |
| Cadmium | 0.0500 | 0.0516 | | mg/L | | 103 | 80 - 120 |
| Calcium | 10.0 | 10.0 | | mg/L | | 100 | 80 - 120 |
| Chromium | 0.200 | 0.195 | | mg/L | | 98 | 80 - 120 |
| Cobalt | 0.500 | 0.498 | | mg/L | | 100 | 80 - 120 |
| Molybdenum | 1.00 | 0.978 | | mg/L | | 98 | 80 - 120 |
| Selenium | 0.100 | 0.0994 | | mg/L | | 99 | 80 - 120 |
| Thallium | 0.100 | 0.0964 | | mg/L | | 96 | 80 - 120 |

**Lab Sample ID: LCS 500-483975/2-A**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Beryllium | 0.0500 | 0.0520 | | mg/L | | 104 | 80 - 120 |
| Boron | 1.00 | 0.983 | | mg/L | | 98 | 80 - 120 |
| Lead | 0.100 | 0.105 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: 500-162824-1 MS**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.486 | | mg/L | | 97 | 75 - 125 |
| Arsenic | 0.0014 | | 0.100 | 0.0971 | | mg/L | | 96 | 75 - 125 |
| Barium | 0.039 | | 2.00 | 2.02 | | mg/L | | 99 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0496 | | mg/L | | 99 | 75 - 125 |
| Calcium | 78 | | 10.0 | 87.8 | 4 | mg/L | | 93 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.192 | | mg/L | | 95 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.475 | | mg/L | | 95 | 75 - 125 |
| Molybdenum | <0.0050 | | 1.00 | 0.930 | | mg/L | | 93 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.0958 | | mg/L | | 96 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.0934 | | mg/L | | 93 | 75 - 125 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-162824-1 MS**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | 0.0500 | 0.0467 | | mg/L | | 93 | 75 - 125 |
| Boron | 0.070 | | 1.00 | 0.965 | | mg/L | | 90 | 75 - 125 |
| Lead | 0.0017 | | 0.100 | 0.102 | | mg/L | | 100 | 75 - 125 |

**Lab Sample ID: 500-162824-1 MSD**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.485 | | mg/L | | 97 | 75 - 125 | 0 | 20 |
| Arsenic | 0.0014 | | 0.100 | 0.0931 | | mg/L | | 92 | 75 - 125 | 4 | 20 |
| Barium | 0.039 | | 2.00 | 1.97 | | mg/L | | 97 | 75 - 125 | 2 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0494 | | mg/L | | 99 | 75 - 125 | 0 | 20 |
| Calcium | 78 | | 10.0 | 85.4 | 4 | mg/L | | 70 | 75 - 125 | 3 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.186 | | mg/L | | 92 | 75 - 125 | 3 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.459 | | mg/L | | 92 | 75 - 125 | 4 | 20 |
| Molybdenum | <0.0050 | | 1.00 | 0.914 | | mg/L | | 91 | 75 - 125 | 2 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.0924 | | mg/L | | 92 | 75 - 125 | 4 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.0910 | | mg/L | | 91 | 75 - 125 | 3 | 20 |

**Lab Sample ID: 500-162824-1 MSD**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | 0.0500 | 0.0476 | | mg/L | | 95 | 75 - 125 | 2 | 20 |
| Boron | 0.070 | | 1.00 | 0.976 | | mg/L | | 91 | 75 - 125 | 1 | 20 |
| Lead | 0.0017 | | 0.100 | 0.103 | | mg/L | | 101 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | <0.0030 | | mg/L | | NC | 20 |
| Arsenic | 0.0014 | | 0.00143 | | mg/L | | 5 | 20 |
| Barium | 0.039 | | 0.0380 | | mg/L | | 3 | 20 |
| Cadmium | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Calcium | 78 | | 76.5 | | mg/L | | 3 | 20 |
| Chromium | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Cobalt | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Molybdenum | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Selenium | <0.0025 | | <0.0025 | | mg/L | | NC | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Boron | 0.070 | | 0.0576 | | mg/L | | 19 | 20 |
| Lead | 0.0017 | | 0.00164 | | mg/L | | 4 | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-485450/12-A**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:09 | 1 |

**Lab Sample ID: LCS 500-485450/13-A**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00200 | | mg/L | | 100 | 80 - 120 |

**Lab Sample ID: 500-162824-6 MS**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00101 | | mg/L | | 101 | 75 - 125 |

**Lab Sample ID: 500-162824-6 MSD**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000965 | | mg/L | | 96 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-162824-6 DU**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-483709/1**
**Matrix: Water**
**Analysis Batch: 483709**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 05/06/19 01:54 | 1 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: LCS 500-483709/2**
**Matrix: Water**
**Analysis Batch: 483709**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 274 | | mg/L | | 110 | 80 - 120 |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 483709**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 450 | | 434 | | mg/L | | 3 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-484846/83**
**Matrix: Water**
**Analysis Batch: 484846**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/11/19 08:50 | 1 |

**Lab Sample ID: LCS 500-484846/84**
**Matrix: Water**
**Analysis Batch: 484846**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 50.7 | | mg/L | | 101 | 85 - 115 |

**Lab Sample ID: MB 500-485974/4**
**Matrix: Water**
**Analysis Batch: 485974**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/17/19 20:11 | 1 |

**Lab Sample ID: LCS 500-485974/5**
**Matrix: Water**
**Analysis Batch: 485974**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 50.4 | | mg/L | | 101 | 85 - 115 |

**Lab Sample ID: MB 500-485996/9**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/17/19 21:52 | 1 |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: LCS 500-485996/10**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 51.5 | | mg/L | | 103 | 85 - 115 | | |

**Lab Sample ID: 500-162824-4 MS**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 48 | | 50.0 | 90.2 | | mg/L | | 84 | 75 - 125 | | |

**Lab Sample ID: 500-162824-4 MSD**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 48 | | 50.0 | 93.7 | | mg/L | | 91 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-162824-12 MS**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 190 | | 50.0 | 228 | | mg/L | | 83 | 75 - 125 | | |

**Lab Sample ID: 500-162824-12 MSD**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 190 | | 50.0 | 226 | | mg/L | | 77 | 75 - 125 | 1 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-485004/31**
**Matrix: Water**
**Analysis Batch: 485004**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/11/19 12:57 | 1 |

**Lab Sample ID: LCS 500-485004/32**
**Matrix: Water**
**Analysis Batch: 485004**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | | | 10.0 | 10.5 | | mg/L | | 105 | 80 - 120 | | |

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: MB 500-485172/31**
**Matrix: Water**
**Analysis Batch: 485172**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/13/19 19:45 | 1 |

**Lab Sample ID: LCS 500-485172/32**
**Matrix: Water**
**Analysis Batch: 485172**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.4 | | mg/L | | 104 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-440971/6**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/14/19 12:26 | 1 |

**Lab Sample ID: LCS 400-440971/7**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 15.0 | 14.4 | | mg/L | | 96 | 90 - 110 |

**Lab Sample ID: MRL 400-440971/3**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 5.00 | <5.0 | | mg/L | | 87 | 50 - 150 |

**Lab Sample ID: 500-162824-13 MS**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 170 | | 10.0 | 173 | 4 | mg/L | | 20 | 77 - 128 |

**Lab Sample ID: 500-162824-13 MSD**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 170 | | 10.0 | 172 | 4 | mg/L | | 12 | 77 - 128 | 0 | 5 |

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: MB 400-441150/6**
**Matrix: Water**
**Analysis Batch: 441150**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/16/19 11:01 | 1 |

**Lab Sample ID: LCS 400-441150/7**
**Matrix: Water**
**Analysis Batch: 441150**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 15.0 | 14.3 | | mg/L | | 95 | 90 - 110 | | |

**Lab Sample ID: MRL 400-441150/3**
**Matrix: Water**
**Analysis Batch: 441150**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 5.00 | <5.0 | | mg/L | | 95 | 50 - 150 | | |

## Client Sample ID: MW-01

**Lab Sample ID: 500-162824-1**

**Date Collected: 04/30/19 13:25**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 18:33 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:00 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 02:37 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:22 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:06 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 484846 | 05/11/19 09:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485004 | 05/11/19 13:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:33 | RRC | TAL PEN |

## Client Sample ID: MW-02

**Lab Sample ID: 500-162824-2**

**Date Collected: 04/30/19 09:45**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 18:53 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:30 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:06 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:28 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:12 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 484846 | 05/11/19 09:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:22 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:33 | RRC | TAL PEN |

## Client Sample ID: MW-03

**Lab Sample ID: 500-162824-3**

**Date Collected: 04/30/19 10:50**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 18:57 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:34 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:10 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:29 | MJG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-03

**Date Collected: 04/30/19 10:50**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:14 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:02 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:25 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 440971 | 05/14/19 13:57 | RRC | TAL PEN |

## Client Sample ID: MW-04

**Date Collected: 04/30/19 11:40**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:01 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:38 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:14 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:31 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:17 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:03 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:28 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:40 | RRC | TAL PEN |

## Client Sample ID: MW-05

**Date Collected: 04/30/19 12:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:05 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:42 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:19 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:32 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:19 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:31 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 13:57 | RRC | TAL PEN |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-08

**Date Collected: 05/01/19 15:35**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:09 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:45 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:23 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:34 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:22 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:34 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 441150 | 05/16/19 11:37 | RRC | TAL PEN |

## Client Sample ID: MW-09

**Date Collected: 05/01/19 13:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:21 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 484965 | 05/10/19 18:49 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:42 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:27 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:40 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:25 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:32 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:38 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 14:02 | RRC | TAL PEN |

## Client Sample ID: MW-10

**Date Collected: 05/01/19 09:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:25 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:00 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:39 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-10

**Date Collected: 05/01/19 09:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:42 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:27 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:32 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:41 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:40 | RRC | TAL PEN |

## Client Sample ID: MW-11

**Date Collected: 05/01/19 10:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:29 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 484965 | 05/10/19 19:04 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:46 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:44 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:48 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:30 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:33 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:45 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 440971 | 05/14/19 14:06 | RRC | TAL PEN |

## Client Sample ID: MW-12

**Date Collected: 05/01/19 11:55**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:33 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:08 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:48 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:49 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:32 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485974 | 05/17/19 20:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 440971 | 05/14/19 14:06 | RRC | TAL PEN |

## Client Sample ID: MW-15

**Lab Sample ID: 500-162824-11**

**Date Collected: 05/02/19 12:15**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:37 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 484965 | 05/10/19 19:12 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:49 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:52 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:51 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:35 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485996 | 05/17/19 22:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:00 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 30 | 440971 | 05/14/19 17:14 | RRC | TAL PEN |

## Client Sample ID: MW-17

**Lab Sample ID: 500-162824-12**

**Date Collected: 04/29/19 15:20**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:42 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:16 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:56 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:52 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:37 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485996 | 05/17/19 22:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:04 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 30 | 440971 | 05/15/19 10:19 | RRC | TAL PEN |

## Client Sample ID: MW-18

**Lab Sample ID: 500-162824-13**

**Date Collected: 04/29/19 14:25**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:46 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:19 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 04:00 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-18

**Lab Sample ID: 500-162824-13**

**Date Collected: 04/29/19 14:25**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:54 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:40 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485974 | 05/17/19 20:56 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:07 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 14:02 | RRC | TAL PEN |

## Client Sample ID: MW-19

**Lab Sample ID: 500-162824-14**

**Date Collected: 05/02/19 10:30**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:50 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 484965 | 05/10/19 19:23 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:53 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 04:04 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:55 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:43 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:27 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:10 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 14:06 | RRC | TAL PEN |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-162824-15**

**Date Collected: 04/29/19 00:00**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:54 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 484965 | 05/10/19 19:27 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:57 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 04:08 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:57 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:45 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485974 | 05/17/19 20:56 | EAT | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: Duplicate

**Date Collected: 04/29/19 00:00**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 440971 | 05/15/19 10:19 | RRC | TAL PEN |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 05-30-19 * |

## Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Alabama | State Program | 4 | 40150 | 06-30-19 |
| ANAB | ISO/IEC 17025 | | L2471 | 02-22-20 |
| Arizona | State Program | 9 | AZ0710 | 01-12-20 |
| Arkansas DEQ | State Program | 6 | 88-0689 | 09-01-19 |
| California | State Program | 9 | 2510 | 06-30-19 |
| Florida | NELAP | 4 | E81010 | 06-30-19 |
| Georgia | State Program | 4 | E81010 (FL) | 06-30-19 |
| Illinois | NELAP | 5 | 200041 | 10-09-19 |
| Iowa | State Program | 7 | 367 | 08-01-20 |
| Kansas | NELAP | 7 | E-10253 | 10-31-19 |
| Kentucky (UST) | State Program | 4 | 53 | 06-30-19 |
| Kentucky (WW) | State Program | 4 | 98030 | 12-31-19 |
| Louisiana | NELAP | 6 | 30976 | 06-30-19 |
| Louisiana (DW) | NELAP | 6 | LA017 | 12-31-19 |
| Maryland | State Program | 3 | 233 | 09-30-19 |
| Massachusetts | State Program | 1 | M-FL094 | 06-30-19 |
| Michigan | State Program | 5 | 9912 | 06-30-19 |
| New Jersey | NELAP | 2 | FL006 | 06-30-19 |
| North Carolina (WW/SW) | State Program | 4 | 314 | 12-31-19 |
| Oklahoma | State Program | 6 | 9810 | 08-31-19 |
| Pennsylvania | NELAP | 3 | 68-00467 | 01-31-20 |
| Rhode Island | State Program | 1 | LAO00307 | 12-30-19 |
| South Carolina | State Program | 4 | 96026 | 06-30-19 |
| Tennessee | State Program | 4 | TN02907 | 06-30-19 |
| Texas | NELAP | 6 | T104704286-18-15 | 09-30-19 |
| US Fish & Wildlife | Federal | | LE058448-0 | 07-31-19 |
| USDA | Federal | | P330-18-00148 | 05-17-21 |
| Virginia | NELAP | 3 | 460166 | 06-14-19 |
| Washington | State Program | 10 | C915 | 05-15-20 |
| West Virginia DEP | State Program | 3 | 136 | 07-31-19 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL
Phone: 708.534.5200 Fax: 708.5

500-162824 COC

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-162824

Chain of Custody Number:

Page 1 of 2

5.3

Temperature °C of Cooler: 3.7, 4.7, 2.3

| | |
|---|---|
| Client | KPRG and Assoc. |
| Client Project # | 12313.1 |
| Project Name | NRG Powerton CCR |
| Project Location/State | Pekin, IL |
| Lab Project # | |
| Sampler | Mitchel Dolan |
| Lab PM | Eric Lang |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | 3 | 8 | 3 | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Parameter | Total Metals | Cl, Fl, SO4, TDS | Rad 226/228 | | | | | | | |
| 1 | | MW-01 | 4/30 | 1325 | 5 | W | | X | X | X | | | | | | | |
| 2 | | MW-02 | 4/30 | 0945 | | | | | | | | | | | | | |
| 3 | | MW-03 | 4/30 | 1050 | | | | | | | | | | | | | |
| 4 | | MW-04 | 4/30 | 1140 | | | | | | | | | | | | | |
| 5 | | MW-05 | 4/30 | 1230 | | | | | | | | | | | | | |
| 6 | | MW-08 | 5/1 | 1535 | | | | | | | | | | | | | |
| 7 | | MW-09 | 5/1 | 1315 | | | | | | | | | | | | | |
| 8 | | MW-10 | 5/1 | 0930 | | | | | | | | | | | | | |
| 9 | | MW-11 | 5/1 | 1025 | | | | | | | | | | | | | |
| 10 | | MW-12 | 5/1 | 1155 | | | | | | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| | Company | Date | Time |
|---|---|---|---|
| Relinquished By | KPRG | 5/2/2019 | 1700 |
| Relinquished By | | | |
| Relinquished By | | | |

| | Company | Date | Time |
|---|---|---|---|
| Received By | FEDEX | 5/2/2019 | 1700 |
| Received By | Neil Fioravanti | TACHE 05/04/19 | 0930 |
| Received By | | | |

Lab Courier
Shipped FX SATURDAY
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

# Chain of Custody Record

Lab Job #: 500-16282-4
Chain of Custody Number:
Page 2 of 2
Temperature °C of Cooler: 3.7, 4.7, 2.3, 5.3

| Client | Client Project # | Preservative | 3 | 8 | 3 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KPRG and Assoc. | 12313.1 | | | | | | | | | | |
| Project Name: NRG Powerton CCR | | Parameter | Total Metals | Cl, Fl, SO4, TDS | Rad 226/228 | | | | | | |
| Project Location/State: Pekin, IL | Lab Project # | | | | | | | | | | |
| Sampler: Mitchel Dolan | Lab PM: Eric Lang | | | | | | | | | | |

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | | MW-15 | 5/2 | 1215 | 5 | W | | | | | | | | | | |
| 12 | | MW-17 | 4/29 | 1520 | | | | | | | | | | | | |
| 13 | | MW-18 | 4/29 | 1425 | | | | | | | | | | | | |
| 14 | | MW-19 | 5/2 | 1030 | | | | | | | | | | | | |
| 15 | | DUPLICATE | — | — | | | | | | | | | | | | |
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Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Comments

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 5/2/2019 | 1700 | FEDEX | | 5/2/2019 | 1700 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | [signature] Fiorawanti | THLH | 05/04/19 | 0930 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | | | | |

Lab Courier
Shipped FX SATurday
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 61.40 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-MHEZ-7SSOM25EXP 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

500-162824 Waybill

(000) 000-0000
INV:
PO:
REF:
DEPT:

FedEx Express

REL# 3785346

SATURDAY 4:30P
** 2DAY **

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Mstr# 7870 1648 7780

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ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 64.10 LB
CAD: 006994[illegible]SSFE2002
DIMS: 24[illegible]

BILL

Part # 156297-MHEZ-7SSOM25EXP 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

RT 717
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5 A
16.30 7780
05.04

UNIVERSITY PARK

(000) 000-0000
INV:
PO:
REF:
DEPT:

FedEx Express

REL# 3785346

SATURDAY 4:30P
** 2DAY **

1 of 9

TRK# 7870 1648 7780
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reasonably necessary, appropriate or advisable to do so. TestAmerica will in no way be liable for any
subcontracted services [illegible]

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laws of this

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safety for conversion, reference and shall not affect in any way these Terms and Conditions or their
interpretation. No waiver by either party of any provision, term or condition of the other
party thereunder shall constitute a waiver of any subsequent breach or other provision.

8.3 The obligations, indemnities and remedies of the parties provided herein are exclusive and in lieu of any
others available at law or in equity. Indemnification shall provide herein, and limitations of liability shall apply
notwithstanding the fault, negligence or strict liability of the party to be indemnified, released or whose liability is
limited, except to the extent of such party's gross negligence or willful misconduct.

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ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 57.70 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-4962-7/SSFE2002 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484
(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx Express

REL# 3785346

6 of 9
MPS# 0263 7870 1648 7838
Mstr# 7870 1648 7780

0201

SATURDAY 4:30P
** 2DAY **

60484
IL-US ORD

SO JOTA

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 60.00 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-4962-7/SSFE2002 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484
(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx Express

REL# 3785346

5 of 9
MPS# 0263 7870 1648 7827
Mstr# 7870 1648 7780

0201

SATURDAY 4:30P
** 2DAY **

60484
IL-US ORD

SO JOTA

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-120630.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-162824-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 5/17/2019 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-01 (500-162824-1) | 4/30/19 | 13:25 Central | | Water | | | X | 1 | |
| MW-02 (500-162824-2) | 4/30/19 | 09:45 Central | | Water | | | X | 1 | |
| MW-03 (500-162824-3) | 4/30/19 | 10:50 Central | | Water | | | X | 1 | |
| MW-04 (500-162824-4) | 4/30/19 | 11:40 Central | | Water | | | X | 1 | |
| MW-05 (500-162824-5) | 4/30/19 | 12:30 Central | | Water | | | X | 1 | |
| MW-08 (500-162824-6) | 5/1/19 | 15:35 Central | | Water | | | X | 1 | |
| MW-09 (500-162824-7) | 5/1/19 | 13:15 Central | | Water | | | X | 1 | |
| MW-10 (500-162824-8) | 5/1/19 | 09:30 Central | | Water | | | X | 1 | |
| MW-11 (500-162824-9) | 5/1/19 | 10:25 Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 5/6/19 1500 | TA | Kathy R Auer | 5-7-19 851 | TA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.9°C IR 7 |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-120630.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-162824-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 5/17/2019 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-12 (500-162824-10) | 5/1/19 | 11:55 Central | | Water | | | X | 1 | |
| MW-15 (500-162824-11) | 5/2/19 | 12:15 Central | | Water | | | X | 1 | |
| MW-17 (500-162824-12) | 4/29/19 | 15:20 Central | | Water | | | X | 1 | |
| MW-18 (500-162824-13) | 4/29/19 | 14:25 Central | | Water | | | X | 1 | |
| MW-19 (500-162824-14) | 5/2/19 | 10:30 Central | | Water | | | X | 1 | |
| Duplicate (500-162824-15) | 4/29/19 | Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 5/6/19 1500 | TA | Kathy R Avery | 5-7-19 851 | TA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.9°C IR7 |
|---|---|---|

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-1

**Login Number: 162824**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.7,4.7,5.3,2.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-1

**Login Number: 162824**
**List Number: 2**
**Creator: Avery, Kathy R**

**List Source: Eurofins TestAmerica, Pensacola**
**List Creation: 05/07/19 05:40 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | Not Present |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.9°C IR 7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing TestAmerica



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-162824-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*5/22/2019 9:30:12 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-162824-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-162824-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/4/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.3º C, 3.7º C, 4.7º C and 5.3º C.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
Method(s) 375.4, SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample, the MS/MSD was diluted after the spike. The spike amount was adjusted by the dilution factor.

(500-162824-F-13 MS) and (500-162824-F-13 MSD)

Method(s) 375.4, SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-440971 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 375.4, SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-03 (500-162824-3), MW-05 (500-162824-5), MW-09 (500-162824-7), MW-11 (500-162824-9), MW-12 (500-162824-10), MW-15 (500-162824-11), MW-17 (500-162824-12), MW-18 (500-162824-13), MW-19 (500-162824-14), Duplicate (500-162824-15), (500-162824-F-13 MS) and (500-162824-F-13 MSD). Elevated reporting limits (RLs) are provided.

Method(s) 375.4, SM 4500 SO4 E: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-08 (500-162824-6). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-162824-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.039 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.070 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 78 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0017 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 450 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 54 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 27 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-02 — Lab Sample ID: 500-162824-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.048 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.12 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 79 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 440 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 48 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.16 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 30 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-162824-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.060 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.28 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 74 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 390 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 49 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 38 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-162824-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.026 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.36 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 74 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 380 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 48 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-04 (Continued) — Lab Sample ID: 500-162824-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.25 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 35 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-162824-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.041 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.56 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 84 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0061 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 590 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 73 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.36 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 120 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-162824-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.021 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0018 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.068 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.54 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 95 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0069 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 600 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 73 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.35 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 85 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-162824-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.038 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.6 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 79 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.031 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0036 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 640 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 37 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-10 — Lab Sample ID: 500-162824-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0023 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.27 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.35 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 92 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0028 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0037 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 470 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 50 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 30 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-162824-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.11 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.60 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.3 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0026 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0011 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.014 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 730 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 60 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.62 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 200 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-162824-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.041 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.13 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.40 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00054 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-162824-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 0.0012 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.011 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 170 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.38 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 330 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-162824-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.027 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0045 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.052 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.5 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 180 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.023 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.52 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 420 | | 150 | | mg/L | 30 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-162824-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.042 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.040 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.98 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00052 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 150 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00069 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.060 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 190 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.66 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 660 | | 150 | | mg/L | 30 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-18 — Lab Sample ID: 500-162824-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.54 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.61 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-162824-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.076 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.7 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.031 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0035 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 700 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 39 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 160 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-162824-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.024 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0021 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.052 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.6 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 190 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.024 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.53 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 470 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL PEN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Assest ID |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Water | 04/30/19 13:25 | 05/04/19 09:30 | |
| 500-162824-2 | MW-02 | Water | 04/30/19 09:45 | 05/04/19 09:30 | |
| 500-162824-3 | MW-03 | Water | 04/30/19 10:50 | 05/04/19 09:30 | |
| 500-162824-4 | MW-04 | Water | 04/30/19 11:40 | 05/04/19 09:30 | |
| 500-162824-5 | MW-05 | Water | 04/30/19 12:30 | 05/04/19 09:30 | |
| 500-162824-6 | MW-08 | Water | 05/01/19 15:35 | 05/04/19 09:30 | |
| 500-162824-7 | MW-09 | Water | 05/01/19 13:15 | 05/04/19 09:30 | |
| 500-162824-8 | MW-10 | Water | 05/01/19 09:30 | 05/04/19 09:30 | |
| 500-162824-9 | MW-11 | Water | 05/01/19 10:25 | 05/04/19 09:30 | |
| 500-162824-10 | MW-12 | Water | 05/01/19 11:55 | 05/04/19 09:30 | |
| 500-162824-11 | MW-15 | Water | 05/02/19 12:15 | 05/04/19 09:30 | |
| 500-162824-12 | MW-17 | Water | 04/29/19 15:20 | 05/04/19 09:30 | |
| 500-162824-13 | MW-18 | Water | 04/29/19 14:25 | 05/04/19 09:30 | |
| 500-162824-14 | MW-19 | Water | 05/02/19 10:30 | 05/04/19 09:30 | |
| 500-162824-15 | Duplicate | Water | 04/29/19 00:00 | 05/04/19 09:30 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-01

**Date Collected: 04/30/19 13:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:33 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Arsenic** | **0.0014** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Barium** | **0.039** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:00 | 1 |
| **Boron** | **0.070** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:00 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Calcium** | **78** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Lead** | **0.0017** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:00 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:22 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **450** | | 10 | | mg/L | | | 05/06/19 02:06 | 1 |
| **Chloride** | **54** | | 2.0 | | mg/L | | | 05/11/19 09:12 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 05/11/19 13:06 | 1 |
| **Sulfate** | **27** | | 5.0 | | mg/L | | | 05/14/19 12:33 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-02

**Date Collected: 04/30/19 09:45**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-2

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:53 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| **Barium** | **0.048** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:30 | 1 |
| **Boron** | **0.12** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:30 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| **Calcium** | **79** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:30 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:28 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **440** | | 10 | | mg/L | | | 05/06/19 02:12 | 1 |
| **Chloride** | **48** | | 2.0 | | mg/L | | | 05/11/19 09:12 | 1 |
| **Fluoride** | **0.16** | | 0.10 | | mg/L | | | 05/13/19 20:22 | 1 |
| **Sulfate** | **30** | | 5.0 | | mg/L | | | 05/14/19 12:33 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-03

**Date Collected: 04/30/19 10:50**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-3

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:57 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| **Barium** | **0.060** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:34 | 1 |
| **Boron** | **0.28** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:34 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| **Calcium** | **74** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:34 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:29 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **390** | | 10 | | mg/L | | | 05/06/19 02:14 | 1 |
| **Chloride** | **49** | | 2.0 | | mg/L | | | 05/17/19 22:02 | 1 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 05/13/19 20:25 | 1 |
| **Sulfate** | **38** | | 10 | | mg/L | | | 05/14/19 13:57 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-04

**Date Collected: 04/30/19 11:40**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-4

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:01 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| **Barium** | **0.026** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:38 | 1 |
| **Boron** | **0.36** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:38 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| **Calcium** | **74** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:38 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:31 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **380** | | 10 | | mg/L | | | 05/06/19 02:17 | 1 |
| **Chloride** | **48** | | 2.0 | | mg/L | | | 05/17/19 22:03 | 1 |
| **Fluoride** | **0.25** | | 0.10 | | mg/L | | | 05/13/19 20:28 | 1 |
| **Sulfate** | **35** | | 5.0 | | mg/L | | | 05/14/19 12:40 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-05

**Date Collected: 04/30/19 12:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-5

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:05 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| **Barium** | **0.041** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:42 | 1 |
| **Boron** | **0.56** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:42 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| **Calcium** | **84** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:42 | 1 |
| **Molybdenum** | **0.0061** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:32 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **590** | | 10 | | mg/L | | | 05/06/19 02:19 | 1 |
| **Chloride** | **73** | | 2.0 | | mg/L | | | 05/17/19 22:06 | 1 |
| **Fluoride** | **0.36** | | 0.10 | | mg/L | | | 05/13/19 20:31 | 1 |
| **Sulfate** | **120** | | 25 | | mg/L | | | 05/14/19 13:57 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-08

**Date Collected: 05/01/19 15:35**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-6

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.021** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:09 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| **Arsenic** | **0.0018** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| **Barium** | **0.068** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:45 | 1 |
| **Boron** | **0.54** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:45 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| **Calcium** | **95** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:45 | 1 |
| **Molybdenum** | **0.0069** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:34 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **600** | | 10 | | mg/L | | | 05/06/19 02:22 | 1 |
| **Chloride** | **73** | | 2.0 | | mg/L | | | 05/17/19 22:06 | 1 |
| **Fluoride** | **0.35** | | 0.10 | | mg/L | | | 05/13/19 20:34 | 1 |
| **Sulfate** | **85** | | 25 | | mg/L | | | 05/16/19 11:37 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-09

**Date Collected: 05/01/19 13:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-7

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:21 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| **Barium** | **0.038** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:42 | 1 |
| **Boron** | **4.6** | | 0.50 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:49 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| **Calcium** | **79** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:42 | 1 |
| **Molybdenum** | **0.031** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| **Selenium** | **0.0036** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:40 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **640** | | 10 | | mg/L | | | 05/06/19 02:25 | 1 |
| **Chloride** | **37** | | 2.0 | | mg/L | | | 05/17/19 20:32 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 05/13/19 20:38 | 1 |
| **Sulfate** | **170** | | 25 | | mg/L | | | 05/14/19 14:02 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-10

**Date Collected: 05/01/19 09:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-8

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:25 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Arsenic** | **0.0023** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Barium** | **0.27** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:00 | 1 |
| **Boron** | **0.35** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:00 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Calcium** | **92** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Cobalt** | **0.011** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Lead** | **0.0028** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:00 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Selenium** | **0.0037** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:42 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **470** | | 10 | | mg/L | | | 05/06/19 02:27 | 1 |
| **Chloride** | **50** | | 2.0 | | mg/L | | | 05/17/19 20:32 | 1 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 05/13/19 20:41 | 1 |
| **Sulfate** | **30** | | 5.0 | | mg/L | | | 05/14/19 12:40 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-11

**Date Collected: 05/01/19 10:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-9

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:29 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Arsenic** | **0.11** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Barium** | **0.60** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:46 | 1 |
| **Boron** | **2.3** | | 0.25 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:04 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Cobalt** | **0.0026** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Lead** | **0.0011** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:46 | 1 |
| **Molybdenum** | **0.014** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:48 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **730** | | 10 | | mg/L | | | 05/06/19 02:30 | 1 |
| **Chloride** | **60** | | 2.0 | | mg/L | | | 05/17/19 20:33 | 1 |
| **Fluoride** | **0.62** | | 0.10 | | mg/L | | | 05/13/19 20:45 | 1 |
| **Sulfate** | **200** | | 50 | | mg/L | | | 05/14/19 14:06 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-12

**Date Collected: 05/01/19 11:55**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-10

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.014** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:33 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Arsenic** | **0.041** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Barium** | **0.13** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:08 | 1 |
| **Boron** | **0.40** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:08 | 1 |
| **Cadmium** | **0.00054** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Lead** | **0.0012** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:08 | 1 |
| **Molybdenum** | **0.011** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:49 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/06/19 02:32 | 1 |
| **Chloride** | **170** | | 10 | | mg/L | | | 05/17/19 20:57 | 5 |
| **Fluoride** | **0.38** | | 0.10 | | mg/L | | | 05/13/19 20:57 | 1 |
| **Sulfate** | **330** | | 50 | | mg/L | | | 05/14/19 14:06 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-15

**Date Collected: 05/02/19 12:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-11

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.027** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:37 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| **Arsenic** | **0.0045** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| **Barium** | **0.052** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:49 | 1 |
| **Boron** | **1.5** | | 0.25 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:12 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| **Calcium** | **180** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:49 | 1 |
| **Molybdenum** | **0.023** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:51 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/06/19 02:35 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 05/17/19 22:57 | 5 |
| **Fluoride** | **0.52** | | 0.10 | | mg/L | | | 05/13/19 21:00 | 1 |
| **Sulfate** | **420** | | 150 | | mg/L | | | 05/14/19 17:14 | 30 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-17

**Date Collected: 04/29/19 15:20**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-12

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.015** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:42 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Arsenic** | **0.042** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Barium** | **0.040** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:16 | 1 |
| **Boron** | **0.98** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:16 | 1 |
| **Cadmium** | **0.00052** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Calcium** | **150** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Lead** | **0.00069** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:16 | 1 |
| **Molybdenum** | **0.060** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:52 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/06/19 02:37 | 1 |
| **Chloride** | **190** | | 10 | | mg/L | | | 05/17/19 22:57 | 5 |
| **Fluoride** | **0.66** | | 0.10 | | mg/L | | | 05/13/19 21:04 | 1 |
| **Sulfate** | **660** | | 150 | | mg/L | | | 05/15/19 10:19 | 30 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-18

**Date Collected: 04/29/19 14:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-13

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.013** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:46 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| **Barium** | **0.12** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:19 | 1 |
| **Boron** | **0.54** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:19 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:19 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:54 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/06/19 02:40 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 05/17/19 20:56 | 5 |
| **Fluoride** | **0.61** | | 0.10 | | mg/L | | | 05/13/19 21:07 | 1 |
| **Sulfate** | **170** | | 25 | | mg/L | | | 05/14/19 14:02 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-19

**Date Collected: 05/02/19 10:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-14

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:50 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| **Barium** | **0.076** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:53 | 1 |
| **Boron** | **3.7** | | 0.50 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:23 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:53 | 1 |
| **Molybdenum** | **0.031** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| **Selenium** | **0.0035** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:55 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **700** | | 10 | | mg/L | | | 05/06/19 02:43 | 1 |
| **Chloride** | **39** | | 2.0 | | mg/L | | | 05/17/19 20:27 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 05/13/19 21:10 | 1 |
| **Sulfate** | **160** | | 25 | | mg/L | | | 05/14/19 14:06 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: Duplicate

**Date Collected: 04/29/19 00:00**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-15

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.024** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:54 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| **Arsenic** | **0.0021** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| **Barium** | **0.052** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:57 | 1 |
| **Boron** | **1.6** | | 0.25 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:27 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| **Calcium** | **190** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:57 | 1 |
| **Molybdenum** | **0.024** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:57 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/06/19 02:45 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 05/17/19 20:56 | 5 |
| **Fluoride** | **0.53** | | 0.10 | | mg/L | | | 05/13/19 21:12 | 1 |
| **Sulfate** | **470** | | 100 | | mg/L | | | 05/15/19 10:19 | 20 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 483975

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-162824-6 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 3005A | |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 3005A | |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 3005A | |

### Analysis Batch: 484171

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-6 | MW-08 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6010C | 483975 |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 6010C | 483975 |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 6010C | 483975 |

### Analysis Batch: 484720

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 6020A | 483975 |

## Metals (Continued)

### Analysis Batch: 484720 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-6 | MW-08 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6020A | 483975 |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 6020A | 483975 |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 6020A | 483975 |

### Analysis Batch: 484965

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-6 | MW-08 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6020A | 483975 |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 6020A | 483975 |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 6020A | 483975 |

### Prep Batch: 485450

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-162824-2 | MW-02 | Total/NA | Water | 7470A | |
| 500-162824-3 | MW-03 | Total/NA | Water | 7470A | |
| 500-162824-4 | MW-04 | Total/NA | Water | 7470A | |
| 500-162824-5 | MW-05 | Total/NA | Water | 7470A | |

## Metals (Continued)

### Prep Batch: 485450 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-6 | MW-08 | Total/NA | Water | 7470A | |
| 500-162824-7 | MW-09 | Total/NA | Water | 7470A | |
| 500-162824-8 | MW-10 | Total/NA | Water | 7470A | |
| 500-162824-9 | MW-11 | Total/NA | Water | 7470A | |
| 500-162824-10 | MW-12 | Total/NA | Water | 7470A | |
| 500-162824-11 | MW-15 | Total/NA | Water | 7470A | |
| 500-162824-12 | MW-17 | Total/NA | Water | 7470A | |
| 500-162824-13 | MW-18 | Total/NA | Water | 7470A | |
| 500-162824-14 | MW-19 | Total/NA | Water | 7470A | |
| 500-162824-15 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-485450/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-485450/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-162824-6 MS | MW-08 | Total/NA | Water | 7470A | |
| 500-162824-6 MSD | MW-08 | Total/NA | Water | 7470A | |
| 500-162824-6 DU | MW-08 | Total/NA | Water | 7470A | |

### Analysis Batch: 485704

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | 7470A | 485450 |
| 500-162824-2 | MW-02 | Total/NA | Water | 7470A | 485450 |
| 500-162824-3 | MW-03 | Total/NA | Water | 7470A | 485450 |
| 500-162824-4 | MW-04 | Total/NA | Water | 7470A | 485450 |
| 500-162824-5 | MW-05 | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 | MW-08 | Total/NA | Water | 7470A | 485450 |
| 500-162824-7 | MW-09 | Total/NA | Water | 7470A | 485450 |
| 500-162824-8 | MW-10 | Total/NA | Water | 7470A | 485450 |
| 500-162824-9 | MW-11 | Total/NA | Water | 7470A | 485450 |
| 500-162824-10 | MW-12 | Total/NA | Water | 7470A | 485450 |
| 500-162824-11 | MW-15 | Total/NA | Water | 7470A | 485450 |
| 500-162824-12 | MW-17 | Total/NA | Water | 7470A | 485450 |
| 500-162824-13 | MW-18 | Total/NA | Water | 7470A | 485450 |
| 500-162824-14 | MW-19 | Total/NA | Water | 7470A | 485450 |
| 500-162824-15 | Duplicate | Total/NA | Water | 7470A | 485450 |
| MB 500-485450/12-A | Method Blank | Total/NA | Water | 7470A | 485450 |
| LCS 500-485450/13-A | Lab Control Sample | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 MS | MW-08 | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 MSD | MW-08 | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 DU | MW-08 | Total/NA | Water | 7470A | 485450 |

## General Chemistry

### Analysis Batch: 440971

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-2 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-3 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-7 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |

## General Chemistry (Continued)

### Analysis Batch: 440971 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-10 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-440971/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-440971/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-440971/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-13 MS | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-13 MSD | MW-18 | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 441150

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-6 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-441150/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-441150/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-441150/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 483709

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-162824-2 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-162824-3 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-162824-6 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-162824-7 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-162824-10 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-483709/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-483709/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-162824-1 DU | MW-01 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 484846

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-2 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-484846/83 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-484846/84 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 485004

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| MB 500-485004/31 | Method Blank | Total/NA | Water | SM 4500 F C | |

## General Chemistry (Continued)

### Analysis Batch: 485004 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-485004/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 485172

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-2 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-162824-3 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-162824-6 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-162824-7 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-162824-10 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-485172/31 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-485172/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 485974

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-7 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-10 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-485974/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-485974/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 485996

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-3 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-6 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-485996/9 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-485996/10 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-4 MS | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-4 MSD | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-12 MS | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-12 MSD | MW-17 | Total/NA | Water | SM 4500 Cl- E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-483975/1-A**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:13 | 1 |

**Lab Sample ID: LCS 500-483975/2-A**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.544 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: 500-162824-1 MS**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.554 | | mg/L | | 111 | 75 - 125 |

**Lab Sample ID: 500-162824-1 MSD**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.557 | | mg/L | | 111 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | <0.010 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-483975/1-A**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-483975/1-A**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 17:53 | 1 |
| Boron | <0.050 | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 17:53 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 17:53 | 1 |

**Lab Sample ID: LCS 500-483975/2-A**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.504 | | mg/L | | 101 | 80 - 120 |
| Arsenic | 0.100 | 0.0997 | | mg/L | | 100 | 80 - 120 |
| Barium | 2.00 | 2.02 | | mg/L | | 101 | 80 - 120 |
| Cadmium | 0.0500 | 0.0516 | | mg/L | | 103 | 80 - 120 |
| Calcium | 10.0 | 10.0 | | mg/L | | 100 | 80 - 120 |
| Chromium | 0.200 | 0.195 | | mg/L | | 98 | 80 - 120 |
| Cobalt | 0.500 | 0.498 | | mg/L | | 100 | 80 - 120 |
| Molybdenum | 1.00 | 0.978 | | mg/L | | 98 | 80 - 120 |
| Selenium | 0.100 | 0.0994 | | mg/L | | 99 | 80 - 120 |
| Thallium | 0.100 | 0.0964 | | mg/L | | 96 | 80 - 120 |

**Lab Sample ID: LCS 500-483975/2-A**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Beryllium | 0.0500 | 0.0520 | | mg/L | | 104 | 80 - 120 |
| Boron | 1.00 | 0.983 | | mg/L | | 98 | 80 - 120 |
| Lead | 0.100 | 0.105 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: 500-162824-1 MS**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.486 | | mg/L | | 97 | 75 - 125 |
| Arsenic | 0.0014 | | 0.100 | 0.0971 | | mg/L | | 96 | 75 - 125 |
| Barium | 0.039 | | 2.00 | 2.02 | | mg/L | | 99 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0496 | | mg/L | | 99 | 75 - 125 |
| Calcium | 78 | | 10.0 | 87.8 | 4 | mg/L | | 93 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.192 | | mg/L | | 95 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.475 | | mg/L | | 95 | 75 - 125 |
| Molybdenum | <0.0050 | | 1.00 | 0.930 | | mg/L | | 93 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.0958 | | mg/L | | 96 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.0934 | | mg/L | | 93 | 75 - 125 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-162824-1 MS**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | 0.0500 | 0.0467 | | mg/L | | 93 | 75 - 125 |
| Boron | 0.070 | | 1.00 | 0.965 | | mg/L | | 90 | 75 - 125 |
| Lead | 0.0017 | | 0.100 | 0.102 | | mg/L | | 100 | 75 - 125 |

**Lab Sample ID: 500-162824-1 MSD**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.485 | | mg/L | | 97 | 75 - 125 | 0 | 20 |
| Arsenic | 0.0014 | | 0.100 | 0.0931 | | mg/L | | 92 | 75 - 125 | 4 | 20 |
| Barium | 0.039 | | 2.00 | 1.97 | | mg/L | | 97 | 75 - 125 | 2 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0494 | | mg/L | | 99 | 75 - 125 | 0 | 20 |
| Calcium | 78 | | 10.0 | 85.4 | 4 | mg/L | | 70 | 75 - 125 | 3 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.186 | | mg/L | | 92 | 75 - 125 | 3 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.459 | | mg/L | | 92 | 75 - 125 | 4 | 20 |
| Molybdenum | <0.0050 | | 1.00 | 0.914 | | mg/L | | 91 | 75 - 125 | 2 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.0924 | | mg/L | | 92 | 75 - 125 | 4 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.0910 | | mg/L | | 91 | 75 - 125 | 3 | 20 |

**Lab Sample ID: 500-162824-1 MSD**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | 0.0500 | 0.0476 | | mg/L | | 95 | 75 - 125 | 2 | 20 |
| Boron | 0.070 | | 1.00 | 0.976 | | mg/L | | 91 | 75 - 125 | 1 | 20 |
| Lead | 0.0017 | | 0.100 | 0.103 | | mg/L | | 101 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | <0.0030 | | mg/L | | NC | 20 |
| Arsenic | 0.0014 | | 0.00143 | | mg/L | | 5 | 20 |
| Barium | 0.039 | | 0.0380 | | mg/L | | 3 | 20 |
| Cadmium | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Calcium | 78 | | 76.5 | | mg/L | | 3 | 20 |
| Chromium | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Cobalt | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Molybdenum | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Selenium | <0.0025 | | <0.0025 | | mg/L | | NC | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Boron | 0.070 | | 0.0576 | | mg/L | | 19 | 20 |
| Lead | 0.0017 | | 0.00164 | | mg/L | | 4 | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-485450/12-A**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:09 | 1 |

**Lab Sample ID: LCS 500-485450/13-A**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00200 | | mg/L | | 100 | 80 - 120 |

**Lab Sample ID: 500-162824-6 MS**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00101 | | mg/L | | 101 | 75 - 125 |

**Lab Sample ID: 500-162824-6 MSD**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000965 | | mg/L | | 96 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-162824-6 DU**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-483709/1**
**Matrix: Water**
**Analysis Batch: 483709**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 05/06/19 01:54 | 1 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: LCS 500-483709/2**
**Matrix: Water**
**Analysis Batch: 483709**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 274 | | mg/L | | 110 | 80 - 120 |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 483709**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 450 | | 434 | | mg/L | | 3 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-484846/83**
**Matrix: Water**
**Analysis Batch: 484846**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/11/19 08:50 | 1 |

**Lab Sample ID: LCS 500-484846/84**
**Matrix: Water**
**Analysis Batch: 484846**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 50.7 | | mg/L | | 101 | 85 - 115 |

**Lab Sample ID: MB 500-485974/4**
**Matrix: Water**
**Analysis Batch: 485974**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/17/19 20:11 | 1 |

**Lab Sample ID: LCS 500-485974/5**
**Matrix: Water**
**Analysis Batch: 485974**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 50.4 | | mg/L | | 101 | 85 - 115 |

**Lab Sample ID: MB 500-485996/9**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/17/19 21:52 | 1 |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: LCS 500-485996/10**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 51.5 | | mg/L | | 103 | 85 - 115 | | |

**Lab Sample ID: 500-162824-4 MS**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 48 | | 50.0 | 90.2 | | mg/L | | 84 | 75 - 125 | | |

**Lab Sample ID: 500-162824-4 MSD**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 48 | | 50.0 | 93.7 | | mg/L | | 91 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-162824-12 MS**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 190 | | 50.0 | 228 | | mg/L | | 83 | 75 - 125 | | |

**Lab Sample ID: 500-162824-12 MSD**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 190 | | 50.0 | 226 | | mg/L | | 77 | 75 - 125 | 1 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-485004/31**
**Matrix: Water**
**Analysis Batch: 485004**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/11/19 12:57 | 1 |

**Lab Sample ID: LCS 500-485004/32**
**Matrix: Water**
**Analysis Batch: 485004**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | | | 10.0 | 10.5 | | mg/L | | 105 | 80 - 120 | | |

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: MB 500-485172/31**
**Matrix: Water**
**Analysis Batch: 485172**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/13/19 19:45 | 1 |

**Lab Sample ID: LCS 500-485172/32**
**Matrix: Water**
**Analysis Batch: 485172**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.4 | | mg/L | | 104 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-440971/6**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/14/19 12:26 | 1 |

**Lab Sample ID: LCS 400-440971/7**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 15.0 | 14.4 | | mg/L | | 96 | 90 - 110 |

**Lab Sample ID: MRL 400-440971/3**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 5.00 | <5.0 | | mg/L | | 87 | 50 - 150 |

**Lab Sample ID: 500-162824-13 MS**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 170 | | 10.0 | 173 | 4 | mg/L | | 20 | 77 - 128 |

**Lab Sample ID: 500-162824-13 MSD**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 170 | | 10.0 | 172 | 4 | mg/L | | 12 | 77 - 128 | 0 | 5 |

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: MB 400-441150/6**
**Matrix: Water**
**Analysis Batch: 441150**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/16/19 11:01 | 1 |

**Lab Sample ID: LCS 400-441150/7**
**Matrix: Water**
**Analysis Batch: 441150**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 15.0 | 14.3 | | mg/L | | 95 | 90 - 110 | | |

**Lab Sample ID: MRL 400-441150/3**
**Matrix: Water**
**Analysis Batch: 441150**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 5.00 | <5.0 | | mg/L | | 95 | 50 - 150 | | |

## Client Sample ID: MW-01

**Lab Sample ID: 500-162824-1**

**Date Collected: 04/30/19 13:25**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 18:33 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:00 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 02:37 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:22 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:06 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 484846 | 05/11/19 09:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485004 | 05/11/19 13:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:33 | RRC | TAL PEN |

## Client Sample ID: MW-02

**Lab Sample ID: 500-162824-2**

**Date Collected: 04/30/19 09:45**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 18:53 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:30 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:06 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:28 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:12 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 484846 | 05/11/19 09:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:22 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:33 | RRC | TAL PEN |

## Client Sample ID: MW-03

**Lab Sample ID: 500-162824-3**

**Date Collected: 04/30/19 10:50**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 18:57 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:34 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:10 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:29 | MJG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-03

**Date Collected: 04/30/19 10:50**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:14 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:02 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:25 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 440971 | 05/14/19 13:57 | RRC | TAL PEN |

## Client Sample ID: MW-04

**Date Collected: 04/30/19 11:40**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:01 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:38 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:14 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:31 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:17 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:03 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:28 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:40 | RRC | TAL PEN |

## Client Sample ID: MW-05

**Date Collected: 04/30/19 12:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:05 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:42 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:19 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:32 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:19 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:31 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 13:57 | RRC | TAL PEN |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-08

**Date Collected: 05/01/19 15:35**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:09 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:45 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:23 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:34 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:22 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:34 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 441150 | 05/16/19 11:37 | RRC | TAL PEN |

## Client Sample ID: MW-09

**Date Collected: 05/01/19 13:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:21 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 484965 | 05/10/19 18:49 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:42 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:27 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:40 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:25 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:32 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:38 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 14:02 | RRC | TAL PEN |

## Client Sample ID: MW-10

**Date Collected: 05/01/19 09:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:25 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:00 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:39 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-10

**Date Collected: 05/01/19 09:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:42 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:27 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:32 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:41 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:40 | RRC | TAL PEN |

## Client Sample ID: MW-11

**Date Collected: 05/01/19 10:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:29 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 484965 | 05/10/19 19:04 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:46 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:44 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:48 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:30 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:33 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:45 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 440971 | 05/14/19 14:06 | RRC | TAL PEN |

## Client Sample ID: MW-12

**Date Collected: 05/01/19 11:55**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:33 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:08 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:48 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:49 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:32 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485974 | 05/17/19 20:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 440971 | 05/14/19 14:06 | RRC | TAL PEN |

## Client Sample ID: MW-15

**Lab Sample ID: 500-162824-11**

**Date Collected: 05/02/19 12:15**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:37 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 484965 | 05/10/19 19:12 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:49 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:52 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:51 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:35 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485996 | 05/17/19 22:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:00 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 30 | 440971 | 05/14/19 17:14 | RRC | TAL PEN |

## Client Sample ID: MW-17

**Lab Sample ID: 500-162824-12**

**Date Collected: 04/29/19 15:20**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:42 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:16 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:56 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:52 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:37 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485996 | 05/17/19 22:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:04 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 30 | 440971 | 05/15/19 10:19 | RRC | TAL PEN |

## Client Sample ID: MW-18

**Lab Sample ID: 500-162824-13**

**Date Collected: 04/29/19 14:25**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:46 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:19 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 04:00 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-18

**Lab Sample ID: 500-162824-13**

**Date Collected: 04/29/19 14:25**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:54 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:40 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485974 | 05/17/19 20:56 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:07 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 14:02 | RRC | TAL PEN |

## Client Sample ID: MW-19

**Lab Sample ID: 500-162824-14**

**Date Collected: 05/02/19 10:30**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:50 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 484965 | 05/10/19 19:23 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:53 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 04:04 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:55 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:43 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:27 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:10 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 14:06 | RRC | TAL PEN |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-162824-15**

**Date Collected: 04/29/19 00:00**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:54 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 484965 | 05/10/19 19:27 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:57 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 04:08 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:57 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:45 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485974 | 05/17/19 20:56 | EAT | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: Duplicate

**Date Collected: 04/29/19 00:00**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 440971 | 05/15/19 10:19 | RRC | TAL PEN |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 05-30-19 * |

## Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Alabama | State Program | 4 | 40150 | 06-30-19 |
| ANAB | ISO/IEC 17025 | | L2471 | 02-22-20 |
| Arizona | State Program | 9 | AZ0710 | 01-12-20 |
| Arkansas DEQ | State Program | 6 | 88-0689 | 09-01-19 |
| California | State Program | 9 | 2510 | 06-30-19 |
| Florida | NELAP | 4 | E81010 | 06-30-19 |
| Georgia | State Program | 4 | E81010 (FL) | 06-30-19 |
| Illinois | NELAP | 5 | 200041 | 10-09-19 |
| Iowa | State Program | 7 | 367 | 08-01-20 |
| Kansas | NELAP | 7 | E-10253 | 10-31-19 |
| Kentucky (UST) | State Program | 4 | 53 | 06-30-19 |
| Kentucky (WW) | State Program | 4 | 98030 | 12-31-19 |
| Louisiana | NELAP | 6 | 30976 | 06-30-19 |
| Louisiana (DW) | NELAP | 6 | LA017 | 12-31-19 |
| Maryland | State Program | 3 | 233 | 09-30-19 |
| Massachusetts | State Program | 1 | M-FL094 | 06-30-19 |
| Michigan | State Program | 5 | 9912 | 06-30-19 |
| New Jersey | NELAP | 2 | FL006 | 06-30-19 |
| North Carolina (WW/SW) | State Program | 4 | 314 | 12-31-19 |
| Oklahoma | State Program | 6 | 9810 | 08-31-19 |
| Pennsylvania | NELAP | 3 | 68-00467 | 01-31-20 |
| Rhode Island | State Program | 1 | LAO00307 | 12-30-19 |
| South Carolina | State Program | 4 | 96026 | 06-30-19 |
| Tennessee | State Program | 4 | TN02907 | 06-30-19 |
| Texas | NELAP | 6 | T104704286-18-15 | 09-30-19 |
| US Fish & Wildlife | Federal | | LE058448-0 | 07-31-19 |
| USDA | Federal | | P330-18-00148 | 05-17-21 |
| Virginia | NELAP | 3 | 460166 | 06-14-19 |
| Washington | State Program | 10 | C915 | 05-15-20 |
| West Virginia DEP | State Program | 3 | 136 | 07-31-19 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL
Phone: 708.534.5200 Fax: 708.5

500-162824 COC

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-162824

Chain of Custody Number:

Page 1 of 2

5.3

Temperature °C of Cooler: 3.7, 4.7, 2.3

| | |
|---|---|
| Client | KPRG and Assoc. |
| Client Project # | 12313.1 |
| Project Name | NRG Powerton CCR |
| Project Location/State | Pekin, IL |
| Lab Project # | |
| Sampler | Mitchel Dolan |
| Lab PM | Eric Lang |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | 3 | 8 | 3 | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Parameter | Total Metals | Cl, Fl, SO4, TDS | Rad 226/228 | | | | | | | |
| 1 | | MW-01 | 4/30 | 1325 | 5 | W | | X | X | X | | | | | | | |
| 2 | | MW-02 | 4/30 | 0945 | | | | | | | | | | | | | |
| 3 | | MW-03 | 4/30 | 1050 | | | | | | | | | | | | | |
| 4 | | MW-04 | 4/30 | 1140 | | | | | | | | | | | | | |
| 5 | | MW-05 | 4/30 | 1230 | | | | | | | | | | | | | |
| 6 | | MW-08 | 5/1 | 1535 | | | | | | | | | | | | | |
| 7 | | MW-09 | 5/1 | 1315 | | | | | | | | | | | | | |
| 8 | | MW-10 | 5/1 | 0930 | | | | | | | | | | | | | |
| 9 | | MW-11 | 5/1 | 1025 | | | | | | | | | | | | | |
| 10 | | MW-12 | 5/1 | 1155 | | | | | | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| | Company | Date | Time |
|---|---|---|---|
| Relinquished By | KPRG | 5/2/2019 | 1700 |
| Relinquished By | | | |
| Relinquished By | | | |

| | Company | Date | Time |
|---|---|---|---|
| Received By | FEDEX | 5/2/2019 | 1700 |
| Received By | Neil Fioravanti | TACHE 05/04/19 | 0930 |
| Received By | | | |

Lab Courier
Shipped FX SATURDAY
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

# Chain of Custody Record

Lab Job #: 500-16282-4
Chain of Custody Number:
Page 2 of 2
Temperature °C of Cooler: 3.7, 4.7, 2.3, 5.3

| Client | Client Project # | Preservative | 3 | 8 | 3 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KPRG and Assoc. | 12313.1 | | | | | | | | | | |
| Project Name: NRG Powerton CCR | | Parameter | Total Metals | Cl, Fl, SO4, TDS | Rad 226/228 | | | | | | |
| Project Location/State: Pekin, IL | Lab Project # | | | | | | | | | | |
| Sampler: Mitchel Dolan | Lab PM: Eric Lang | | | | | | | | | | |

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | | MW-15 | 5/2 | 1215 | 5 | W | | | | | | | | | | |
| 12 | | MW-17 | 4/29 | 1520 | | | | | | | | | | | | |
| 13 | | MW-18 | 4/29 | 1425 | | | | | | | | | | | | |
| 14 | | MW-19 | 5/2 | 1030 | | | | | | | | | | | | |
| 15 | | DUPLICATE | — | — | | | | | | | | | | | | |
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Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Comments

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 5/2/2019 | 1700 | FEDEX | | 5/2/2019 | 1700 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | [signature] Fiorawanti | THLH | 05/04/19 | 0930 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | | | | |

Lab Courier
Shipped FX SATurday
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 61.40 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-MHEZ-7SSOM25EXP 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

500-162824 Waybill

(000) 000-0000
INV:
PO:
REF:
DEPT:

FedEx Express

REL# 3785346

SATURDAY 4:30P
** 2DAY **

8 of 9

MPS# 7870 1648 7850
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Mstr# 7870 1648 7780

0201

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ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 64.10 LB
CAD: 006994[illegible]SSFE2002
DIMS: 24[illegible]

BILL

Part # 156297-MHEZ-7SSOM25EXP 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

RT 717
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5 A
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05.04

UNIVERSITY PARK

(000) 000-0000
INV:
PO:
REF:
DEPT:

FedEx Express

REL# 3785346

SATURDAY 4:30P
** 2DAY **

1 of 9

TRK# 7870 1648 7780
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## MASTER ##

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reasonably necessary, appropriate or advisable to do so. TestAmerica will in no way be liable for any
subcontracted services [illegible]

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safety for conversion, reference and shall not affect in any way these Terms and Conditions or their
interpretation. No waiver by either party of any provision, term or condition of the other
party thereunder shall constitute a waiver of any subsequent breach or other provision.

8.3 The obligations, indemnities and remedies of the parties provided herein are exclusive and in lieu of any
others available at law or in equity. Indemnification shall provide herein, and limitations of liability shall apply
notwithstanding the fault, negligence or strict liability of the party to be indemnified, released or whose liability is
limited, except to the extent of such party's gross negligence or willful misconduct.

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ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 57.70 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-4962-7/SSFE2002 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484
(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx Express

REL# 3785346

6 of 9
MPS# 0263 7870 1648 7838
Mstr# 7870 1648 7780

0201

SATURDAY 4:30P
** 2DAY **

60484
IL-US ORD

SO JOTA

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 60.00 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-4962-7/SSFE2002 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484
(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx Express

REL# 3785346

5 of 9
MPS# 0263 7870 1648 7827
Mstr# 7870 1648 7780

0201

SATURDAY 4:30P
** 2DAY **

60484
IL-US ORD

SO JOTA

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-120630.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-162824-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 5/17/2019 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-01 (500-162824-1) | 4/30/19 | 13:25 Central | | Water | | | X | 1 | |
| MW-02 (500-162824-2) | 4/30/19 | 09:45 Central | | Water | | | X | 1 | |
| MW-03 (500-162824-3) | 4/30/19 | 10:50 Central | | Water | | | X | 1 | |
| MW-04 (500-162824-4) | 4/30/19 | 11:40 Central | | Water | | | X | 1 | |
| MW-05 (500-162824-5) | 4/30/19 | 12:30 Central | | Water | | | X | 1 | |
| MW-08 (500-162824-6) | 5/1/19 | 15:35 Central | | Water | | | X | 1 | |
| MW-09 (500-162824-7) | 5/1/19 | 13:15 Central | | Water | | | X | 1 | |
| MW-10 (500-162824-8) | 5/1/19 | 09:30 Central | | Water | | | X | 1 | |
| MW-11 (500-162824-9) | 5/1/19 | 10:25 Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 5/6/19 1500 | TA | Kathy R Auer | 5-7-19 851 | TA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.9°C IR 7 |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-120630.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-162824-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 5/17/2019 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-12 (500-162824-10) | 5/1/19 | 11:55 Central | | Water | | | X | 1 | |
| MW-15 (500-162824-11) | 5/2/19 | 12:15 Central | | Water | | | X | 1 | |
| MW-17 (500-162824-12) | 4/29/19 | 15:20 Central | | Water | | | X | 1 | |
| MW-18 (500-162824-13) | 4/29/19 | 14:25 Central | | Water | | | X | 1 | |
| MW-19 (500-162824-14) | 5/2/19 | 10:30 Central | | Water | | | X | 1 | |
| Duplicate (500-162824-15) | 4/29/19 | Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 5/6/19 1500 | TA | Kathy R Avery | 5-7-19 851 | TA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.9°C IR7 |
|---|---|---|

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-1

**Login Number: 162824**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.7,4.7,5.3,2.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

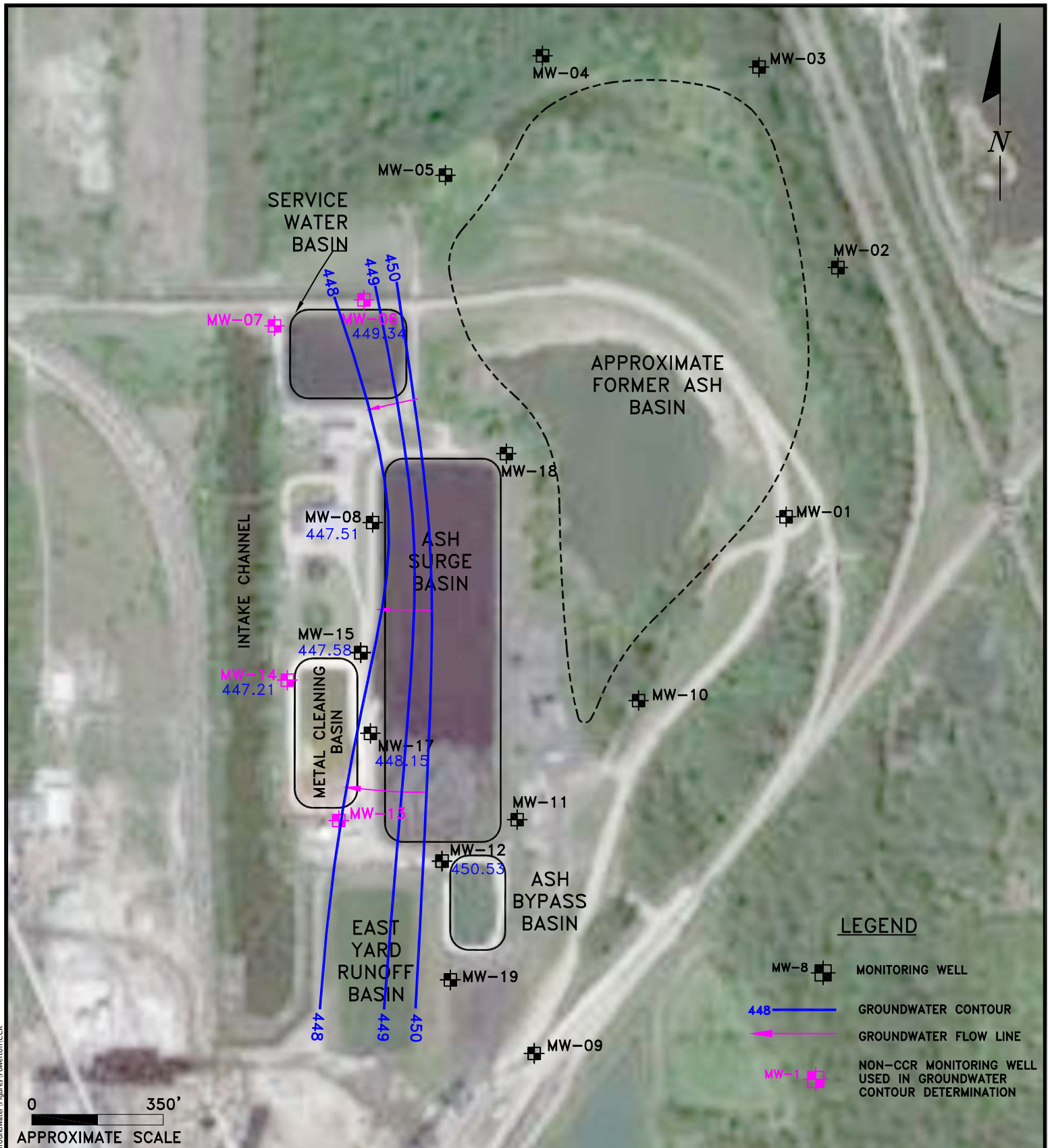
Client: KPRG and Associates, Inc.

Job Number: 500-162824-1

**Login Number: 162824**
**List Number: 2**
**Creator: Avery, Kathy R**

**List Source: Eurofins TestAmerica, Pensacola**
**List Creation: 05/07/19 05:40 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | Not Present |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.9°C IR 7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |




W:\Projects\Midwest Generation\12313 Ash Pond Groundwater\Figures\Powerton\CCR

ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, inc.

414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

# CCR GROUNDWATER CONTOUR MAP FOR SILT/CLAY UNIT 11/2019

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: December 19, 2019

KPRG Project No. 12313.1 | FIGURE 4

eurofins | Environment Testing TestAmerica



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-162824-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*5/22/2019 9:30:12 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-162824-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-162824-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/4/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.3º C, 3.7º C, 4.7º C and 5.3º C.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
Method(s) 375.4, SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample, the MS/MSD was diluted after the spike. The spike amount was adjusted by the dilution factor.

(500-162824-F-13 MS) and (500-162824-F-13 MSD)

Method(s) 375.4, SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-440971 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 375.4, SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-03 (500-162824-3), MW-05 (500-162824-5), MW-09 (500-162824-7), MW-11 (500-162824-9), MW-12 (500-162824-10), MW-15 (500-162824-11), MW-17 (500-162824-12), MW-18 (500-162824-13), MW-19 (500-162824-14), Duplicate (500-162824-15), (500-162824-F-13 MS) and (500-162824-F-13 MSD). Elevated reporting limits (RLs) are provided.

Method(s) 375.4, SM 4500 SO4 E: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-08 (500-162824-6). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-162824-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.039 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.070 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 78 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0017 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 450 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 54 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 27 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-02 — Lab Sample ID: 500-162824-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.048 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.12 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 79 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 440 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 48 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.16 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 30 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-162824-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.060 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.28 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 74 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 390 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 49 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 38 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-162824-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.026 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.36 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 74 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 380 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 48 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-04 (Continued) — Lab Sample ID: 500-162824-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.25 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 35 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-162824-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.041 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.56 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 84 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0061 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 590 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 73 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.36 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 120 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-162824-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.021 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0018 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.068 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.54 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 95 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0069 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 600 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 73 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.35 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 85 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-162824-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.038 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.6 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 79 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.031 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0036 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 640 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 37 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-10 — Lab Sample ID: 500-162824-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0023 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.27 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.35 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 92 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0028 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0037 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 470 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 50 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 30 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-162824-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.11 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.60 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.3 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0026 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0011 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.014 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 730 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 60 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.62 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 200 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-162824-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.041 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.13 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.40 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00054 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-162824-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 0.0012 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.011 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 170 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.38 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 330 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-162824-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.027 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0045 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.052 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.5 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 180 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.023 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.52 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 420 | | 150 | | mg/L | 30 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-162824-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.042 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.040 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.98 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00052 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 150 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00069 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.060 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 190 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.66 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 660 | | 150 | | mg/L | 30 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-18 — Lab Sample ID: 500-162824-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.54 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.61 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-162824-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.076 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.7 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.031 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0035 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 700 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 39 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 160 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-162824-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.024 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0021 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.052 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.6 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 190 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.024 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.53 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 470 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL PEN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Assest ID |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Water | 04/30/19 13:25 | 05/04/19 09:30 | |
| 500-162824-2 | MW-02 | Water | 04/30/19 09:45 | 05/04/19 09:30 | |
| 500-162824-3 | MW-03 | Water | 04/30/19 10:50 | 05/04/19 09:30 | |
| 500-162824-4 | MW-04 | Water | 04/30/19 11:40 | 05/04/19 09:30 | |
| 500-162824-5 | MW-05 | Water | 04/30/19 12:30 | 05/04/19 09:30 | |
| 500-162824-6 | MW-08 | Water | 05/01/19 15:35 | 05/04/19 09:30 | |
| 500-162824-7 | MW-09 | Water | 05/01/19 13:15 | 05/04/19 09:30 | |
| 500-162824-8 | MW-10 | Water | 05/01/19 09:30 | 05/04/19 09:30 | |
| 500-162824-9 | MW-11 | Water | 05/01/19 10:25 | 05/04/19 09:30 | |
| 500-162824-10 | MW-12 | Water | 05/01/19 11:55 | 05/04/19 09:30 | |
| 500-162824-11 | MW-15 | Water | 05/02/19 12:15 | 05/04/19 09:30 | |
| 500-162824-12 | MW-17 | Water | 04/29/19 15:20 | 05/04/19 09:30 | |
| 500-162824-13 | MW-18 | Water | 04/29/19 14:25 | 05/04/19 09:30 | |
| 500-162824-14 | MW-19 | Water | 05/02/19 10:30 | 05/04/19 09:30 | |
| 500-162824-15 | Duplicate | Water | 04/29/19 00:00 | 05/04/19 09:30 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-01

**Date Collected: 04/30/19 13:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:33 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Arsenic** | **0.0014** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Barium** | **0.039** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:00 | 1 |
| **Boron** | **0.070** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:00 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Calcium** | **78** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Lead** | **0.0017** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:00 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:22 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **450** | | 10 | | mg/L | | | 05/06/19 02:06 | 1 |
| **Chloride** | **54** | | 2.0 | | mg/L | | | 05/11/19 09:12 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 05/11/19 13:06 | 1 |
| **Sulfate** | **27** | | 5.0 | | mg/L | | | 05/14/19 12:33 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-02

**Date Collected: 04/30/19 09:45**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-2

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:53 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| **Barium** | **0.048** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:30 | 1 |
| **Boron** | **0.12** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:30 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| **Calcium** | **79** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:30 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:28 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **440** | | 10 | | mg/L | | | 05/06/19 02:12 | 1 |
| **Chloride** | **48** | | 2.0 | | mg/L | | | 05/11/19 09:12 | 1 |
| **Fluoride** | **0.16** | | 0.10 | | mg/L | | | 05/13/19 20:22 | 1 |
| **Sulfate** | **30** | | 5.0 | | mg/L | | | 05/14/19 12:33 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-03

**Date Collected: 04/30/19 10:50**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-3

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:57 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| **Barium** | **0.060** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:34 | 1 |
| **Boron** | **0.28** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:34 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| **Calcium** | **74** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:34 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:29 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **390** | | 10 | | mg/L | | | 05/06/19 02:14 | 1 |
| **Chloride** | **49** | | 2.0 | | mg/L | | | 05/17/19 22:02 | 1 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 05/13/19 20:25 | 1 |
| **Sulfate** | **38** | | 10 | | mg/L | | | 05/14/19 13:57 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-04

**Date Collected: 04/30/19 11:40**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-4

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:01 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| **Barium** | **0.026** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:38 | 1 |
| **Boron** | **0.36** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:38 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| **Calcium** | **74** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:38 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:31 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **380** | | 10 | | mg/L | | | 05/06/19 02:17 | 1 |
| **Chloride** | **48** | | 2.0 | | mg/L | | | 05/17/19 22:03 | 1 |
| **Fluoride** | **0.25** | | 0.10 | | mg/L | | | 05/13/19 20:28 | 1 |
| **Sulfate** | **35** | | 5.0 | | mg/L | | | 05/14/19 12:40 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-05

**Date Collected: 04/30/19 12:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-5

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:05 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| **Barium** | **0.041** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:42 | 1 |
| **Boron** | **0.56** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:42 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| **Calcium** | **84** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:42 | 1 |
| **Molybdenum** | **0.0061** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:32 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **590** | | 10 | | mg/L | | | 05/06/19 02:19 | 1 |
| **Chloride** | **73** | | 2.0 | | mg/L | | | 05/17/19 22:06 | 1 |
| **Fluoride** | **0.36** | | 0.10 | | mg/L | | | 05/13/19 20:31 | 1 |
| **Sulfate** | **120** | | 25 | | mg/L | | | 05/14/19 13:57 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-08

**Date Collected: 05/01/19 15:35**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-6

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.021** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:09 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| **Arsenic** | **0.0018** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| **Barium** | **0.068** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:45 | 1 |
| **Boron** | **0.54** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:45 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| **Calcium** | **95** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:45 | 1 |
| **Molybdenum** | **0.0069** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:34 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **600** | | 10 | | mg/L | | | 05/06/19 02:22 | 1 |
| **Chloride** | **73** | | 2.0 | | mg/L | | | 05/17/19 22:06 | 1 |
| **Fluoride** | **0.35** | | 0.10 | | mg/L | | | 05/13/19 20:34 | 1 |
| **Sulfate** | **85** | | 25 | | mg/L | | | 05/16/19 11:37 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-09

**Date Collected: 05/01/19 13:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-7

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:21 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| **Barium** | **0.038** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:42 | 1 |
| **Boron** | **4.6** | | 0.50 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:49 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| **Calcium** | **79** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:42 | 1 |
| **Molybdenum** | **0.031** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| **Selenium** | **0.0036** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:40 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **640** | | 10 | | mg/L | | | 05/06/19 02:25 | 1 |
| **Chloride** | **37** | | 2.0 | | mg/L | | | 05/17/19 20:32 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 05/13/19 20:38 | 1 |
| **Sulfate** | **170** | | 25 | | mg/L | | | 05/14/19 14:02 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-10

**Date Collected: 05/01/19 09:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-8

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:25 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Arsenic** | **0.0023** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Barium** | **0.27** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:00 | 1 |
| **Boron** | **0.35** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:00 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Calcium** | **92** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Cobalt** | **0.011** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Lead** | **0.0028** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:00 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Selenium** | **0.0037** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:42 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **470** | | 10 | | mg/L | | | 05/06/19 02:27 | 1 |
| **Chloride** | **50** | | 2.0 | | mg/L | | | 05/17/19 20:32 | 1 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 05/13/19 20:41 | 1 |
| **Sulfate** | **30** | | 5.0 | | mg/L | | | 05/14/19 12:40 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-11

**Date Collected: 05/01/19 10:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-9

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:29 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Arsenic** | **0.11** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Barium** | **0.60** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:46 | 1 |
| **Boron** | **2.3** | | 0.25 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:04 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Cobalt** | **0.0026** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Lead** | **0.0011** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:46 | 1 |
| **Molybdenum** | **0.014** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:48 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **730** | | 10 | | mg/L | | | 05/06/19 02:30 | 1 |
| **Chloride** | **60** | | 2.0 | | mg/L | | | 05/17/19 20:33 | 1 |
| **Fluoride** | **0.62** | | 0.10 | | mg/L | | | 05/13/19 20:45 | 1 |
| **Sulfate** | **200** | | 50 | | mg/L | | | 05/14/19 14:06 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-12

**Date Collected: 05/01/19 11:55**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-10

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.014** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:33 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Arsenic** | **0.041** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Barium** | **0.13** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:08 | 1 |
| **Boron** | **0.40** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:08 | 1 |
| **Cadmium** | **0.00054** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Lead** | **0.0012** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:08 | 1 |
| **Molybdenum** | **0.011** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:49 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/06/19 02:32 | 1 |
| **Chloride** | **170** | | 10 | | mg/L | | | 05/17/19 20:57 | 5 |
| **Fluoride** | **0.38** | | 0.10 | | mg/L | | | 05/13/19 20:57 | 1 |
| **Sulfate** | **330** | | 50 | | mg/L | | | 05/14/19 14:06 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-15

**Date Collected: 05/02/19 12:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-11

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.027** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:37 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| **Arsenic** | **0.0045** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| **Barium** | **0.052** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:49 | 1 |
| **Boron** | **1.5** | | 0.25 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:12 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| **Calcium** | **180** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:49 | 1 |
| **Molybdenum** | **0.023** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:51 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/06/19 02:35 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 05/17/19 22:57 | 5 |
| **Fluoride** | **0.52** | | 0.10 | | mg/L | | | 05/13/19 21:00 | 1 |
| **Sulfate** | **420** | | 150 | | mg/L | | | 05/14/19 17:14 | 30 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-17

**Date Collected: 04/29/19 15:20**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-12

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.015** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:42 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Arsenic** | **0.042** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Barium** | **0.040** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:16 | 1 |
| **Boron** | **0.98** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:16 | 1 |
| **Cadmium** | **0.00052** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Calcium** | **150** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Lead** | **0.00069** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:16 | 1 |
| **Molybdenum** | **0.060** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:52 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/06/19 02:37 | 1 |
| **Chloride** | **190** | | 10 | | mg/L | | | 05/17/19 22:57 | 5 |
| **Fluoride** | **0.66** | | 0.10 | | mg/L | | | 05/13/19 21:04 | 1 |
| **Sulfate** | **660** | | 150 | | mg/L | | | 05/15/19 10:19 | 30 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-18

**Date Collected: 04/29/19 14:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-13

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.013** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:46 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| **Barium** | **0.12** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:19 | 1 |
| **Boron** | **0.54** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:19 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:19 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:54 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/06/19 02:40 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 05/17/19 20:56 | 5 |
| **Fluoride** | **0.61** | | 0.10 | | mg/L | | | 05/13/19 21:07 | 1 |
| **Sulfate** | **170** | | 25 | | mg/L | | | 05/14/19 14:02 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-19

**Date Collected: 05/02/19 10:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-14

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:50 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| **Barium** | **0.076** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:53 | 1 |
| **Boron** | **3.7** | | 0.50 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:23 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:53 | 1 |
| **Molybdenum** | **0.031** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| **Selenium** | **0.0035** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:55 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **700** | | 10 | | mg/L | | | 05/06/19 02:43 | 1 |
| **Chloride** | **39** | | 2.0 | | mg/L | | | 05/17/19 20:27 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 05/13/19 21:10 | 1 |
| **Sulfate** | **160** | | 25 | | mg/L | | | 05/14/19 14:06 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: Duplicate

**Date Collected: 04/29/19 00:00**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-15

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.024** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:54 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| **Arsenic** | **0.0021** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| **Barium** | **0.052** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:57 | 1 |
| **Boron** | **1.6** | | 0.25 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:27 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| **Calcium** | **190** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:57 | 1 |
| **Molybdenum** | **0.024** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:57 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/06/19 02:45 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 05/17/19 20:56 | 5 |
| **Fluoride** | **0.53** | | 0.10 | | mg/L | | | 05/13/19 21:12 | 1 |
| **Sulfate** | **470** | | 100 | | mg/L | | | 05/15/19 10:19 | 20 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 483975

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-162824-6 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 3005A | |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 3005A | |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 3005A | |

### Analysis Batch: 484171

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-6 | MW-08 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6010C | 483975 |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 6010C | 483975 |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 6010C | 483975 |

### Analysis Batch: 484720

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 6020A | 483975 |

## Metals (Continued)

### Analysis Batch: 484720 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-6 | MW-08 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6020A | 483975 |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 6020A | 483975 |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 6020A | 483975 |

### Analysis Batch: 484965

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-6 | MW-08 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6020A | 483975 |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 6020A | 483975 |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 6020A | 483975 |

### Prep Batch: 485450

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-162824-2 | MW-02 | Total/NA | Water | 7470A | |
| 500-162824-3 | MW-03 | Total/NA | Water | 7470A | |
| 500-162824-4 | MW-04 | Total/NA | Water | 7470A | |
| 500-162824-5 | MW-05 | Total/NA | Water | 7470A | |

## Metals (Continued)

### Prep Batch: 485450 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-6 | MW-08 | Total/NA | Water | 7470A | |
| 500-162824-7 | MW-09 | Total/NA | Water | 7470A | |
| 500-162824-8 | MW-10 | Total/NA | Water | 7470A | |
| 500-162824-9 | MW-11 | Total/NA | Water | 7470A | |
| 500-162824-10 | MW-12 | Total/NA | Water | 7470A | |
| 500-162824-11 | MW-15 | Total/NA | Water | 7470A | |
| 500-162824-12 | MW-17 | Total/NA | Water | 7470A | |
| 500-162824-13 | MW-18 | Total/NA | Water | 7470A | |
| 500-162824-14 | MW-19 | Total/NA | Water | 7470A | |
| 500-162824-15 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-485450/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-485450/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-162824-6 MS | MW-08 | Total/NA | Water | 7470A | |
| 500-162824-6 MSD | MW-08 | Total/NA | Water | 7470A | |
| 500-162824-6 DU | MW-08 | Total/NA | Water | 7470A | |

### Analysis Batch: 485704

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | 7470A | 485450 |
| 500-162824-2 | MW-02 | Total/NA | Water | 7470A | 485450 |
| 500-162824-3 | MW-03 | Total/NA | Water | 7470A | 485450 |
| 500-162824-4 | MW-04 | Total/NA | Water | 7470A | 485450 |
| 500-162824-5 | MW-05 | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 | MW-08 | Total/NA | Water | 7470A | 485450 |
| 500-162824-7 | MW-09 | Total/NA | Water | 7470A | 485450 |
| 500-162824-8 | MW-10 | Total/NA | Water | 7470A | 485450 |
| 500-162824-9 | MW-11 | Total/NA | Water | 7470A | 485450 |
| 500-162824-10 | MW-12 | Total/NA | Water | 7470A | 485450 |
| 500-162824-11 | MW-15 | Total/NA | Water | 7470A | 485450 |
| 500-162824-12 | MW-17 | Total/NA | Water | 7470A | 485450 |
| 500-162824-13 | MW-18 | Total/NA | Water | 7470A | 485450 |
| 500-162824-14 | MW-19 | Total/NA | Water | 7470A | 485450 |
| 500-162824-15 | Duplicate | Total/NA | Water | 7470A | 485450 |
| MB 500-485450/12-A | Method Blank | Total/NA | Water | 7470A | 485450 |
| LCS 500-485450/13-A | Lab Control Sample | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 MS | MW-08 | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 MSD | MW-08 | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 DU | MW-08 | Total/NA | Water | 7470A | 485450 |

## General Chemistry

### Analysis Batch: 440971

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-2 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-3 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-7 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |

## General Chemistry (Continued)

### Analysis Batch: 440971 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-10 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-440971/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-440971/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-440971/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-13 MS | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-13 MSD | MW-18 | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 441150

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-6 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-441150/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-441150/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-441150/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 483709

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-162824-2 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-162824-3 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-162824-6 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-162824-7 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-162824-10 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-483709/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-483709/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-162824-1 DU | MW-01 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 484846

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-2 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-484846/83 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-484846/84 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 485004

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| MB 500-485004/31 | Method Blank | Total/NA | Water | SM 4500 F C | |

## General Chemistry (Continued)

### Analysis Batch: 485004 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-485004/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 485172

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-2 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-162824-3 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-162824-6 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-162824-7 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-162824-10 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-485172/31 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-485172/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 485974

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-7 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-10 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-485974/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-485974/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 485996

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-3 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-6 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-485996/9 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-485996/10 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-4 MS | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-4 MSD | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-12 MS | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-12 MSD | MW-17 | Total/NA | Water | SM 4500 Cl- E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-483975/1-A**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:13 | 1 |

**Lab Sample ID: LCS 500-483975/2-A**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.544 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: 500-162824-1 MS**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.554 | | mg/L | | 111 | 75 - 125 |

**Lab Sample ID: 500-162824-1 MSD**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.557 | | mg/L | | 111 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | <0.010 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-483975/1-A**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-483975/1-A**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 17:53 | 1 |
| Boron | <0.050 | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 17:53 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 17:53 | 1 |

**Lab Sample ID: LCS 500-483975/2-A**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.504 | | mg/L | | 101 | 80 - 120 |
| Arsenic | 0.100 | 0.0997 | | mg/L | | 100 | 80 - 120 |
| Barium | 2.00 | 2.02 | | mg/L | | 101 | 80 - 120 |
| Cadmium | 0.0500 | 0.0516 | | mg/L | | 103 | 80 - 120 |
| Calcium | 10.0 | 10.0 | | mg/L | | 100 | 80 - 120 |
| Chromium | 0.200 | 0.195 | | mg/L | | 98 | 80 - 120 |
| Cobalt | 0.500 | 0.498 | | mg/L | | 100 | 80 - 120 |
| Molybdenum | 1.00 | 0.978 | | mg/L | | 98 | 80 - 120 |
| Selenium | 0.100 | 0.0994 | | mg/L | | 99 | 80 - 120 |
| Thallium | 0.100 | 0.0964 | | mg/L | | 96 | 80 - 120 |

**Lab Sample ID: LCS 500-483975/2-A**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Beryllium | 0.0500 | 0.0520 | | mg/L | | 104 | 80 - 120 |
| Boron | 1.00 | 0.983 | | mg/L | | 98 | 80 - 120 |
| Lead | 0.100 | 0.105 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: 500-162824-1 MS**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.486 | | mg/L | | 97 | 75 - 125 |
| Arsenic | 0.0014 | | 0.100 | 0.0971 | | mg/L | | 96 | 75 - 125 |
| Barium | 0.039 | | 2.00 | 2.02 | | mg/L | | 99 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0496 | | mg/L | | 99 | 75 - 125 |
| Calcium | 78 | | 10.0 | 87.8 | 4 | mg/L | | 93 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.192 | | mg/L | | 95 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.475 | | mg/L | | 95 | 75 - 125 |
| Molybdenum | <0.0050 | | 1.00 | 0.930 | | mg/L | | 93 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.0958 | | mg/L | | 96 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.0934 | | mg/L | | 93 | 75 - 125 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-162824-1 MS**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | 0.0500 | 0.0467 | | mg/L | | 93 | 75 - 125 |
| Boron | 0.070 | | 1.00 | 0.965 | | mg/L | | 90 | 75 - 125 |
| Lead | 0.0017 | | 0.100 | 0.102 | | mg/L | | 100 | 75 - 125 |

**Lab Sample ID: 500-162824-1 MSD**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.485 | | mg/L | | 97 | 75 - 125 | 0 | 20 |
| Arsenic | 0.0014 | | 0.100 | 0.0931 | | mg/L | | 92 | 75 - 125 | 4 | 20 |
| Barium | 0.039 | | 2.00 | 1.97 | | mg/L | | 97 | 75 - 125 | 2 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0494 | | mg/L | | 99 | 75 - 125 | 0 | 20 |
| Calcium | 78 | | 10.0 | 85.4 | 4 | mg/L | | 70 | 75 - 125 | 3 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.186 | | mg/L | | 92 | 75 - 125 | 3 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.459 | | mg/L | | 92 | 75 - 125 | 4 | 20 |
| Molybdenum | <0.0050 | | 1.00 | 0.914 | | mg/L | | 91 | 75 - 125 | 2 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.0924 | | mg/L | | 92 | 75 - 125 | 4 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.0910 | | mg/L | | 91 | 75 - 125 | 3 | 20 |

**Lab Sample ID: 500-162824-1 MSD**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | 0.0500 | 0.0476 | | mg/L | | 95 | 75 - 125 | 2 | 20 |
| Boron | 0.070 | | 1.00 | 0.976 | | mg/L | | 91 | 75 - 125 | 1 | 20 |
| Lead | 0.0017 | | 0.100 | 0.103 | | mg/L | | 101 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | <0.0030 | | mg/L | | NC | 20 |
| Arsenic | 0.0014 | | 0.00143 | | mg/L | | 5 | 20 |
| Barium | 0.039 | | 0.0380 | | mg/L | | 3 | 20 |
| Cadmium | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Calcium | 78 | | 76.5 | | mg/L | | 3 | 20 |
| Chromium | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Cobalt | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Molybdenum | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Selenium | <0.0025 | | <0.0025 | | mg/L | | NC | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Boron | 0.070 | | 0.0576 | | mg/L | | 19 | 20 |
| Lead | 0.0017 | | 0.00164 | | mg/L | | 4 | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-485450/12-A**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:09 | 1 |

**Lab Sample ID: LCS 500-485450/13-A**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00200 | | mg/L | | 100 | 80 - 120 |

**Lab Sample ID: 500-162824-6 MS**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00101 | | mg/L | | 101 | 75 - 125 |

**Lab Sample ID: 500-162824-6 MSD**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000965 | | mg/L | | 96 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-162824-6 DU**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-483709/1**
**Matrix: Water**
**Analysis Batch: 483709**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 05/06/19 01:54 | 1 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: LCS 500-483709/2**
**Matrix: Water**
**Analysis Batch: 483709**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 274 | | mg/L | | 110 | 80 - 120 |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 483709**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 450 | | 434 | | mg/L | | 3 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-484846/83**
**Matrix: Water**
**Analysis Batch: 484846**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/11/19 08:50 | 1 |

**Lab Sample ID: LCS 500-484846/84**
**Matrix: Water**
**Analysis Batch: 484846**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 50.7 | | mg/L | | 101 | 85 - 115 |

**Lab Sample ID: MB 500-485974/4**
**Matrix: Water**
**Analysis Batch: 485974**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/17/19 20:11 | 1 |

**Lab Sample ID: LCS 500-485974/5**
**Matrix: Water**
**Analysis Batch: 485974**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 50.4 | | mg/L | | 101 | 85 - 115 |

**Lab Sample ID: MB 500-485996/9**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/17/19 21:52 | 1 |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: LCS 500-485996/10**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 51.5 | | mg/L | | 103 | 85 - 115 | | |

**Lab Sample ID: 500-162824-4 MS**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 48 | | 50.0 | 90.2 | | mg/L | | 84 | 75 - 125 | | |

**Lab Sample ID: 500-162824-4 MSD**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 48 | | 50.0 | 93.7 | | mg/L | | 91 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-162824-12 MS**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 190 | | 50.0 | 228 | | mg/L | | 83 | 75 - 125 | | |

**Lab Sample ID: 500-162824-12 MSD**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 190 | | 50.0 | 226 | | mg/L | | 77 | 75 - 125 | 1 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-485004/31**
**Matrix: Water**
**Analysis Batch: 485004**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/11/19 12:57 | 1 |

**Lab Sample ID: LCS 500-485004/32**
**Matrix: Water**
**Analysis Batch: 485004**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | | | 10.0 | 10.5 | | mg/L | | 105 | 80 - 120 | | |

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: MB 500-485172/31**
**Matrix: Water**
**Analysis Batch: 485172**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/13/19 19:45 | 1 |

**Lab Sample ID: LCS 500-485172/32**
**Matrix: Water**
**Analysis Batch: 485172**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.4 | | mg/L | | 104 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-440971/6**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/14/19 12:26 | 1 |

**Lab Sample ID: LCS 400-440971/7**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 15.0 | 14.4 | | mg/L | | 96 | 90 - 110 |

**Lab Sample ID: MRL 400-440971/3**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 5.00 | <5.0 | | mg/L | | 87 | 50 - 150 |

**Lab Sample ID: 500-162824-13 MS**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 170 | | 10.0 | 173 | 4 | mg/L | | 20 | 77 - 128 |

**Lab Sample ID: 500-162824-13 MSD**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 170 | | 10.0 | 172 | 4 | mg/L | | 12 | 77 - 128 | 0 | 5 |

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: MB 400-441150/6**
**Matrix: Water**
**Analysis Batch: 441150**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/16/19 11:01 | 1 |

**Lab Sample ID: LCS 400-441150/7**
**Matrix: Water**
**Analysis Batch: 441150**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 15.0 | 14.3 | | mg/L | | 95 | 90 - 110 | | |

**Lab Sample ID: MRL 400-441150/3**
**Matrix: Water**
**Analysis Batch: 441150**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 5.00 | <5.0 | | mg/L | | 95 | 50 - 150 | | |

## Client Sample ID: MW-01

**Lab Sample ID: 500-162824-1**

**Date Collected: 04/30/19 13:25**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 18:33 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:00 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 02:37 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:22 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:06 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 484846 | 05/11/19 09:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485004 | 05/11/19 13:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:33 | RRC | TAL PEN |

## Client Sample ID: MW-02

**Lab Sample ID: 500-162824-2**

**Date Collected: 04/30/19 09:45**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 18:53 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:30 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:06 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:28 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:12 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 484846 | 05/11/19 09:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:22 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:33 | RRC | TAL PEN |

## Client Sample ID: MW-03

**Lab Sample ID: 500-162824-3**

**Date Collected: 04/30/19 10:50**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 18:57 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:34 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:10 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:29 | MJG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-03

**Date Collected: 04/30/19 10:50**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:14 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:02 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:25 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 440971 | 05/14/19 13:57 | RRC | TAL PEN |

## Client Sample ID: MW-04

**Date Collected: 04/30/19 11:40**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:01 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:38 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:14 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:31 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:17 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:03 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:28 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:40 | RRC | TAL PEN |

## Client Sample ID: MW-05

**Date Collected: 04/30/19 12:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:05 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:42 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:19 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:32 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:19 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:31 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 13:57 | RRC | TAL PEN |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-08

**Date Collected: 05/01/19 15:35**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:09 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:45 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:23 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:34 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:22 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:34 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 441150 | 05/16/19 11:37 | RRC | TAL PEN |

## Client Sample ID: MW-09

**Date Collected: 05/01/19 13:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:21 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 484965 | 05/10/19 18:49 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:42 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:27 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:40 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:25 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:32 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:38 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 14:02 | RRC | TAL PEN |

## Client Sample ID: MW-10

**Date Collected: 05/01/19 09:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:25 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:00 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:39 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-10

**Date Collected: 05/01/19 09:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:42 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:27 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:32 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:41 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:40 | RRC | TAL PEN |

## Client Sample ID: MW-11

**Date Collected: 05/01/19 10:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:29 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 484965 | 05/10/19 19:04 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:46 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:44 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:48 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:30 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:33 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:45 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 440971 | 05/14/19 14:06 | RRC | TAL PEN |

## Client Sample ID: MW-12

**Date Collected: 05/01/19 11:55**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:33 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:08 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:48 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:49 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:32 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485974 | 05/17/19 20:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 440971 | 05/14/19 14:06 | RRC | TAL PEN |

## Client Sample ID: MW-15

**Lab Sample ID: 500-162824-11**

**Date Collected: 05/02/19 12:15**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:37 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 484965 | 05/10/19 19:12 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:49 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:52 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:51 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:35 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485996 | 05/17/19 22:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:00 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 30 | 440971 | 05/14/19 17:14 | RRC | TAL PEN |

## Client Sample ID: MW-17

**Lab Sample ID: 500-162824-12**

**Date Collected: 04/29/19 15:20**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:42 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:16 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:56 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:52 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:37 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485996 | 05/17/19 22:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:04 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 30 | 440971 | 05/15/19 10:19 | RRC | TAL PEN |

## Client Sample ID: MW-18

**Lab Sample ID: 500-162824-13**

**Date Collected: 04/29/19 14:25**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:46 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:19 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 04:00 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-18

**Lab Sample ID: 500-162824-13**

**Date Collected: 04/29/19 14:25**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:54 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:40 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485974 | 05/17/19 20:56 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:07 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 14:02 | RRC | TAL PEN |

## Client Sample ID: MW-19

**Lab Sample ID: 500-162824-14**

**Date Collected: 05/02/19 10:30**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:50 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 484965 | 05/10/19 19:23 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:53 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 04:04 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:55 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:43 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:27 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:10 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 14:06 | RRC | TAL PEN |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-162824-15**

**Date Collected: 04/29/19 00:00**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:54 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 484965 | 05/10/19 19:27 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:57 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 04:08 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:57 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:45 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485974 | 05/17/19 20:56 | EAT | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: Duplicate

**Date Collected: 04/29/19 00:00**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 440971 | 05/15/19 10:19 | RRC | TAL PEN |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 05-30-19 * |

## Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Alabama | State Program | 4 | 40150 | 06-30-19 |
| ANAB | ISO/IEC 17025 | | L2471 | 02-22-20 |
| Arizona | State Program | 9 | AZ0710 | 01-12-20 |
| Arkansas DEQ | State Program | 6 | 88-0689 | 09-01-19 |
| California | State Program | 9 | 2510 | 06-30-19 |
| Florida | NELAP | 4 | E81010 | 06-30-19 |
| Georgia | State Program | 4 | E81010 (FL) | 06-30-19 |
| Illinois | NELAP | 5 | 200041 | 10-09-19 |
| Iowa | State Program | 7 | 367 | 08-01-20 |
| Kansas | NELAP | 7 | E-10253 | 10-31-19 |
| Kentucky (UST) | State Program | 4 | 53 | 06-30-19 |
| Kentucky (WW) | State Program | 4 | 98030 | 12-31-19 |
| Louisiana | NELAP | 6 | 30976 | 06-30-19 |
| Louisiana (DW) | NELAP | 6 | LA017 | 12-31-19 |
| Maryland | State Program | 3 | 233 | 09-30-19 |
| Massachusetts | State Program | 1 | M-FL094 | 06-30-19 |
| Michigan | State Program | 5 | 9912 | 06-30-19 |
| New Jersey | NELAP | 2 | FL006 | 06-30-19 |
| North Carolina (WW/SW) | State Program | 4 | 314 | 12-31-19 |
| Oklahoma | State Program | 6 | 9810 | 08-31-19 |
| Pennsylvania | NELAP | 3 | 68-00467 | 01-31-20 |
| Rhode Island | State Program | 1 | LAO00307 | 12-30-19 |
| South Carolina | State Program | 4 | 96026 | 06-30-19 |
| Tennessee | State Program | 4 | TN02907 | 06-30-19 |
| Texas | NELAP | 6 | T104704286-18-15 | 09-30-19 |
| US Fish & Wildlife | Federal | | LE058448-0 | 07-31-19 |
| USDA | Federal | | P330-18-00148 | 05-17-21 |
| Virginia | NELAP | 3 | 460166 | 06-14-19 |
| Washington | State Program | 10 | C915 | 05-15-20 |
| West Virginia DEP | State Program | 3 | 136 | 07-31-19 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL
Phone: 708.534.5200 Fax: 708.5

500-162824 COC

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-162824

Chain of Custody Number:

Page 1 of 2

5.3

Temperature °C of Cooler: 3.7, 4.7, 2.3

| | |
|---|---|
| Client | KPRG and Assoc. |
| Client Project # | 12313.1 |
| Project Name | NRG Powerton CCR |
| Project Location/State | Pekin, IL |
| Lab Project # | |
| Sampler | Mitchel Dolan |
| Lab PM | Eric Lang |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | 3 | 8 | 3 | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Parameter | Total Metals | Cl, Fl, SO4, TDS | Rad 226/228 | | | | | | | |
| 1 | | MW-01 | 4/30 | 1325 | 5 | W | | X | X | X | | | | | | | |
| 2 | | MW-02 | 4/30 | 0945 | | | | | | | | | | | | | |
| 3 | | MW-03 | 4/30 | 1050 | | | | | | | | | | | | | |
| 4 | | MW-04 | 4/30 | 1140 | | | | | | | | | | | | | |
| 5 | | MW-05 | 4/30 | 1230 | | | | | | | | | | | | | |
| 6 | | MW-08 | 5/1 | 1535 | | | | | | | | | | | | | |
| 7 | | MW-09 | 5/1 | 1315 | | | | | | | | | | | | | |
| 8 | | MW-10 | 5/1 | 0930 | | | | | | | | | | | | | |
| 9 | | MW-11 | 5/1 | 1025 | | | | | | | | | | | | | |
| 10 | | MW-12 | 5/1 | 1155 | | | | | | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| | Company | Date | Time |
|---|---|---|---|
| Relinquished By | KPRG | 5/2/2019 | 1700 |
| Relinquished By | | | |
| Relinquished By | | | |

| | Company | Date | Time |
|---|---|---|---|
| Received By | FEDEX | 5/2/2019 | 1700 |
| Received By | Neil Fioravanti | TACHE 05/04/19 | 0930 |
| Received By | | | |

Lab Courier
Shipped FX SATURDAY
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

# Chain of Custody Record

Lab Job #: 500-16282-4
Chain of Custody Number:
Page 2 of 2
Temperature °C of Cooler: 3.7, 4.7, 2.3, 5.3

| Client | Client Project # | Preservative | 3 | 8 | 3 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KPRG and Assoc. | 12313.1 | | | | | | | | | | |
| Project Name: NRG Powerton CCR | | Parameter | Total Metals | Cl, Fl, SO4, TDS | Rad 226/228 | | | | | | |
| Project Location/State: Pekin, IL | Lab Project # | | | | | | | | | | |
| Sampler: Mitchel Dolan | Lab PM: Eric Lang | | | | | | | | | | |

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | | MW-15 | 5/2 | 1215 | 5 | W | | | | | | | | | | |
| 12 | | MW-17 | 4/29 | 1520 | | | | | | | | | | | | |
| 13 | | MW-18 | 4/29 | 1425 | | | | | | | | | | | | |
| 14 | | MW-19 | 5/2 | 1030 | | | | | | | | | | | | |
| 15 | | DUPLICATE | — | — | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Comments

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 5/2/2019 | 1700 | FEDEX | | 5/2/2019 | 1700 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | [signature] Fiorawanti | THLH | 05/04/19 | 0930 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | | | | |

Lab Courier
Shipped FX SATurday
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 61.40 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-MHEZ-7SSOM25EXP 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

500-162824 Waybill

(000) 000-0000
INV:
PO:
REF:
DEPT:

FedEx Express

REL# 3785346

SATURDAY 4:30P
** 2DAY **

8 of 9

MPS# 7870 1648 7850
0263

Mstr# 7870 1648 7780

0201

SO JOTA

60484
IL-US ORD

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 64.10 LB
CAD: 006994[illegible]SSFE2002
DIMS: 24[illegible]

BILL

Part # 156297-MHEZ-7SSOM25EXP 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

RT 717
ST 11

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16.30 7780
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UNIVERSITY PARK

(000) 000-0000
INV:
PO:
REF:
DEPT:

FedEx Express

REL# 3785346

SATURDAY 4:30P
** 2DAY **

1 of 9

TRK# 7870 1648 7780
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## MASTER ##

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IL-US ORD

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ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 57.70 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-4962-7/SSFE2002 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484
(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx Express

REL# 3785346

6 of 9
MPS# 0263 7870 1648 7838
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SATURDAY 4:30P
** 2DAY **

60484
IL-US ORD

SO JOTA

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 60.00 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-4962-7/SSFE2002 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484
(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx Express

REL# 3785346

5 of 9
MPS# 0263 7870 1648 7827
Mstr# 7870 1648 7780

0201

SATURDAY 4:30P
** 2DAY **

60484
IL-US ORD

SO JOTA

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-120630.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-162824-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 5/17/2019 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-01 (500-162824-1) | 4/30/19 | 13:25 Central | | Water | | | X | 1 | |
| MW-02 (500-162824-2) | 4/30/19 | 09:45 Central | | Water | | | X | 1 | |
| MW-03 (500-162824-3) | 4/30/19 | 10:50 Central | | Water | | | X | 1 | |
| MW-04 (500-162824-4) | 4/30/19 | 11:40 Central | | Water | | | X | 1 | |
| MW-05 (500-162824-5) | 4/30/19 | 12:30 Central | | Water | | | X | 1 | |
| MW-08 (500-162824-6) | 5/1/19 | 15:35 Central | | Water | | | X | 1 | |
| MW-09 (500-162824-7) | 5/1/19 | 13:15 Central | | Water | | | X | 1 | |
| MW-10 (500-162824-8) | 5/1/19 | 09:30 Central | | Water | | | X | 1 | |
| MW-11 (500-162824-9) | 5/1/19 | 10:25 Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 5/6/19 1500 | TA | Kathy R Auer | 5-7-19 851 | TA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.9°C IR 7 |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-120630.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-162824-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 5/17/2019 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-12 (500-162824-10) | 5/1/19 | 11:55 Central | | Water | | | X | 1 | |
| MW-15 (500-162824-11) | 5/2/19 | 12:15 Central | | Water | | | X | 1 | |
| MW-17 (500-162824-12) | 4/29/19 | 15:20 Central | | Water | | | X | 1 | |
| MW-18 (500-162824-13) | 4/29/19 | 14:25 Central | | Water | | | X | 1 | |
| MW-19 (500-162824-14) | 5/2/19 | 10:30 Central | | Water | | | X | 1 | |
| Duplicate (500-162824-15) | 4/29/19 | Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 5/6/19 1500 | TA | Kathy R Avery | 5-7-19 851 | TA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.9°C IR7 |
|---|---|---|

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-1

**Login Number: 162824**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.7,4.7,5.3,2.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-1

**Login Number: 162824**
**List Number: 2**
**Creator: Avery, Kathy R**

**List Source: Eurofins TestAmerica, Pensacola**
**List Creation: 05/07/19 05:40 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | Not Present |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.9°C IR 7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing TestAmerica



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-162824-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*8/15/2019 1:57:27 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-162824-2

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-162824-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/4/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.3º C, 3.7º C, 4.7º C and 5.3º C.

**RAD**
Method(s) 904.0, 9320: Ra-228 Prep Batch 160-430397
The Ra-228 recovery in the LCS was slightly low (72) outside QC limits (75%-125%) indicating a potential slight low bias to the sample results. The barium recovery in the LCS (107%) and the Replicate Error Ratio (RER) were within limits demonstrating acceptable method performance.
MW-01 (500-162824-1), MW-02 (500-162824-2), MW-03 (500-162824-3), MW-04 (500-162824-4), MW-05 (500-162824-5), MW-08 (500-162824-6), MW-09 (500-162824-7), MW-10 (500-162824-8), MW-11 (500-162824-9), (LCS 160-430397/1-A), (MB 160-430397/23-A) and (500-162824-C-1-B DU)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-430139
The following samples had yellow discoloration:MW-12 (500-162824-10), MW-17 (500-162824-12) and MW-18 (500-162824-13). Sample 500-162824-C-10 had brown solids.

Method(s) PrecSep_0: Radium 228 Prep Batch 160-430397
The following samples were prepared at a reduced aliquot due to cloudy discoloration: MW-10 (500-162824-8) and MW-11 (500-162824-9).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-430133
The following samples had white discoloration:MW-12 (500-162824-10), MW-17 (500-162824-12) and MW-18 (500-162824-13). Sample 500-162824-C-10 had brown solids.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-430235
The following samples were prepared at a reduced aliquot due to cloudy discoloration: MW-10 (500-162824-8) and MW-11 (500-162824-9).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Water | 04/30/19 13:25 | 05/04/19 09:30 | |
| 500-162824-2 | MW-02 | Water | 04/30/19 09:45 | 05/04/19 09:30 | |
| 500-162824-3 | MW-03 | Water | 04/30/19 10:50 | 05/04/19 09:30 | |
| 500-162824-4 | MW-04 | Water | 04/30/19 11:40 | 05/04/19 09:30 | |
| 500-162824-5 | MW-05 | Water | 04/30/19 12:30 | 05/04/19 09:30 | |
| 500-162824-6 | MW-08 | Water | 05/01/19 15:35 | 05/04/19 09:30 | |
| 500-162824-7 | MW-09 | Water | 05/01/19 13:15 | 05/04/19 09:30 | |
| 500-162824-8 | MW-10 | Water | 05/01/19 09:30 | 05/04/19 09:30 | |
| 500-162824-9 | MW-11 | Water | 05/01/19 10:25 | 05/04/19 09:30 | |
| 500-162824-10 | MW-12 | Water | 05/01/19 11:55 | 05/04/19 09:30 | |
| 500-162824-11 | MW-15 | Water | 05/02/19 12:15 | 05/04/19 09:30 | |
| 500-162824-12 | MW-17 | Water | 04/29/19 15:20 | 05/04/19 09:30 | |
| 500-162824-13 | MW-18 | Water | 04/29/19 14:25 | 05/04/19 09:30 | |
| 500-162824-14 | MW-19 | Water | 05/02/19 10:30 | 05/04/19 09:30 | |
| 500-162824-15 | Duplicate | Water | 04/29/19 00:00 | 05/04/19 09:30 | |

## Client Sample ID: MW-01

**Date Collected: 04/30/19 13:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0249 | U | 0.0545 | 0.0545 | 1.00 | 0.121 | pCi/L | 05/30/19 10:35 | 08/13/19 21:10 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.1* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:10* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.000 | U * | 0.369 | 0.369 | 1.00 | 0.656 | pCi/L | 05/31/19 10:52 | 07/23/19 14:24 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.1* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:24* | *1* |
| *Y Carrier* | *75.5* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:24* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | -0.0249 | U | 0.373 | 0.373 | 5.00 | 0.656 | pCi/L | | 08/15/19 09:45 | 1 |

## Client Sample ID: MW-02

**Date Collected: 04/30/19 09:45**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0445 | U | 0.0705 | 0.0707 | 1.00 | 0.121 | pCi/L | 05/30/19 10:35 | 08/13/19 21:10 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.5* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:10* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.171 | U * | 0.262 | 0.262 | 1.00 | 0.441 | pCi/L | 05/31/19 10:52 | 07/23/19 14:25 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.5* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:25* | *1* |
| *Y Carrier* | *76.6* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:25* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.215 | U | 0.271 | 0.271 | 5.00 | 0.441 | pCi/L | | 08/15/19 09:45 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-03

**Date Collected: 04/30/19 10:50**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0298 | U | 0.0613 | 0.0613 | 1.00 | 0.111 | pCi/L | 05/30/19 10:35 | 08/13/19 21:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *74.0* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.0589 | U * | 0.366 | 0.366 | 1.00 | 0.668 | pCi/L | 05/31/19 10:52 | 07/23/19 14:25 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *74.0* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:25* | *1* |
| *Y Carrier* | *73.3* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:25* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | -0.0291 | U | 0.371 | 0.371 | 5.00 | 0.668 | pCi/L | | 08/15/19 09:45 | 1 |

## Client Sample ID: MW-04

**Date Collected: 04/30/19 11:40**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0600 | U | 0.0531 | 0.0534 | 1.00 | 0.130 | pCi/L | 05/30/19 10:35 | 08/14/19 06:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.6* | | *40 - 110* | *05/30/19 10:35* | *08/14/19 06:57* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.260 | U * | 0.408 | 0.409 | 1.00 | 0.684 | pCi/L | 05/31/19 10:52 | 07/23/19 14:29 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.6* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |
| *Y Carrier* | *80.4* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.200 | U | 0.411 | 0.412 | 5.00 | 0.684 | pCi/L | | 08/15/19 09:45 | 1 |

## Client Sample ID: MW-05

**Date Collected: 04/30/19 12:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.115 | U | 0.0338 | 0.0354 | 1.00 | 0.136 | pCi/L | 05/30/19 10:35 | 08/13/19 21:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *73.7* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.325 | U * | 0.427 | 0.428 | 1.00 | 0.709 | pCi/L | 05/31/19 10:52 | 07/23/19 14:29 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *73.7* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |
| *Y Carrier* | *77.8* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.209 | U | 0.428 | 0.429 | 5.00 | 0.709 | pCi/L | | 08/15/19 09:45 | 1 |

## Client Sample ID: MW-08

**Date Collected: 05/01/19 15:35**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0735 | U | 0.0635 | 0.0638 | 1.00 | 0.0942 | pCi/L | 05/30/19 10:35 | 08/13/19 21:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.1* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.819** | * | 0.427 | 0.433 | 1.00 | 0.639 | pCi/L | 05/31/19 10:52 | 07/23/19 14:29 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.1* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |
| *Y Carrier* | *74.4* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.892** | | 0.432 | 0.438 | 5.00 | 0.639 | pCi/L | | 08/15/19 09:45 | 1 |

## Client Sample ID: MW-09

**Date Collected: 05/01/19 13:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0249 | U | 0.0422 | 0.0422 | 1.00 | 0.108 | pCi/L | 05/30/19 10:35 | 08/13/19 21:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.0* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.606 | U * | 0.422 | 0.426 | 1.00 | 0.660 | pCi/L | 05/31/19 10:52 | 07/23/19 14:29 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.0* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |
| *Y Carrier* | *78.1* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.581 | U | 0.424 | 0.428 | 5.00 | 0.660 | pCi/L | | 08/15/19 09:45 | 1 |

## Client Sample ID: MW-10

**Date Collected: 05/01/19 09:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.491 | | 0.142 | 0.148 | 1.00 | 0.131 | pCi/L | 05/30/19 10:35 | 08/13/19 21:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.1* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.834 | * | 0.468 | 0.474 | 1.00 | 0.706 | pCi/L | 05/31/19 10:52 | 07/23/19 14:32 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.1* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:32* | *1* |
| *Y Carrier* | *74.0* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:32* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.33 | | 0.489 | 0.497 | 5.00 | 0.706 | pCi/L | | 08/15/19 09:45 | 1 |

## Client Sample ID: MW-11

**Date Collected: 05/01/19 10:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.679 | | 0.171 | 0.182 | 1.00 | 0.137 | pCi/L | 05/30/19 10:35 | 08/13/19 21:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.0* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.906 | * | 0.490 | 0.497 | 1.00 | 0.733 | pCi/L | 05/31/19 10:52 | 07/23/19 14:32 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.0* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:32* | *1* |
| *Y Carrier* | *76.3* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:32* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.59 | | 0.519 | 0.529 | 5.00 | 0.733 | pCi/L | | 08/15/19 09:45 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

**Client Sample ID: MW-12**
**Date Collected: 05/01/19 11:55**
**Date Received: 05/04/19 09:30**

**Lab Sample ID: 500-162824-10**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.309** | | 0.0978 | 0.102 | 1.00 | 0.0781 | pCi/L | 05/29/19 11:23 | 08/03/19 12:56 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.7* | | *40 - 110* | *05/29/19 11:23* | *08/03/19 12:56* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.358 | U | 0.277 | 0.279 | 1.00 | 0.439 | pCi/L | 05/29/19 12:41 | 07/17/19 08:46 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.7* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:46* | *1* |
| *Y Carrier* | *86.4* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:46* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.666** | | 0.294 | 0.297 | 5.00 | 0.439 | pCi/L | | 08/06/19 11:03 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-15

**Date Collected: 05/02/19 12:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-11

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0738 | U | 0.0681 | 0.0684 | 1.00 | 0.105 | pCi/L | 05/29/19 11:23 | 08/03/19 12:56 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.1* | | *40 - 110* | *05/29/19 11:23* | *08/03/19 12:56* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.204 | U | 0.256 | 0.257 | 1.00 | 0.424 | pCi/L | 05/29/19 12:41 | 07/17/19 08:46 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.1* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:46* | *1* |
| *Y Carrier* | *88.6* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:46* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.278 | U | 0.265 | 0.266 | 5.00 | 0.424 | pCi/L | | 08/06/19 11:03 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-17

**Date Collected: 04/29/19 15:20**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-12

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.120** | | 0.0667 | 0.0675 | 1.00 | 0.0798 | pCi/L | 05/29/19 11:23 | 08/03/19 13:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.8* | | *40 - 110* | *05/29/19 11:23* | *08/03/19 13:00* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.397 | U | 0.265 | 0.267 | 1.00 | 0.411 | pCi/L | 05/29/19 12:41 | 07/17/19 08:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.8* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |
| *Y Carrier* | *89.7* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.517** | | 0.273 | 0.275 | 5.00 | 0.411 | pCi/L | | 08/06/19 11:03 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-18

**Date Collected: 04/29/19 14:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-13

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.220 | | 0.0987 | 0.101 | 1.00 | 0.112 | pCi/L | 05/29/19 11:23 | 08/03/19 13:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.4* | | *40 - 110* | *05/29/19 11:23* | *08/03/19 13:00* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.122 | U | 0.261 | 0.261 | 1.00 | 0.445 | pCi/L | 05/29/19 12:41 | 07/17/19 08:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.4* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |
| *Y Carrier* | *89.7* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.342 | U | 0.279 | 0.280 | 5.00 | 0.445 | pCi/L | | 08/06/19 11:03 | 1 |

## Client Sample ID: MW-19

**Date Collected: 05/02/19 10:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-14

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.129 | | 0.0694 | 0.0704 | 1.00 | 0.0795 | pCi/L | 05/29/19 11:23 | 08/03/19 14:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *86.7* | | *40 - 110* | *05/29/19 11:23* | *08/03/19 14:52* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.175 | U | 0.257 | 0.257 | 1.00 | 0.431 | pCi/L | 05/29/19 12:41 | 07/17/19 08:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *86.7* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |
| *Y Carrier* | *88.2* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.304 | U | 0.266 | 0.266 | 5.00 | 0.431 | pCi/L | | 08/06/19 11:03 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: Duplicate

**Date Collected: 04/29/19 00:00**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-15

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.165 | | 0.0830 | 0.0843 | 1.00 | 0.103 | pCi/L | 05/29/19 11:23 | 08/03/19 14:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.7* | | *40 - 110* | *05/29/19 11:23* | *08/03/19 14:52* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.134 | U | 0.230 | 0.230 | 1.00 | 0.390 | pCi/L | 05/29/19 12:41 | 07/17/19 08:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.7* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.298 | U | 0.245 | 0.245 | 5.00 | 0.390 | pCi/L | | 08/06/19 11:04 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD is outside acceptance limits. |
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Rad

### Prep Batch: 430133

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-10 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-162824-11 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-162824-12 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-162824-13 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-162824-14 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-162824-15 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-430133/23-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-430133/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 430139

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-10 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-162824-11 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-162824-12 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-162824-13 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-162824-14 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-162824-15 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-430139/23-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-430139/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |

### Prep Batch: 430235

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-162824-2 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-162824-3 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-162824-4 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-162824-5 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-162824-6 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-162824-7 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-162824-8 | MW-10 | Total/NA | Water | PrecSep-21 | |
| 500-162824-9 | MW-11 | Total/NA | Water | PrecSep-21 | |
| MB 160-430235/23-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-430235/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-162824-1 DU | MW-01 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 430397

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-162824-2 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-162824-3 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-162824-4 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-162824-5 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-162824-6 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-162824-7 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-162824-8 | MW-10 | Total/NA | Water | PrecSep_0 | |
| 500-162824-9 | MW-11 | Total/NA | Water | PrecSep_0 | |
| MB 160-430397/23-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-430397/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-162824-1 DU | MW-01 | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-430133/23-A**
**Matrix: Water**
**Analysis Batch: 438092**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 430133**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.03041 | U | 0.0531 | 0.0531 | 1.00 | 0.120 | pCi/L | 05/29/19 11:23 | 08/04/19 21:19 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *05/29/19 11:23* | *08/04/19 21:19* | *1* |

**Lab Sample ID: LCS 160-430133/1-A**
**Matrix: Water**
**Analysis Batch: 437770**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 430133**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 8.842 | | 0.939 | 1.00 | 0.103 | pCi/L | 78 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* |

**Lab Sample ID: MB 160-430235/23-A**
**Matrix: Water**
**Analysis Batch: 439426**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 430235**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.005455 | U | 0.0525 | 0.0525 | 1.00 | 0.107 | pCi/L | 05/30/19 10:35 | 08/13/19 23:00 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *98.9* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 23:00* | *1* |

**Lab Sample ID: LCS 160-430235/1-A**
**Matrix: Water**
**Analysis Batch: 439308**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 430235**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 8.579 | | 0.902 | 1.00 | 0.103 | pCi/L | 76 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *95.2* | | *40 - 110* |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 439426**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 430235**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0249 | U | | 0.02744 | U | 0.0559 | 1.00 | 0.100 | pCi/L | | | 0.47 | 1 |

## Method: 903.0 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 439426**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 430235**

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 88.7 | | 40 - 110 |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-430139/23-A**
**Matrix: Water**
**Analysis Batch: 435082**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 430139**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.3048 | U | 0.265 | 0.267 | 1.00 | 0.426 | pCi/L | 05/29/19 12:41 | 07/17/19 08:57 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 102 | | 40 - 110 | 05/29/19 12:41 | 07/17/19 08:57 | 1 |
| Y Carrier | 82.6 | | 40 - 110 | 05/29/19 12:41 | 07/17/19 08:57 | 1 |

**Lab Sample ID: LCS 160-430139/1-A**
**Matrix: Water**
**Analysis Batch: 435081**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 430139**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.02 | 8.352 | | 0.988 | 1.00 | 0.440 | pCi/L | 93 | 75 - 125 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 103 | | 40 - 110 |
| Y Carrier | 87.1 | | 40 - 110 |

**Lab Sample ID: MB 160-430397/23-A**
**Matrix: Water**
**Analysis Batch: 435974**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 430397**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.03968 | U | 0.302 | 0.302 | 1.00 | 0.553 | pCi/L | 05/31/19 10:52 | 07/23/19 14:34 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 98.9 | | 40 - 110 | 05/31/19 10:52 | 07/23/19 14:34 | 1 |
| Y Carrier | 62.8 | | 40 - 110 | 05/31/19 10:52 | 07/23/19 14:34 | 1 |

**Lab Sample ID: LCS 160-430397/1-A**
**Matrix: Water**
**Analysis Batch: 436112**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 430397**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.00 | 6.483 | * | 0.923 | 1.00 | 0.554 | pCi/L | 72 | 75 - 125 | | |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-430397/1-A**
**Matrix: Water**
**Analysis Batch: 436112**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 430397**

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 95.2 | | 40 - 110 |
| Y Carrier | 65.8 | | 40 - 110 |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 436112**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 430397**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.000 | U * | | -0.07644 | U * | 0.300 | 1.00 | 0.550 | pCi/L | | | 0.11 | 1 |

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 88.7 | | 40 - 110 |
| Y Carrier | 75.5 | | 40 - 110 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-01
**Date Collected: 04/30/19 13:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:10 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 436112 | 07/23/19 14:24 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

## Client Sample ID: MW-02
**Date Collected: 04/30/19 09:45**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:10 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 436112 | 07/23/19 14:25 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 04/30/19 10:50**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:11 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 436112 | 07/23/19 14:25 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

## Client Sample ID: MW-04
**Date Collected: 04/30/19 11:40**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439521 | 08/14/19 06:57 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 436097 | 07/23/19 14:29 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-05

**Lab Sample ID: 500-162824-5**

**Date Collected: 04/30/19 12:30**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:11 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 436097 | 07/23/19 14:29 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

## Client Sample ID: MW-08

**Lab Sample ID: 500-162824-6**

**Date Collected: 05/01/19 15:35**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:11 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 436097 | 07/23/19 14:29 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

## Client Sample ID: MW-09

**Lab Sample ID: 500-162824-7**

**Date Collected: 05/01/19 13:15**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:11 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 436097 | 07/23/19 14:29 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

## Client Sample ID: MW-10

**Lab Sample ID: 500-162824-8**

**Date Collected: 05/01/19 09:30**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:11 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435974 | 07/23/19 14:32 | AMJ | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-11

**Date Collected: 05/01/19 10:25**
**Date Received: 05/04/19 09:30**

**Lab Sample ID: 500-162824-9**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:11 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435974 | 07/23/19 14:32 | AMJ | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

## Client Sample ID: MW-12

**Date Collected: 05/01/19 11:55**
**Date Received: 05/04/19 09:30**

**Lab Sample ID: 500-162824-10**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430133 | 05/29/19 11:23 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 437844 | 08/03/19 12:56 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430139 | 05/29/19 12:41 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435081 | 07/17/19 08:46 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 438275 | 08/06/19 11:03 | SMP | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 05/02/19 12:15**
**Date Received: 05/04/19 09:30**

**Lab Sample ID: 500-162824-11**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430133 | 05/29/19 11:23 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 437844 | 08/03/19 12:56 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430139 | 05/29/19 12:41 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435081 | 07/17/19 08:46 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 438275 | 08/06/19 11:03 | SMP | TAL SL |

## Client Sample ID: MW-17

**Date Collected: 04/29/19 15:20**
**Date Received: 05/04/19 09:30**

**Lab Sample ID: 500-162824-12**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430133 | 05/29/19 11:23 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 437902 | 08/03/19 13:00 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430139 | 05/29/19 12:41 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435081 | 07/17/19 08:47 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 438275 | 08/06/19 11:03 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-18

**Lab Sample ID: 500-162824-13**

**Date Collected: 04/29/19 14:25**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430133 | 05/29/19 11:23 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 437902 | 08/03/19 13:00 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430139 | 05/29/19 12:41 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435081 | 07/17/19 08:47 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 438275 | 08/06/19 11:03 | SMP | TAL SL |

## Client Sample ID: MW-19

**Lab Sample ID: 500-162824-14**

**Date Collected: 05/02/19 10:30**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430133 | 05/29/19 11:23 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 437844 | 08/03/19 14:52 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430139 | 05/29/19 12:41 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435081 | 07/17/19 08:47 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 438275 | 08/06/19 11:03 | SMP | TAL SL |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-162824-15**

**Date Collected: 04/29/19 00:00**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430133 | 05/29/19 11:23 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 437844 | 08/03/19 14:52 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430139 | 05/29/19 12:41 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435081 | 07/17/19 08:47 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 438275 | 08/06/19 11:04 | SMP | TAL SL |

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-20 |

## Laboratory: Eurofins TestAmerica, St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200023 | 11-30-19 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL
Phone: 708.534.5200 Fax: 708.5

500-162824 COC

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-162824

Chain of Custody Number:

Page 1 of 2

Temperature °C of Cooler: 3.7, 4.7, 2.3 5.3

| Client | Client Project # | Preservative | 3 | 8 | 3 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KPRG and Assoc. | 12313.1 | | | | | | | | | | |
| Project Name: NRG Powerton CCR | | Parameter | Total Metals | Cl, Fl, SO4, TDS | Rad 226/228 | | | | | | |
| Project Location/State: Pekin, IL | Lab Project # | | | | | | | | | | |
| Sampler: Mitchel Dolan | Lab PM: Eric Lang | | | | | | | | | | |

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 4/30 | 1325 | 5 | W | X | X | X | | | | | |
| 2 | | MW-02 | 4/30 | 0945 | | | | | | | | | | |
| 3 | | MW-03 | 4/30 | 1050 | | | | | | | | | | |
| 4 | | MW-04 | 4/30 | 1140 | | | | | | | | | | |
| 5 | | MW-05 | 4/30 | 1230 | | | | | | | | | | |
| 6 | | MW-08 | 5/1 | 1535 | | | | | | | | | | |
| 7 | | MW-09 | 5/1 | 1315 | | | | | | | | | | |
| 8 | | MW-10 | 5/1 | 0930 | | | | | | | | | | |
| 9 | | MW-11 | 5/1 | 1025 | | | | | | | | | | |
| 10 | | MW-12 | 5/1 | 1155 | | | | | | | | | | |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 5/2/2019 | 1700 | FEDEX | | 5/2/2019 | 1700 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | Neil Fioravanti | TACHE | 05/04/19 | 0930 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | | | | |

Lab Courier
Shipped FX SATURDAY
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)



8/15/2019

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)

Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)

Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-16284

Chain of Custody Number:

Page 2 of 2

Temperature °C of Cooler: 3.7A.7, 23, 5-3

| Client | Client Project # | Preservative | 3 | 8 | 3 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KPRG and Assoc. | 12313.1 | | | | | | | | | | |
| Project Name: NRG Powerton CCR | | Parameter | Total Metals | Cl, Fl, SO4, TDS | Rad 226/228 | | | | | | |
| Project Location/State: Pekin, IL | Lab Project # | | | | | | | | | | |
| Sampler: Mitchel Dolan | Lab PM: Eric Lang | | | | | | | | | | |

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | | MW-15 | 5/2 | 1215 | 5 | W | | | | | | | | |
| 12 | | MW-17 | 4/29 | 1520 | | | | | | | | | | |
| 13 | | MW-18 | 4/29 | 1425 | | | | | | | | | | |
| 14 | | MW-19 | 5/2 | 1030 | | | | | | | | | | |
| 15 | | DUPLICATE | — | — | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 5/2/2019 | 1700 | FEDEX | | 5/2/2019 | 1700 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | [signature] Fiorawanti | THLH | 05/04/19 | 0930 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | | | | |

Lab Courier
Shipped FX SATurday
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:



TAL-4124-500 (1209)

8/15/2019

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 61.40 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-MEB-7850-MPS EXP 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

500-162824 Waybill

(000) 000-0000
INV:
PO:
REF:
DEPT:

FedEx Express

REL# 3785346

SATURDAY 4:30P
** 2DAY **

8 of 9

MPS# 7870 1648 7850
0263

Mstr# 7870 1648 7780

0201

60484
IL-US ORD

SO JOTA

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 64.10 LB
CAD: 006994[illegible] SSFE2002
DIMS: 24[illegible]

BILL [illegible]

5 A
16.30 7780
05.04

RT 717
ST 11

Part # 156297-MEB-7850-MPS EXP 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK

(000) 000-0000
INV:
PO:
REF:
DEPT:

FedEx Express

REL# 3785346

SATURDAY 4:30P
** 2DAY **

1 of 9

TRK# 7870 1648 7780
0201

## MASTER ##

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IL-US ORD

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ervices ordered by the Client to another laboratory or laboratories if, in TestAmerica's sole judgment, it is reasonably necessary, appropriate or advisable to do so. TestAmerica will in no way be liable for any subcontracted services so [illegible]

[illegible] of Consultants, status hearing tion shall not ion of the laws of this

[illegible] and accounts pliation of the shall not be

[illegible] in writing by these acts or herein and tions, claims, warranties, or laws of this

[illegible] Client, Client attorney fees ises related to

[illegible] TestAmerica

[illegible] issued, unless [illegible] status hearing [illegible] is [illegible] [illegible] review. Longer [illegible] charge. Any returned to the sue portion of a signature week. RNED TO THE

safety for convenient reference and shall not affect in any way the meaning or interpretation hereof. No waiver by either party of any provision, term or condition of this Agreement shall constitute a waiver of any subsequent breach or other provision.

8.3 The obligations, indemnities and remedies of the parties provided herein, and exclusive remedy of any others available at law or in equity. Indemnification by a party from liability and liabilities of such party shall apply notwithstanding any fault, negligence or strict liability of the party to be indemnified, except to the extent of gross negligence or willful misconduct.

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ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 57.70 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-4852-7/SSFE2002 11/19

ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx Express

REL# 3785346

6 of 9

MPS# 0263 7870 1648 7838

Mstr# 7870 1648 7780

0201

SATURDAY 4:30P
** 2DAY **

60484
IL-US ORD

SO JOTA

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 60.00 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-4852-7/SSFE2002 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx Express

REL# 3785346

5 of 9

MPS# 0263 7870 1648 7827

Mstr# 7870 1648 7780

0201

SATURDAY 4:30P
** 2DAY **

60484
IL-US ORD

SO JOTA

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-120636.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-162824-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 6/4/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-12 (500-162824-10) | 5/1/19 | 11:55 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-15 (500-162824-11) | 5/2/19 | 12:15 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-17 (500-162824-12) | 4/29/19 | 15:20 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-18 (500-162824-13) | 4/29/19 | 14:25 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-19 (500-162824-14) | 5/2/19 | 10:30 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-162824-15) | 4/29/19 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

500-162824 Chain of Custody

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: 5/6/19 1500 | Company TA | Received by: | Date/Time: 5-7-19 09:00 | Company TA SLC |
|---|---|---|---|---|---|
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019



8/15/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-120636.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-162824-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 6/4/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-162824-1) | 4/30/19 | 13:25 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-02 (500-162824-2) | 4/30/19 | 09:45 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-162824-3) | 4/30/19 | 10:50 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-162824-4) | 4/30/19 | 11:40 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-162824-5) | 4/30/19 | 12:30 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-08 (500-162824-6) | 5/1/19 | 15:35 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-09 (500-162824-7) | 5/1/19 | 13:15 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-162824-8) | 5/1/19 | 09:30 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-11 (500-162824-9) | 5/1/19 | 10:25 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| *Possible Hazard Identification* | *Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)* |
|---|---|
| *Unconfirmed* | ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| | [signature] | 5/6/19 1508 | TA | [signature] | 5-7-19 0:100 | TA SLT |
| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-2

**Login Number: 162824**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.7,4.7,5.3,2.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-2

**Login Number: 162824**
**List Number: 3**
**Creator: Hellm, Michael**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 05/09/19 11:00 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 18.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) |
| 500-162824-1 | MW-01 | 79.1 |
| 500-162824-1 DU | MW-01 | 88.7 |
| 500-162824-2 | MW-02 | 91.5 |
| 500-162824-3 | MW-03 | 74.0 |
| 500-162824-4 | MW-04 | 83.6 |
| 500-162824-5 | MW-05 | 73.7 |
| 500-162824-6 | MW-08 | 83.1 |
| 500-162824-7 | MW-09 | 76.0 |
| 500-162824-8 | MW-10 | 94.1 |
| 500-162824-9 | MW-11 | 89.0 |
| 500-162824-10 | MW-12 | 88.7 |
| 500-162824-11 | MW-15 | 88.1 |
| 500-162824-12 | MW-17 | 89.8 |
| 500-162824-13 | MW-18 | 88.4 |
| 500-162824-14 | MW-19 | 86.7 |
| 500-162824-15 | Duplicate | 90.7 |
| LCS 160-430133/1-A | Lab Control Sample | 103 |
| LCS 160-430235/1-A | Lab Control Sample | 95.2 |
| MB 160-430133/23-A | Method Blank | 102 |
| MB 160-430235/23-A | Method Blank | 98.9 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) | Y Carrier (40-110) |
| 500-162824-1 | MW-01 | 79.1 | 75.5 |
| 500-162824-1 DU | MW-01 | 88.7 | 75.5 |
| 500-162824-2 | MW-02 | 91.5 | 76.6 |
| 500-162824-3 | MW-03 | 74.0 | 73.3 |
| 500-162824-4 | MW-04 | 83.6 | 80.4 |
| 500-162824-5 | MW-05 | 73.7 | 77.8 |
| 500-162824-6 | MW-08 | 83.1 | 74.4 |
| 500-162824-7 | MW-09 | 76.0 | 78.1 |
| 500-162824-8 | MW-10 | 94.1 | 74.0 |
| 500-162824-9 | MW-11 | 89.0 | 76.3 |
| 500-162824-10 | MW-12 | 88.7 | 86.4 |
| 500-162824-11 | MW-15 | 88.1 | 88.6 |
| 500-162824-12 | MW-17 | 89.8 | 89.7 |
| 500-162824-13 | MW-18 | 88.4 | 89.7 |
| 500-162824-14 | MW-19 | 86.7 | 88.2 |
| 500-162824-15 | Duplicate | 90.7 | 87.9 |
| LCS 160-430139/1-A | Lab Control Sample | 103 | 87.1 |
| LCS 160-430397/1-A | Lab Control Sample | 95.2 | 65.8 |
| MB 160-430139/23-A | Method Blank | 102 | 82.6 |
| MB 160-430397/23-A | Method Blank | 98.9 | 62.8 |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier
Y Carrier = Y Carrier

eurofins | Environment Testing TestAmerica



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-173472-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*12/5/2019 10:30:05 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-173472-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-173472-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 11/14/2019 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.3º C, 1.7º C, 3.3º C and 3.9º C.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-173472-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.012 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.029 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.091 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.52 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00085 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 95 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Chromium | 0.025 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.016 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.034 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0079 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 390 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 47 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.18 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 41 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-173472-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.022 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0025 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.087 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.98 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00094 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.013 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 640 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 92 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.33 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 110 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-173472-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: MW-18 (Continued) — Lab Sample ID: 500-173472-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.79 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1100 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.56 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 210 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-173472-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.10 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.5 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00056 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.036 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 740 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 53 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.15 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 140 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-173472-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.021 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.088 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.10 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.9 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Cadmium | 0.0015 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 230 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00093 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.058 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Thallium | 0.0029 | | 0.0020 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 2300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 600 | | 50 | | mg/L | 25 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.55 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 730 | | 150 | | mg/L | 30 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: Duplicate — Lab Sample ID: 500-173472-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0012 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.74 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 130 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.58 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 210 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-173472-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0056 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.057 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.5 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 85 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0032 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00076 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.026 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 36 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.18 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 82 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-173472-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.14 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.72 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.8 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0041 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0021 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.020 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 890 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 83 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.55 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-11 (Continued) — Lab Sample ID: 500-173472-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 150 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-173472-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.026 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.072 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.74 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.027 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1100 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 160 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.45 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 280 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-173472-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.029 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0044 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.053 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.8 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 170 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.025 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 170 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.50 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 260 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL PEN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-173472-1 | MW-01 | Water | 11/13/19 11:20 | 11/14/19 09:40 | |
| 500-173472-2 | MW-08 | Water | 11/13/19 12:30 | 11/14/19 09:40 | |
| 500-173472-3 | MW-18 | Water | 11/13/19 13:50 | 11/14/19 09:40 | |
| 500-173472-4 | MW-19 | Water | 11/13/19 14:42 | 11/14/19 09:40 | |
| 500-173472-5 | MW-17 | Water | 11/13/19 15:11 | 11/14/19 09:40 | |
| 500-173472-6 | Duplicate | Water | 11/13/19 00:00 | 11/14/19 09:40 | |
| 500-173472-7 | MW-09 | Water | 11/14/19 08:32 | 11/15/19 08:55 | |
| 500-173472-8 | MW-11 | Water | 11/14/19 09:30 | 11/15/19 08:55 | |
| 500-173472-9 | MW-12 | Water | 11/14/19 10:17 | 11/15/19 08:55 | |
| 500-173472-10 | MW-15 | Water | 11/14/19 11:53 | 11/15/19 08:55 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: MW-01

**Date Collected: 11/13/19 11:20**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.012** | | 0.010 | | mg/L | | 11/26/19 17:10 | 11/27/19 08:45 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:06 | 1 |
| **Arsenic** | **0.029** | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:06 | 1 |
| **Barium** | **0.091** | | 0.0025 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:06 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:06 | 1 |
| **Boron** | **0.52** | | 0.050 | | mg/L | | 11/26/19 17:10 | 11/29/19 13:04 | 1 |
| **Cadmium** | **0.00085** | | 0.00050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:06 | 1 |
| **Calcium** | **95** | | 0.20 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:06 | 1 |
| **Chromium** | **0.025** | | 0.0050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:06 | 1 |
| **Cobalt** | **0.016** | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:06 | 1 |
| **Lead** | **0.034** | | 0.00050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:06 | 1 |
| **Molybdenum** | **0.0079** | | 0.0050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:06 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:06 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:06 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/19 09:25 | 11/21/19 09:51 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **390** | | 10 | | mg/L | | | 11/19/19 22:52 | 1 |
| **Chloride** | **47** | | 2.0 | | mg/L | | | 11/25/19 10:49 | 1 |
| **Fluoride** | **0.18** | | 0.10 | | mg/L | | | 11/26/19 19:38 | 1 |
| **Sulfate** | **41** | | 10 | | mg/L | | | 11/26/19 13:09 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: MW-08

**Date Collected: 11/13/19 12:30**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-2

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.022** | | 0.010 | | mg/L | | 11/26/19 17:10 | 11/27/19 08:50 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:10 | 1 |
| **Arsenic** | **0.0025** | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:10 | 1 |
| **Barium** | **0.087** | | 0.0025 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:10 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:10 | 1 |
| **Boron** | **0.98** | | 0.25 | | mg/L | | 11/26/19 17:10 | 11/29/19 13:08 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:10 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:10 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:10 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:10 | 1 |
| **Lead** | **0.00094** | | 0.00050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:10 | 1 |
| **Molybdenum** | **0.013** | | 0.0050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:10 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:10 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:10 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/19 09:25 | 11/21/19 09:53 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **640** | | 10 | | mg/L | | | 11/19/19 22:55 | 1 |
| **Chloride** | **92** | | 10 | | mg/L | | | 11/25/19 11:57 | 5 |
| **Fluoride** | **0.33** | | 0.10 | | mg/L | | | 11/26/19 19:42 | 1 |
| **Sulfate** | **110** | | 25 | | mg/L | | | 11/26/19 13:09 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: MW-18

**Date Collected: 11/13/19 13:50**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-3

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.014** | | 0.010 | | mg/L | | 11/26/19 17:10 | 11/27/19 08:54 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:13 | 1 |
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:13 | 1 |
| **Barium** | **0.12** | | 0.0025 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:13 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:13 | 1 |
| **Boron** | **0.79** | | 0.25 | | mg/L | | 11/26/19 17:10 | 11/29/19 13:12 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:13 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:13 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:13 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:13 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:13 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:13 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:13 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:13 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/19 09:25 | 11/21/19 09:55 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1100** | | 10 | | mg/L | | | 11/20/19 23:41 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 11/25/19 11:58 | 5 |
| **Fluoride** | **0.56** | | 0.10 | | mg/L | | | 11/26/19 19:49 | 1 |
| **Sulfate** | **210** | | 50 | | mg/L | | | 11/26/19 13:13 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: MW-19

**Date Collected: 11/13/19 14:42**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-4

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/26/19 17:10 | 11/27/19 08:59 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:17 | 1 |
| **Arsenic** | **0.0014** | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:17 | 1 |
| **Barium** | **0.10** | | 0.0025 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:17 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:17 | 1 |
| **Boron** | **2.5** | | 0.50 | | mg/L | | 11/26/19 17:10 | 11/29/19 13:16 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:17 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:17 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:17 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:17 | 1 |
| **Lead** | **0.00056** | | 0.00050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:17 | 1 |
| **Molybdenum** | **0.036** | | 0.0050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:17 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:17 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:17 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/19 09:25 | 11/21/19 09:56 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **740** | | 10 | | mg/L | | | 11/20/19 23:43 | 1 |
| **Chloride** | **53** | | 2.0 | | mg/L | | | 11/25/19 11:59 | 1 |
| **Fluoride** | **0.15** | | 0.10 | | mg/L | | | 11/26/19 19:52 | 1 |
| **Sulfate** | **140** | | 25 | | mg/L | | | 11/26/19 13:13 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: MW-17

**Date Collected: 11/13/19 15:11**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-5

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.021** | | 0.010 | | mg/L | | 11/26/19 17:10 | 11/27/19 09:03 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:21 | 1 |
| **Arsenic** | **0.088** | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:21 | 1 |
| **Barium** | **0.10** | | 0.0025 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:21 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:21 | 1 |
| **Boron** | **1.9** | | 0.50 | | mg/L | | 11/26/19 17:10 | 11/29/19 13:19 | 10 |
| **Cadmium** | **0.0015** | | 0.00050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:21 | 1 |
| **Calcium** | **230** | | 0.20 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:21 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:21 | 1 |
| **Cobalt** | **0.0011** | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:21 | 1 |
| **Lead** | **0.00093** | | 0.00050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:21 | 1 |
| **Molybdenum** | **0.058** | | 0.0050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:21 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:21 | 1 |
| **Thallium** | **0.0029** | | 0.0020 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:21 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/19 09:25 | 11/21/19 09:58 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **2300** | | 10 | | mg/L | | | 11/20/19 23:46 | 1 |
| **Chloride** | **600** | | 50 | | mg/L | | | 11/25/19 12:02 | 25 |
| **Fluoride** | **0.55** | | 0.10 | | mg/L | | | 11/26/19 20:10 | 1 |
| **Sulfate** | **730** | | 150 | | mg/L | | | 11/26/19 13:13 | 30 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: Duplicate

**Date Collected: 11/13/19 00:00**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-6

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.013** | | 0.010 | | mg/L | | 11/26/19 17:10 | 11/27/19 09:08 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:25 | 1 |
| **Arsenic** | **0.0012** | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:25 | 1 |
| **Barium** | **0.12** | | 0.0025 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:25 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:25 | 1 |
| **Boron** | **0.74** | | 0.25 | | mg/L | | 11/26/19 17:10 | 11/29/19 13:23 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:25 | 1 |
| **Calcium** | **130** | | 0.20 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:25 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:25 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:25 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:25 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:25 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:25 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/26/19 17:10 | 11/27/19 22:25 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/19 09:25 | 11/21/19 10:09 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 11/20/19 23:48 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 11/25/19 12:03 | 5 |
| **Fluoride** | **0.58** | | 0.10 | | mg/L | | | 11/26/19 20:19 | 1 |
| **Sulfate** | **210** | | 50 | | mg/L | | | 11/26/19 13:13 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: MW-09

**Date Collected: 11/14/19 08:32**
**Date Received: 11/15/19 08:55**

## Lab Sample ID: 500-173472-7

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/03/19 17:10 | 12/04/19 13:07 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:50 | 1 |
| **Arsenic** | **0.0056** | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:50 | 1 |
| **Barium** | **0.057** | | 0.0025 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:50 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:50 | 1 |
| **Boron** | **2.5** | | 0.50 | | mg/L | | 11/26/19 17:06 | 11/29/19 12:28 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:50 | 1 |
| **Calcium** | **85** | | 0.20 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:50 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:50 | 1 |
| **Cobalt** | **0.0032** | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:50 | 1 |
| **Lead** | **0.00076** | | 0.00050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:50 | 1 |
| **Molybdenum** | **0.026** | | 0.0050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:50 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:50 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:50 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/19 09:25 | 11/21/19 09:28 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **500** | | 10 | | mg/L | | | 11/21/19 05:28 | 1 |
| **Chloride** | **36** | | 2.0 | | mg/L | | | 11/25/19 12:04 | 1 |
| **Fluoride** | **0.18** | | 0.10 | | mg/L | | | 11/26/19 20:34 | 1 |
| **Sulfate** | **82** | | 25 | | mg/L | | | 11/26/19 21:34 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: MW-11

**Date Collected: 11/14/19 09:30**
**Date Received: 11/15/19 08:55**

## Lab Sample ID: 500-173472-8

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/03/19 17:10 | 12/04/19 13:11 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:54 | 1 |
| **Arsenic** | **0.14** | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:54 | 1 |
| **Barium** | **0.72** | | 0.0025 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:54 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:54 | 1 |
| **Boron** | **1.8** | | 0.25 | | mg/L | | 11/26/19 17:06 | 11/29/19 12:32 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:54 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:54 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:54 | 1 |
| **Cobalt** | **0.0041** | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:54 | 1 |
| **Lead** | **0.0021** | | 0.00050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:54 | 1 |
| **Molybdenum** | **0.020** | | 0.0050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:54 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:54 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:54 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/19 09:25 | 11/21/19 09:30 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **890** | | 10 | | mg/L | | | 11/21/19 05:30 | 1 |
| **Chloride** | **83** | | 10 | | mg/L | | | 11/25/19 12:05 | 5 |
| **Fluoride** | **0.55** | | 0.10 | | mg/L | | | 11/26/19 20:37 | 1 |
| **Sulfate** | **150** | | 25 | | mg/L | | | 11/26/19 21:34 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: MW-12

**Date Collected: 11/14/19 10:17**
**Date Received: 11/15/19 08:55**

## Lab Sample ID: 500-173472-9

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.014** | | 0.010 | | mg/L | | 12/03/19 17:10 | 12/04/19 13:16 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:58 | 1 |
| **Arsenic** | **0.026** | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:58 | 1 |
| **Barium** | **0.072** | | 0.0025 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:58 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:58 | 1 |
| **Boron** | **0.74** | | 0.050 | | mg/L | | 11/26/19 17:06 | 11/29/19 12:49 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:58 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:58 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:58 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:58 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:58 | 1 |
| **Molybdenum** | **0.027** | | 0.0050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:58 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:58 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:58 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/19 09:25 | 11/21/19 09:31 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1100** | | 10 | | mg/L | | | 11/21/19 05:33 | 1 |
| **Chloride** | **160** | | 10 | | mg/L | | | 11/25/19 12:06 | 5 |
| **Fluoride** | **0.45** | | 0.10 | | mg/L | | | 11/26/19 20:42 | 1 |
| **Sulfate** | **280** | | 50 | | mg/L | | | 11/26/19 23:19 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: MW-15

**Date Collected: 11/14/19 11:53**
**Date Received: 11/15/19 08:55**

## Lab Sample ID: 500-173472-10

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.029** | | 0.010 | | mg/L | | 12/03/19 17:10 | 12/04/19 13:20 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/26/19 17:06 | 11/27/19 21:02 | 1 |
| **Arsenic** | **0.0044** | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 21:02 | 1 |
| **Barium** | **0.053** | | 0.0025 | | mg/L | | 11/26/19 17:06 | 11/27/19 21:02 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 21:02 | 1 |
| **Boron** | **1.8** | | 0.25 | | mg/L | | 11/26/19 17:06 | 11/29/19 12:53 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:06 | 11/27/19 21:02 | 1 |
| **Calcium** | **170** | | 0.20 | | mg/L | | 11/26/19 17:06 | 11/27/19 21:02 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:06 | 11/27/19 21:02 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 21:02 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:06 | 11/27/19 21:02 | 1 |
| **Molybdenum** | **0.025** | | 0.0050 | | mg/L | | 11/26/19 17:06 | 11/27/19 21:02 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/26/19 17:06 | 11/27/19 21:02 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/26/19 17:06 | 11/27/19 21:02 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/19 09:25 | 11/21/19 09:33 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1300** | | 10 | | mg/L | | | 11/21/19 05:35 | 1 |
| **Chloride** | **170** | | 10 | | mg/L | | | 11/25/19 12:06 | 5 |
| **Fluoride** | **0.50** | | 0.10 | | mg/L | | | 11/26/19 20:46 | 1 |
| **Sulfate** | **260** | | 50 | | mg/L | | | 11/26/19 23:19 | 10 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Qualifiers

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 516379

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-7 | MW-09 | Total/NA | Water | 7470A | |
| 500-173472-8 | MW-11 | Total/NA | Water | 7470A | |
| 500-173472-9 | MW-12 | Total/NA | Water | 7470A | |
| 500-173472-10 | MW-15 | Total/NA | Water | 7470A | |
| MB 500-516379/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-516379/13-A | Lab Control Sample | Total/NA | Water | 7470A | |

### Prep Batch: 516382

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-173472-2 | MW-08 | Total/NA | Water | 7470A | |
| 500-173472-3 | MW-18 | Total/NA | Water | 7470A | |
| 500-173472-4 | MW-19 | Total/NA | Water | 7470A | |
| 500-173472-5 | MW-17 | Total/NA | Water | 7470A | |
| 500-173472-6 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-516382/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-516382/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-173472-5 MS | MW-17 | Total/NA | Water | 7470A | |
| 500-173472-5 MSD | MW-17 | Total/NA | Water | 7470A | |
| 500-173472-5 DU | MW-17 | Total/NA | Water | 7470A | |

### Analysis Batch: 516627

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-1 | MW-01 | Total/NA | Water | 7470A | 516382 |
| 500-173472-2 | MW-08 | Total/NA | Water | 7470A | 516382 |
| 500-173472-3 | MW-18 | Total/NA | Water | 7470A | 516382 |
| 500-173472-4 | MW-19 | Total/NA | Water | 7470A | 516382 |
| 500-173472-5 | MW-17 | Total/NA | Water | 7470A | 516382 |
| 500-173472-6 | Duplicate | Total/NA | Water | 7470A | 516382 |
| 500-173472-7 | MW-09 | Total/NA | Water | 7470A | 516379 |
| 500-173472-8 | MW-11 | Total/NA | Water | 7470A | 516379 |
| 500-173472-9 | MW-12 | Total/NA | Water | 7470A | 516379 |
| 500-173472-10 | MW-15 | Total/NA | Water | 7470A | 516379 |
| MB 500-516379/12-A | Method Blank | Total/NA | Water | 7470A | 516379 |
| MB 500-516382/12-A | Method Blank | Total/NA | Water | 7470A | 516382 |
| LCS 500-516379/13-A | Lab Control Sample | Total/NA | Water | 7470A | 516379 |
| LCS 500-516382/13-A | Lab Control Sample | Total/NA | Water | 7470A | 516382 |
| 500-173472-5 MS | MW-17 | Total/NA | Water | 7470A | 516382 |
| 500-173472-5 MSD | MW-17 | Total/NA | Water | 7470A | 516382 |
| 500-173472-5 DU | MW-17 | Total/NA | Water | 7470A | 516382 |

### Prep Batch: 517477

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-7 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-173472-8 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-173472-9 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-173472-10 | MW-15 | Total Recoverable | Water | 3005A | |
| MB 500-517477/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-517477/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

## Metals

### Prep Batch: 517478

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-173472-2 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-173472-3 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-173472-4 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-173472-5 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-173472-6 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-517478/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-517478/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 517624

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-1 | MW-01 | Total Recoverable | Water | 6010C | 517478 |
| 500-173472-2 | MW-08 | Total Recoverable | Water | 6010C | 517478 |
| 500-173472-3 | MW-18 | Total Recoverable | Water | 6010C | 517478 |
| 500-173472-4 | MW-19 | Total Recoverable | Water | 6010C | 517478 |
| 500-173472-5 | MW-17 | Total Recoverable | Water | 6010C | 517478 |
| 500-173472-6 | Duplicate | Total Recoverable | Water | 6010C | 517478 |
| MB 500-517478/1-A | Method Blank | Total Recoverable | Water | 6010C | 517478 |
| LCS 500-517478/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 517478 |

### Analysis Batch: 517825

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-1 | MW-01 | Total Recoverable | Water | 6020A | 517478 |
| 500-173472-2 | MW-08 | Total Recoverable | Water | 6020A | 517478 |
| 500-173472-3 | MW-18 | Total Recoverable | Water | 6020A | 517478 |
| 500-173472-4 | MW-19 | Total Recoverable | Water | 6020A | 517478 |
| 500-173472-5 | MW-17 | Total Recoverable | Water | 6020A | 517478 |
| 500-173472-6 | Duplicate | Total Recoverable | Water | 6020A | 517478 |
| 500-173472-7 | MW-09 | Total Recoverable | Water | 6020A | 517477 |
| 500-173472-8 | MW-11 | Total Recoverable | Water | 6020A | 517477 |
| 500-173472-9 | MW-12 | Total Recoverable | Water | 6020A | 517477 |
| 500-173472-10 | MW-15 | Total Recoverable | Water | 6020A | 517477 |
| MB 500-517477/1-A | Method Blank | Total Recoverable | Water | 6020A | 517477 |
| MB 500-517478/1-A | Method Blank | Total Recoverable | Water | 6020A | 517478 |
| LCS 500-517477/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 517477 |
| LCS 500-517478/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 517478 |

### Analysis Batch: 517918

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-1 | MW-01 | Total Recoverable | Water | 6020A | 517478 |
| 500-173472-2 | MW-08 | Total Recoverable | Water | 6020A | 517478 |
| 500-173472-3 | MW-18 | Total Recoverable | Water | 6020A | 517478 |
| 500-173472-4 | MW-19 | Total Recoverable | Water | 6020A | 517478 |
| 500-173472-5 | MW-17 | Total Recoverable | Water | 6020A | 517478 |
| 500-173472-6 | Duplicate | Total Recoverable | Water | 6020A | 517478 |
| 500-173472-7 | MW-09 | Total Recoverable | Water | 6020A | 517477 |
| 500-173472-8 | MW-11 | Total Recoverable | Water | 6020A | 517477 |
| 500-173472-9 | MW-12 | Total Recoverable | Water | 6020A | 517477 |
| 500-173472-10 | MW-15 | Total Recoverable | Water | 6020A | 517477 |
| MB 500-517477/1-A | Method Blank | Total Recoverable | Water | 6020A | 517477 |
| MB 500-517478/1-A | Method Blank | Total Recoverable | Water | 6020A | 517478 |

## Metals (Continued)

### Analysis Batch: 517918 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-517477/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 517477 |
| LCS 500-517478/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 517478 |

### Prep Batch: 518505

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-7 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-173472-8 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-173472-9 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-173472-10 | MW-15 | Total Recoverable | Water | 3005A | |
| MB 500-518505/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-518505/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 518695

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-7 | MW-09 | Total Recoverable | Water | 6010C | 518505 |
| 500-173472-8 | MW-11 | Total Recoverable | Water | 6010C | 518505 |
| 500-173472-9 | MW-12 | Total Recoverable | Water | 6010C | 518505 |
| 500-173472-10 | MW-15 | Total Recoverable | Water | 6010C | 518505 |
| MB 500-518505/1-A | Method Blank | Total Recoverable | Water | 6010C | 518505 |
| LCS 500-518505/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 518505 |

## General Chemistry

### Analysis Batch: 467607

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-173472-2 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-173472-3 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-173472-4 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-173472-5 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-173472-6 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-467607/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-467607/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-467607/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-173472-2 MS | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-173472-2 MSD | MW-08 | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 467673

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-7 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-173472-8 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-467673/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-467673/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-467673/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 467674

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-9 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-173472-10 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-467674/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-467674/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

## General Chemistry (Continued)

### Analysis Batch: 467674 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MRL 400-467674/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-173472-9 MS | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-173472-9 MSD | MW-12 | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 516292

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-173472-2 | MW-08 | Total/NA | Water | SM 2540C | |
| MB 500-516292/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-516292/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 516510

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-3 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-173472-4 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-173472-5 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-173472-6 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-516510/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-516510/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 516512

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-7 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-173472-8 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-173472-9 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-173472-10 | MW-15 | Total/NA | Water | SM 2540C | |
| MB 500-516512/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-516512/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 517228

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-173472-2 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-173472-3 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-173472-4 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-173472-5 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-173472-6 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| 500-173472-7 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-173472-8 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-173472-9 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-173472-10 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-517228/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-517228/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-173472-1 MS | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-173472-1 MSD | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-173472-4 MS | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-173472-4 MSD | MW-19 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 517561

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-1 | MW-01 | Total/NA | Water | SM 4500 F C | |

## General Chemistry (Continued)

### Analysis Batch: 517561 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-2 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-173472-3 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-173472-4 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-173472-5 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-173472-6 | Duplicate | Total/NA | Water | SM 4500 F C | |
| 500-173472-7 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-173472-8 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-173472-9 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-173472-10 | MW-15 | Total/NA | Water | SM 4500 F C | |
| MB 500-517561/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| MB 500-517561/31 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-517561/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| LCS 500-517561/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| 500-173472-5 MS | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-173472-5 MSD | MW-17 | Total/NA | Water | SM 4500 F C | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-517478/1-A**
**Matrix: Water**
**Analysis Batch: 517624**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 517478**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 11/26/19 17:10 | 11/27/19 08:37 | 1 |

**Lab Sample ID: LCS 500-517478/2-A**
**Matrix: Water**
**Analysis Batch: 517624**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 517478**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.522 | | mg/L | | 104 | 80 - 120 |

**Lab Sample ID: MB 500-518505/1-A**
**Matrix: Water**
**Analysis Batch: 518695**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 518505**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/03/19 17:10 | 12/04/19 12:49 | 1 |

**Lab Sample ID: LCS 500-518505/2-A**
**Matrix: Water**
**Analysis Batch: 518695**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 518505**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.100 | 0.112 | | mg/L | | 112 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-517477/1-A**
**Matrix: Water**
**Analysis Batch: 517825**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 517477**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:13 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:13 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:13 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:13 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:13 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:13 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:13 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:13 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:13 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:13 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:13 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/26/19 17:06 | 11/27/19 20:13 | 1 |

**Lab Sample ID: MB 500-517477/1-A**
**Matrix: Water**
**Analysis Batch: 517918**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 517477**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 11/26/19 17:06 | 11/29/19 11:58 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-517477/2-A**
**Matrix: Water**
**Analysis Batch: 517825**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 517477**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.499 | | mg/L | | 100 | 80 - 120 |
| Arsenic | 0.100 | 0.0939 | | mg/L | | 94 | 80 - 120 |
| Barium | 0.500 | 0.493 | | mg/L | | 99 | 80 - 120 |
| Beryllium | 0.0500 | 0.0496 | | mg/L | | 99 | 80 - 120 |
| Cadmium | 0.0500 | 0.0492 | | mg/L | | 98 | 80 - 120 |
| Calcium | 10.0 | 8.95 | | mg/L | | 89 | 80 - 120 |
| Chromium | 0.200 | 0.206 | | mg/L | | 103 | 80 - 120 |
| Cobalt | 0.500 | 0.526 | | mg/L | | 105 | 80 - 120 |
| Lead | 0.100 | 0.108 | | mg/L | | 108 | 80 - 120 |
| Molybdenum | 1.00 | 0.931 | | mg/L | | 93 | 80 - 120 |
| Selenium | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |
| Thallium | 0.100 | 0.108 | | mg/L | | 108 | 80 - 120 |

**Lab Sample ID: LCS 500-517477/2-A**
**Matrix: Water**
**Analysis Batch: 517918**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 517477**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 1.05 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: MB 500-517478/1-A**
**Matrix: Water**
**Analysis Batch: 517825**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 517478**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 11/26/19 17:10 | 11/27/19 21:17 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 21:17 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 11/26/19 17:10 | 11/27/19 21:17 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 21:17 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:10 | 11/27/19 21:17 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 11/26/19 17:10 | 11/27/19 21:17 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:10 | 11/27/19 21:17 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 11/26/19 17:10 | 11/27/19 21:17 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 11/26/19 17:10 | 11/27/19 21:17 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 11/26/19 17:10 | 11/27/19 21:17 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 11/26/19 17:10 | 11/27/19 21:17 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 11/26/19 17:10 | 11/27/19 21:17 | 1 |

**Lab Sample ID: MB 500-517478/1-A**
**Matrix: Water**
**Analysis Batch: 517918**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 517478**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 11/26/19 17:10 | 11/29/19 12:57 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-517478/2-A**
**Matrix: Water**
**Analysis Batch: 517825**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 517478**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.529 | | mg/L | | 106 | 80 - 120 |
| Arsenic | 0.100 | 0.101 | | mg/L | | 101 | 80 - 120 |
| Barium | 2.00 | 2.11 | | mg/L | | 106 | 80 - 120 |
| Beryllium | 0.0500 | 0.0517 | | mg/L | | 103 | 80 - 120 |
| Cadmium | 0.0500 | 0.0509 | | mg/L | | 102 | 80 - 120 |
| Calcium | 10.0 | 9.17 | | mg/L | | 92 | 80 - 120 |
| Chromium | 0.200 | 0.205 | | mg/L | | 103 | 80 - 120 |
| Cobalt | 0.500 | 0.533 | | mg/L | | 107 | 80 - 120 |
| Lead | 0.100 | 0.109 | | mg/L | | 109 | 80 - 120 |
| Molybdenum | 1.00 | 0.975 | | mg/L | | 98 | 80 - 120 |
| Selenium | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |
| Thallium | 0.100 | 0.107 | | mg/L | | 107 | 80 - 120 |

**Lab Sample ID: LCS 500-517478/2-A**
**Matrix: Water**
**Analysis Batch: 517918**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 517478**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 1.11 | | mg/L | | 111 | 80 - 120 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-516379/12-A**
**Matrix: Water**
**Analysis Batch: 516627**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 516379**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/19 09:25 | 11/21/19 08:37 | 1 |

**Lab Sample ID: LCS 500-516379/13-A**
**Matrix: Water**
**Analysis Batch: 516627**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 516379**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00183 | | mg/L | | 92 | 80 - 120 |

**Lab Sample ID: MB 500-516382/12-A**
**Matrix: Water**
**Analysis Batch: 516627**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 516382**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 11/20/19 09:25 | 11/21/19 09:34 | 1 |

**Lab Sample ID: LCS 500-516382/13-A**
**Matrix: Water**
**Analysis Batch: 516627**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 516382**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00196 | | mg/L | | 98 | 80 - 120 |

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: 500-173472-5 MS**
**Matrix: Water**
**Analysis Batch: 516627**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**
**Prep Batch: 516382**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00110 | | mg/L | | 110 | 75 - 125 |

**Lab Sample ID: 500-173472-5 MSD**
**Matrix: Water**
**Analysis Batch: 516627**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**
**Prep Batch: 516382**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00110 | | mg/L | | 110 | 75 - 125 | 0 | 20 |

**Lab Sample ID: 500-173472-5 DU**
**Matrix: Water**
**Analysis Batch: 516627**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**
**Prep Batch: 516382**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-516292/1**
**Matrix: Water**
**Analysis Batch: 516292**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 11/19/19 21:56 | 1 |

**Lab Sample ID: LCS 500-516292/2**
**Matrix: Water**
**Analysis Batch: 516292**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 264 | | mg/L | | 106 | 80 - 120 |

**Lab Sample ID: MB 500-516510/1**
**Matrix: Water**
**Analysis Batch: 516510**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 11/20/19 23:05 | 1 |

**Lab Sample ID: LCS 500-516510/2**
**Matrix: Water**
**Analysis Batch: 516510**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 266 | | mg/L | | 106 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: MB 500-516512/1**
**Matrix: Water**
**Analysis Batch: 516512**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 11/21/19 04:57 | 1 |

**Lab Sample ID: LCS 500-516512/2**
**Matrix: Water**
**Analysis Batch: 516512**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 276 | | mg/L | | 110 | 80 - 120 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-517228/12**
**Matrix: Water**
**Analysis Batch: 517228**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 11/25/19 10:46 | 1 |

**Lab Sample ID: LCS 500-517228/13**
**Matrix: Water**
**Analysis Batch: 517228**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 49.1 | | mg/L | | 98 | 85 - 115 |

**Lab Sample ID: 500-173472-1 MS**
**Matrix: Water**
**Analysis Batch: 517228**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 47 | | 50.0 | 90.5 | | mg/L | | 86 | 75 - 125 |

**Lab Sample ID: 500-173472-1 MSD**
**Matrix: Water**
**Analysis Batch: 517228**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 47 | | 50.0 | 89.9 | | mg/L | | 85 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-173472-4 MS**
**Matrix: Water**
**Analysis Batch: 517228**

**Client Sample ID: MW-19**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 53 | | 50.0 | 91.0 | | mg/L | | 77 | 75 - 125 |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: 500-173472-4 MSD**
**Matrix: Water**
**Analysis Batch: 517228**

**Client Sample ID: MW-19**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 53 | | 50.0 | 96.4 | | mg/L | | 88 | 75 - 125 | 6 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-517561/3**
**Matrix: Water**
**Analysis Batch: 517561**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 11/26/19 17:54 | 1 |

**Lab Sample ID: MB 500-517561/31**
**Matrix: Water**
**Analysis Batch: 517561**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 11/26/19 19:56 | 1 |

**Lab Sample ID: LCS 500-517561/32**
**Matrix: Water**
**Analysis Batch: 517561**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 20.0 | 21.4 | | mg/L | | 107 | 80 - 120 |

**Lab Sample ID: LCS 500-517561/4**
**Matrix: Water**
**Analysis Batch: 517561**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 20.0 | 21.2 | | mg/L | | 106 | 80 - 120 |

**Lab Sample ID: 500-173472-5 MS**
**Matrix: Water**
**Analysis Batch: 517561**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.55 | | 5.00 | 5.49 | | mg/L | | 99 | 75 - 125 |

**Lab Sample ID: 500-173472-5 MSD**
**Matrix: Water**
**Analysis Batch: 517561**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.55 | | 5.00 | 5.57 | | mg/L | | 100 | 75 - 125 | 1 | 20 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-467607/6**
**Matrix: Water**
**Analysis Batch: 467607**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 11/26/19 12:34 | 1 |

**Lab Sample ID: LCS 400-467607/7**
**Matrix: Water**
**Analysis Batch: 467607**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 15.0 | 15.8 | | mg/L | | 105 | 90 - 110 |

**Lab Sample ID: MRL 400-467607/3**
**Matrix: Water**
**Analysis Batch: 467607**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 5.00 | 5.62 | | mg/L | | 112 | 50 - 150 |

**Lab Sample ID: 500-173472-2 MS**
**Matrix: Water**
**Analysis Batch: 467607**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 110 | | 10.0 | 113 | 4 | mg/L | | 62 | 77 - 128 |

**Lab Sample ID: 500-173472-2 MSD**
**Matrix: Water**
**Analysis Batch: 467607**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 110 | | 10.0 | 112 | 4 | mg/L | | 49 | 77 - 128 | 1 | 5 |

**Lab Sample ID: MB 400-467673/6**
**Matrix: Water**
**Analysis Batch: 467673**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 11/26/19 20:53 | 1 |

**Lab Sample ID: LCS 400-467673/7**
**Matrix: Water**
**Analysis Batch: 467673**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 15.0 | 15.9 | | mg/L | | 106 | 90 - 110 |

**Lab Sample ID: MRL 400-467673/3**
**Matrix: Water**
**Analysis Batch: 467673**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 5.00 | 5.62 | | mg/L | | 112 | 50 - 150 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-467674/6**
**Matrix: Water**
**Analysis Batch: 467674**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 11/26/19 22:53 | 1 |

**Lab Sample ID: LCS 400-467674/7**
**Matrix: Water**
**Analysis Batch: 467674**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 15.0 | 14.9 | | mg/L | | 100 | 90 - 110 | | |

**Lab Sample ID: MRL 400-467674/3**
**Matrix: Water**
**Analysis Batch: 467674**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 5.00 | 5.31 | | mg/L | | 106 | 50 - 150 | | |

**Lab Sample ID: 500-173472-9 MS**
**Matrix: Water**
**Analysis Batch: 467674**

**Client Sample ID: MW-12**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 280 | | 10.0 | 281 | 4 | mg/L | | 0.5 | 77 - 128 | | |

**Lab Sample ID: 500-173472-9 MSD**
**Matrix: Water**
**Analysis Batch: 467674**

**Client Sample ID: MW-12**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 280 | | 10.0 | 281 | 4 | mg/L | | 1 | 77 - 128 | 0 | 5 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: MW-01

**Lab Sample ID: 500-173472-1**

**Date Collected: 11/13/19 11:20**

**Matrix: Water**

**Date Received: 11/14/19 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 517624 | 11/27/19 08:45 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 517825 | 11/27/19 22:06 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 517918 | 11/29/19 13:04 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 516382 | 11/20/19 09:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 516627 | 11/21/19 09:51 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 516292 | 11/19/19 22:52 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 517228 | 11/25/19 10:49 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 517561 | 11/26/19 19:38 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 467607 | 11/26/19 13:09 | RRC | TAL PEN |

## Client Sample ID: MW-08

**Lab Sample ID: 500-173472-2**

**Date Collected: 11/13/19 12:30**

**Matrix: Water**

**Date Received: 11/14/19 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 517624 | 11/27/19 08:50 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 517825 | 11/27/19 22:10 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 517918 | 11/29/19 13:08 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 516382 | 11/20/19 09:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 516627 | 11/21/19 09:53 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 516292 | 11/19/19 22:55 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 517228 | 11/25/19 11:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 517561 | 11/26/19 19:42 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 467607 | 11/26/19 13:09 | RRC | TAL PEN |

## Client Sample ID: MW-18

**Lab Sample ID: 500-173472-3**

**Date Collected: 11/13/19 13:50**

**Matrix: Water**

**Date Received: 11/14/19 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 517624 | 11/27/19 08:54 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 517825 | 11/27/19 22:13 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 517918 | 11/29/19 13:12 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 516382 | 11/20/19 09:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 516627 | 11/21/19 09:55 | MJG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: MW-18

**Lab Sample ID: 500-173472-3**

**Date Collected: 11/13/19 13:50**

**Matrix: Water**

**Date Received: 11/14/19 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 2540C | | 1 | 516510 | 11/20/19 23:41 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 517228 | 11/25/19 11:58 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 517561 | 11/26/19 19:49 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 467607 | 11/26/19 13:13 | RRC | TAL PEN |

## Client Sample ID: MW-19

**Lab Sample ID: 500-173472-4**

**Date Collected: 11/13/19 14:42**

**Matrix: Water**

**Date Received: 11/14/19 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 517624 | 11/27/19 08:59 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 517825 | 11/27/19 22:17 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 517918 | 11/29/19 13:16 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 516382 | 11/20/19 09:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 516627 | 11/21/19 09:56 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 516510 | 11/20/19 23:43 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 517228 | 11/25/19 11:59 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 517561 | 11/26/19 19:52 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 467607 | 11/26/19 13:13 | RRC | TAL PEN |

## Client Sample ID: MW-17

**Lab Sample ID: 500-173472-5**

**Date Collected: 11/13/19 15:11**

**Matrix: Water**

**Date Received: 11/14/19 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 517624 | 11/27/19 09:03 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 517825 | 11/27/19 22:21 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 517918 | 11/29/19 13:19 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 516382 | 11/20/19 09:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 516627 | 11/21/19 09:58 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 516510 | 11/20/19 23:46 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 25 | 517228 | 11/25/19 12:02 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 517561 | 11/26/19 20:10 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 30 | 467607 | 11/26/19 13:13 | RRC | TAL PEN |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-173472-6**

**Date Collected: 11/13/19 00:00**

**Matrix: Water**

**Date Received: 11/14/19 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 517624 | 11/27/19 09:08 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 517825 | 11/27/19 22:25 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517478 | 11/26/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 517918 | 11/29/19 13:23 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 516382 | 11/20/19 09:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 516627 | 11/21/19 10:09 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 516510 | 11/20/19 23:48 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 517228 | 11/25/19 12:03 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 517561 | 11/26/19 20:19 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 467607 | 11/26/19 13:13 | RRC | TAL PEN |

## Client Sample ID: MW-09

**Lab Sample ID: 500-173472-7**

**Date Collected: 11/14/19 08:32**

**Matrix: Water**

**Date Received: 11/15/19 08:55**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 518505 | 12/03/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 518695 | 12/04/19 13:07 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517477 | 11/26/19 17:06 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 517825 | 11/27/19 20:50 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517477 | 11/26/19 17:06 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 517918 | 11/29/19 12:28 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 516379 | 11/20/19 09:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 516627 | 11/21/19 09:28 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 516512 | 11/21/19 05:28 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 517228 | 11/25/19 12:04 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 517561 | 11/26/19 20:34 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 467673 | 11/26/19 21:34 | RRC | TAL PEN |

## Client Sample ID: MW-11

**Lab Sample ID: 500-173472-8**

**Date Collected: 11/14/19 09:30**

**Matrix: Water**

**Date Received: 11/15/19 08:55**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 518505 | 12/03/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 518695 | 12/04/19 13:11 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517477 | 11/26/19 17:06 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 517825 | 11/27/19 20:54 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517477 | 11/26/19 17:06 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 517918 | 11/29/19 12:32 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 516379 | 11/20/19 09:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 516627 | 11/21/19 09:30 | MJG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Client Sample ID: MW-11

**Lab Sample ID: 500-173472-8**

**Date Collected: 11/14/19 09:30**

**Matrix: Water**

**Date Received: 11/15/19 08:55**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 2540C | | 1 | 516512 | 11/21/19 05:30 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 517228 | 11/25/19 12:05 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 517561 | 11/26/19 20:37 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 467673 | 11/26/19 21:34 | RRC | TAL PEN |

## Client Sample ID: MW-12

**Lab Sample ID: 500-173472-9**

**Date Collected: 11/14/19 10:17**

**Matrix: Water**

**Date Received: 11/15/19 08:55**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 518505 | 12/03/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 518695 | 12/04/19 13:16 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517477 | 11/26/19 17:06 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 517825 | 11/27/19 20:58 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517477 | 11/26/19 17:06 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 517918 | 11/29/19 12:49 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 516379 | 11/20/19 09:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 516627 | 11/21/19 09:31 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 516512 | 11/21/19 05:33 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 517228 | 11/25/19 12:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 517561 | 11/26/19 20:42 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 467674 | 11/26/19 23:19 | RRC | TAL PEN |

## Client Sample ID: MW-15

**Lab Sample ID: 500-173472-10**

**Date Collected: 11/14/19 11:53**

**Matrix: Water**

**Date Received: 11/15/19 08:55**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 518505 | 12/03/19 17:10 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 518695 | 12/04/19 13:20 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517477 | 11/26/19 17:06 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 517825 | 11/27/19 21:02 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 517477 | 11/26/19 17:06 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 517918 | 11/29/19 12:53 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 516379 | 11/20/19 09:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 516627 | 11/21/19 09:33 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 516512 | 11/21/19 05:35 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 517228 | 11/25/19 12:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 517561 | 11/26/19 20:46 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 467674 | 11/26/19 23:19 | RRC | TAL PEN |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | 100201 | 04-30-20 |

## Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Alabama | State | 40150 | 07-01-20 |
| ANAB | ISO/IEC 17025 | L2471 | 02-22-20 |
| Arizona | State | AZ0710 | 01-12-20 |
| Arkansas DEQ | State | 88-0689 | 09-01-20 |
| California | State | 2510 | 07-01-20 |
| Florida | NELAP | E81010 | 06-30-20 |
| Georgia | State | E81010(FL) | 06-30-20 |
| Iowa | State | 367 | 08-01-20 |
| Iowa | State Program | 367 | 08-01-20 |
| Kansas | NELAP | E-10253 | 08-16-20 |
| Kentucky (UST) | State | 53 | 06-30-20 |
| Kentucky (UST) | State Program | 53 | 06-30-20 |
| Kentucky (WW) | State | KY98030 | 12-30-19 |
| Louisiana | NELAP | 30976 | 06-30-20 |
| Louisiana | NELAP | 30976 | 06-30-20 |
| Louisiana (DW) | NELAP | LA017 | 12-31-19 |
| Louisiana (DW) | State | <cert No.> | 12-31-19 |
| Maryland | State | 233 | 09-30-20 |
| Massachusetts | State | M-FL094 | 06-30-20 |
| Michigan | State | 9912 | 05-06-20 |
| Minnesota | NELAP | 012-999-481 | 12-31-19 |
| New Jersey | NELAP | FL006 | 07-30-20 |
| North Carolina (WW/SW) | State | 314 | 12-31-19 |
| North Carolina (WW/SW) | State Program | 314 | 12-31-19 |
| Oklahoma | State | 9810-186 | 08-31-20 |
| Pennsylvania | NELAP | 68-00467 | 01-31-20 |
| Rhode Island | State | LAO00307 | 12-30-19 |
| Rhode Island | State Program | LAO00307 | 12-30-19 |
| South Carolina | State | 96026002 | 06-30-20 |
| South Carolina | State Program | 96026 | 06-30-20 |
| Tennessee | State | TN02907 | 06-30-20 |
| Texas | NELAP | T104704286 | 09-30-20 |
| US Fish & Wildlife | Federal | LE058448-0 | 07-31-20 |
| US Fish & Wildlife | US Federal Programs | LE058448 | 06-07-20 |
| USDA | Federal | P330-18-00148 | 05-17-21 |
| USDA | US Federal Programs | P330-18-00148 | 05-17-21 |
| Virginia | NELAP | 460166 | 06-14-20 |
| Washington | State | C915 | 05-15-20 |
| West Virginia DEP | State | 136 | 06-30-20 |

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

500-173472 COC

## Chain of Custody Record

Lab Job #: 500-173472

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 33, 3.9 (Corr 1.7)

| Client | Client Project # |
|---|---|
| KPRG | 12313.1 |
| Project Name: Powerton CCR | |
| Project Location/State: Pekin, IL | Lab Project # |
| Sampler: Mitchel Dolan | Lab PM |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | 3 | 8 | 8 | 3 | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Parameter | Total Metals | Sulfate | TDS, Cl, Fl | Rad 226/228 | | | | | | |
| 1 | | MW-01 | 11/13/19 | 1120 | 6 | GW | | X | X | X | X | | | | | | |
| 2 | | MW-08 | | 1230 | | | | | | | | | | | | | |
| 3 | | MW-18 | | 1350 | | | | | | | | | | | | | |
| 4 | | MW-19 | | 1442 | | | | | | | | | | | | | |
| 5 | | MW-17 | | 1511 | | | | | | | | | | | | | |
| 6 | | Duplicate | | — | | | | | | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 11/13/19 | 1630 | FEDEX | | 11/13/19 | 1630 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |

Lab Courier
Shipped
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:



TAL-4124-500 (1209)

12/5/2019

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone: 500-173472 COC
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-173472
Chain of Custody Number:
Page 1 of 1
Temperature °C of Cooler:

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client: KPRG | Client Project #: 12313.1 | | Preservative | 3 | 8 | 8 | 5 | | | | | | | Preservative Key: 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other |
| Project Name: Powerton CCR | | | Parameter | Total Metals | Sulfate | TDS, Cl, Fl | Rad 226/228 | | | | | | | |
| Project Location/State: Pekin IL | Lab Project # | | | | | | | | | | | | | |
| Sampler: Michael Dolan | Lab PM: Erin Lang | | | | | | | | | | | | | |

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-09 | 11/14/19 | 0832 | 6 | GW | X | X | X | X | | | | | |
| 2 | | MW-11 | | 0930 | | | | | | | | | | | |
| 3 | | MW-12 | | 1017 | | | | | | | | | | | |
| 4 | | MW-15 | | 1153 | 2 | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 11/14/19 | 1400 | FEDEX | | 11/14/19 | 1400 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | [signature] | TA | 11-5-19 | 0855 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | | | | |

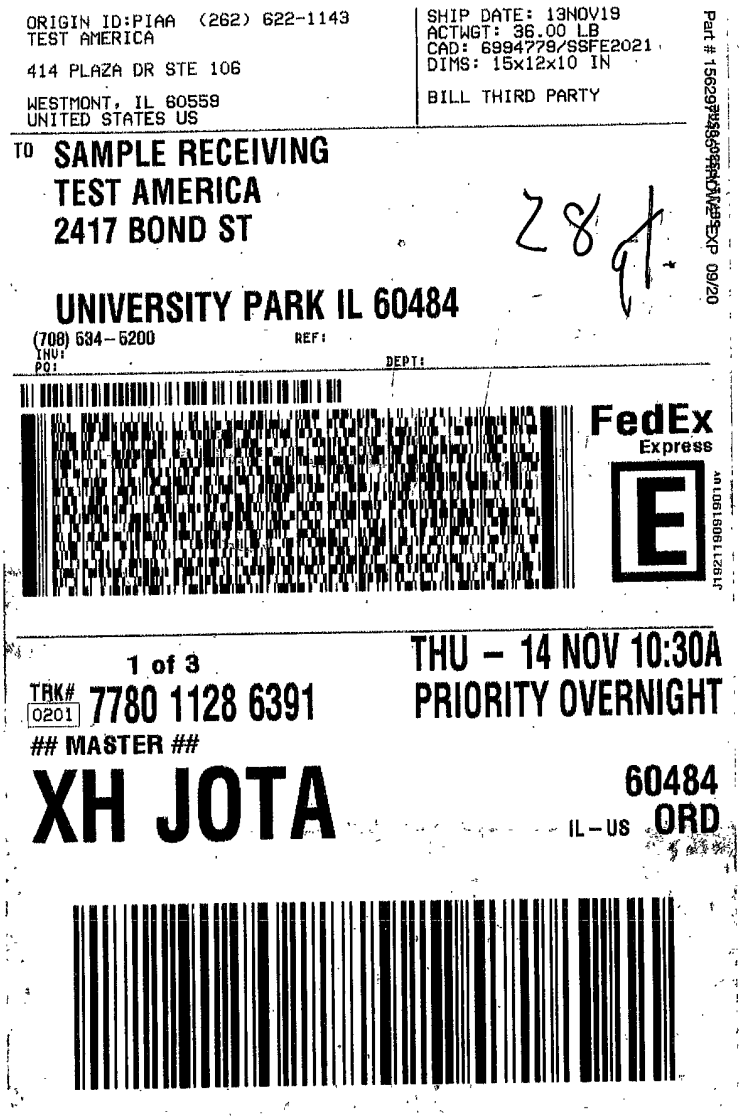
Lab Courier
Shipped
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

500-173472 Waybill


ORIGIN ID:PIAA (262) 622-1143
TEST AMERICA

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 13NOV19
ACTWGT: 36.00 LB
CAD: 6994779/SSFE2021
DIMS: 15x12x10 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(708) 534-5200 REF:
INV:
PO: DEPT:

FedEx Express

1 of 3

TRK# 0201 7780 1128 6391

## MASTER ##

XH JOTA

THU - 14 NOV 10:30A
PRIORITY OVERNIGHT

60484
IL-US ORD



ORIGIN ID:PIAA (262) 622-1143
TEST AMERICA

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 13NOV19
ACTWGT: 45.00 LB
CAD: 6994779/SSFE2021
DIMS: 24x18x12 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
TEST AMERICA
2417 BOND ST

RT 519 5
ST 16 10:30

UNIVERSITY PARK IL 60484

(708) 534-6200
INV:
PO:
REF:
DEPT:

48 lbs

FedEx Express

3 of 3
MPS# 0263 7780 1128 6417
Mstr# 7780 1128 6391

THU - 14 NOV 10:30A
PRIORITY OVERNIGHT

0201

XH JOTA

60484
IL-US ORD

ORIGIN ID:PIAA (262) 622-1143
TEST AMERICA

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 13NOV19
ACTWGT: 65.00 LB
CAD: 6994779/SSFE2021
DIMS: 24x18x12 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
TEST AMERICA
2417 BOND ST

500-173472

48 lbs

UNIVERSITY PARK IL 60484

(708) 534-6200
INV:
PO:
REF:
DEPT:

FedE Expre

2 of 3
MPS# 0263 7780 1128 6406
Mstr# 7780 1128 6391

THU - 14 NOV
PRIORITY

0201

XH JOTA

RT 519 5
ST 16 10:30


ORIGIN ID:PIAA (262) 622-1143
TEST AMERICA
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
ST 21
18x12 IN
TO SAMPLE RECEIVING
TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(708) 534-5200
INV:
PO:
REF:
DEPT:
500-173472 Waybill
FedEx
Express
4 of 4
MPS# 0263 7780 3439 9763
Mstr# 7780 3439 9730
FRI - 15 NOV 3:00P
STANDARD OVERNIGHT
0201
XH JOTA
60484
IL-US ORD

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-128618.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-173472-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 11/26/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-173472-1) | 11/13/19 | 11:20 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-08 (500-173472-2) | 11/13/19 | 12:30 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-18 (500-173472-3) | 11/13/19 | 13:50 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-19 (500-173472-4) | 11/13/19 | 14:42 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-17 (500-173472-5) | 11/13/19 | 15:11 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-173472-6) | 11/13/19 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
|---|---|
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 11/14/19 1600 | TA | [signature] | 11/15/19 08:55 | TASTL |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-128687.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-173472-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 11/27/2019 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-01 (500-173472-1) | 11/13/19 | 11:20 Central | | Water | | | X | 1 | |
| MW-08 (500-173472-2) | 11/13/19 | 12:30 Central | | Water | | | X | 1 | |
| MW-18 (500-173472-3) | 11/13/19 | 13:50 Central | | Water | | | X | 1 | |
| MW-19 (500-173472-4) | 11/13/19 | 14:42 Central | | Water | | | X | 1 | |
| MW-17 (500-173472-5) | 11/13/19 | 15:11 Central | | Water | | | X | 1 | |
| Duplicate (500-173472-6) | 11/13/19 | Central | | Water | | | X | 1 | |
| MW-09 (500-173472-7) | 11/14/19 | 08:32 Central | | Water | | | X | 1 | |
| MW-11 (500-173472-8) | 11/14/19 | 09:30 Central | | Water | | | X | 1 | |
| MW-12 (500-173472-9) | 11/14/19 | 10:17 Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| ***Possible Hazard Identification*** | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** |
|---|---|
| *Unconfirmed* | ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 11/18/19 1500 | TA | [signature] | 11.19.19 906 | TA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.3C IR7 |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-128687.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-173472-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 11/27/2019 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-15 (500-173472-10) | 11/14/19 | 11:53 Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | | 11/18/19 1500 | TA | | 11.19.19 900 | TA |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.3°C IR7 |
|---|---|---|

Ver: 01/16/2019



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

0.3°C Ems IR7

ORIGIN ID:JOTA (708) 534-5200
SAMPLE LOGIN
TESTAMERICA LABS
2417 BOND ST

UNIVERSITY PARK, IL 60484
UNITED STATES US

SHIP DATE: 18NOV19
ACTWGT: 23.00 LB MAN
CAD: 33264/CAFE3211

BILL RECIPIENT

TO SAMPLE RECEIVING
TESTAMERICA PENSACOLA
3355 MCLEMORE DR.

PENSACOLA FL 32514
(850) 474-1001
REF: 173472 SS

FedEx Express

TRK# 0201 4059 7183 8407

TUE - 19 NOV 10:30A
PRIORITY OVERNIGHT

XH PNSA

32514
FL-US BFM

SIGNATURE
DATE

eurofins | Environ TestAm

Custody Seal

956823

Part # 159469-434 RIT EXP 07/20

551C1/F330/104C

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-173472-1

**Login Number: 173472**
**List Number: 1**
**Creator: James, Jeff A**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.3,3.9,1.7, 1.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-173472-1

**Login Number: 173472**
**List Number: 4**
**Creator: Brown, Nathan**

**List Source: Eurofins TestAmerica, Pensacola**
**List Creation: 11/19/19 05:18 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.3°C IR7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

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# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-173472-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

Therese Hargraves

*Authorized for release by:*
*12/11/2019 2:52:36 PM*
Therese Hargraves, Project Manager I
(708)793-3461
therese.hargraves@testamericainc.com

Designee for

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-173472-2

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-173472-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 11/14/2019 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.3º C, 1.7º C, 3.3º C and 3.9º C.

**RAD**
Method 903.0: Radium-226 Prep Batch 160-450986
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

MW-01 (500-173472-1), MW-08 (500-173472-2), MW-18 (500-173472-3), MW-19 (500-173472-4), MW-17 (500-173472-5), Duplicate (500-173472-6), MW-09 (500-173472-7), MW-11 (500-173472-8), MW-12 (500-173472-9), MW-15 (500-173472-10), (LCS 160-450986/1-A), (MB 160-450986/21-A), (440-254611-T-1-A) and (440-254611-U-1-A DU)

Method 904.0: Radium-228 Prep Batch 160-450991

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
MW-01 (500-173472-1), MW-08 (500-173472-2), MW-18 (500-173472-3), MW-19 (500-173472-4), MW-17 (500-173472-5), Duplicate (500-173472-6), MW-09 (500-173472-7), MW-11 (500-173472-8), MW-12 (500-173472-9), MW-15 (500-173472-10), (LCS 160-450991/1-A), (MB 160-450991/21-A), (440-254611-T-1-B) and (440-254611-U-1-B DU)

Method PrecSep_0: Radium 228 Prep Batch 160-450991:

This observation narrative is for the following samples:MW-08 (500-173472-2), MW-18 (500-173472-3), MW-17 (500-173472-5), MW-09 (500-173472-7) and MW-11 (500-173472-8). Samples 500-173472-2, 3, 5, and 7 had light yellow discoloration with tiny particles. Sample 500-173472-1 was reduced due to sediment and cloudy yellow discoloration. Sample 500-173472-8 was reduced due to sediment and pale yellow discoloration. Sample 440-254626-1 was reduced due to insufficient volume.

Method PrecSep-21: Radium 226 Prep Batch 160-450986:

This observation narrative is for the following samples:MW-01 (500-173472-1), MW-08 (500-173472-2), MW-18 (500-173472-3), MW-17 (500-173472-5), Duplicate (500-173472-6), MW-09 (500-173472-7) and MW-11 (500-173472-8). Samples 500-173472-2, 3, 5, and 7 had light yellow discoloration with tiny particles. Sample 500-173472-1 was reduced due to sediment and cloudy yellow discoloration. Sample 500-173472-8 was reduced due to sediment and pale yellow discoloration. Sample 440-254626-1 was reduced due to insufficient volume.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-173472-1 | MW-01 | Water | 11/13/19 11:20 | 11/14/19 09:40 | |
| 500-173472-2 | MW-08 | Water | 11/13/19 12:30 | 11/14/19 09:40 | |
| 500-173472-3 | MW-18 | Water | 11/13/19 13:50 | 11/14/19 09:40 | |
| 500-173472-4 | MW-19 | Water | 11/13/19 14:42 | 11/14/19 09:40 | |
| 500-173472-5 | MW-17 | Water | 11/13/19 15:11 | 11/14/19 09:40 | |
| 500-173472-6 | Duplicate | Water | 11/13/19 00:00 | 11/14/19 09:40 | |
| 500-173472-7 | MW-09 | Water | 11/14/19 08:32 | 11/15/19 08:55 | |
| 500-173472-8 | MW-11 | Water | 11/14/19 09:30 | 11/15/19 08:55 | |
| 500-173472-9 | MW-12 | Water | 11/14/19 10:17 | 11/15/19 08:55 | |
| 500-173472-10 | MW-15 | Water | 11/14/19 11:53 | 11/15/19 08:55 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

## Client Sample ID: MW-01

**Date Collected: 11/13/19 11:20**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.314** | | 0.180 | 0.182 | 1.00 | 0.243 | pCi/L | 11/18/19 17:31 | 12/10/19 05:41 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *86.0* | | *40 - 110* | *11/18/19 17:31* | *12/10/19 05:41* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.569 | U | 0.491 | 0.494 | 1.00 | 0.779 | pCi/L | 11/18/19 18:54 | 11/22/19 13:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *86.0* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:18* | *1* |
| *Y Carrier* | *79.3* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.884** | | 0.523 | 0.526 | 5.00 | 0.779 | pCi/L | | 12/11/19 08:45 | 1 |

## Client Sample ID: MW-08

**Date Collected: 11/13/19 12:30**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.116 | | 0.0701 | 0.0708 | 1.00 | 0.0923 | pCi/L | 11/18/19 17:31 | 12/10/19 05:41 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.1* | | *40 - 110* | *11/18/19 17:31* | *12/10/19 05:41* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0773 | U | 0.286 | 0.286 | 1.00 | 0.498 | pCi/L | 11/18/19 18:54 | 11/22/19 13:19 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.1* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:19* | *1* |
| *Y Carrier* | *77.4* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:19* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.193 | U | 0.294 | 0.295 | 5.00 | 0.498 | pCi/L | | 12/11/19 08:45 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

## Client Sample ID: MW-18

**Date Collected: 11/13/19 13:50**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.233** | | 0.107 | 0.109 | 1.00 | 0.130 | pCi/L | 11/18/19 17:31 | 12/10/19 05:41 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *77.9* | | *40 - 110* | *11/18/19 17:31* | *12/10/19 05:41* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0795 | U | 0.280 | 0.280 | 1.00 | 0.490 | pCi/L | 11/18/19 18:54 | 11/22/19 13:19 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *77.9* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:19* | *1* |
| *Y Carrier* | *78.1* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:19* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.313 | U | 0.300 | 0.300 | 5.00 | 0.490 | pCi/L | | 12/11/19 08:45 | 1 |

## Client Sample ID: MW-19

**Date Collected: 11/13/19 14:42**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.114 | | 0.0800 | 0.0806 | 1.00 | 0.113 | pCi/L | 11/18/19 17:31 | 12/10/19 05:41 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.9* | | *40 - 110* | *11/18/19 17:31* | *12/10/19 05:41* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.277 | U | 0.276 | 0.277 | 1.00 | 0.447 | pCi/L | 11/18/19 18:54 | 11/22/19 13:19 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.9* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:19* | *1* |
| *Y Carrier* | *80.0* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:19* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.391 | U | 0.287 | 0.288 | 5.00 | 0.447 | pCi/L | | 12/11/19 08:45 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

## Client Sample ID: MW-17

**Date Collected: 11/13/19 15:11**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.346** | | 0.112 | 0.117 | 1.00 | 0.114 | pCi/L | 11/18/19 17:31 | 12/10/19 05:41 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.7* | | *40 - 110* | *11/18/19 17:31* | *12/10/19 05:41* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.297 | U | 0.305 | 0.306 | 1.00 | 0.496 | pCi/L | 11/18/19 18:54 | 11/22/19 13:19 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.7* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:19* | *1* |
| *Y Carrier* | *75.1* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:19* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.643** | | 0.325 | 0.328 | 5.00 | 0.496 | pCi/L | | 12/11/19 08:45 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

## Client Sample ID: Duplicate

**Date Collected: 11/13/19 00:00**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0767 | U | 0.0778 | 0.0781 | 1.00 | 0.124 | pCi/L | 11/18/19 17:31 | 12/10/19 05:41 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.9* | | *40 - 110* | *11/18/19 17:31* | *12/10/19 05:41* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.381 | U | 0.264 | 0.266 | 1.00 | 0.409 | pCi/L | 11/18/19 18:54 | 11/22/19 13:19 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.9* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:19* | *1* |
| *Y Carrier* | *77.0* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:19* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.458** | | 0.275 | 0.277 | 5.00 | 0.409 | pCi/L | | 12/11/19 08:45 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

## Client Sample ID: MW-09

**Date Collected: 11/14/19 08:32**
**Date Received: 11/15/19 08:55**

## Lab Sample ID: 500-173472-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.113 | U | 0.0794 | 0.0800 | 1.00 | 0.114 | pCi/L | 11/18/19 17:31 | 12/10/19 05:41 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.0* | | *40 - 110* | *11/18/19 17:31* | *12/10/19 05:41* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.302 | U | 0.283 | 0.285 | 1.00 | 0.457 | pCi/L | 11/18/19 18:54 | 11/22/19 13:19 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.0* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:19* | *1* |
| *Y Carrier* | *76.3* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:19* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.415 | U | 0.294 | 0.296 | 5.00 | 0.457 | pCi/L | | 12/11/19 08:45 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

## Client Sample ID: MW-11

**Date Collected: 11/14/19 09:30**
**Date Received: 11/15/19 08:55**

## Lab Sample ID: 500-173472-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.05 | | 0.207 | 0.228 | 1.00 | 0.165 | pCi/L | 11/18/19 17:31 | 12/10/19 05:41 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.7* | | *40 - 110* | *11/18/19 17:31* | *12/10/19 05:41* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.59 | | 0.529 | 0.549 | 1.00 | 0.731 | pCi/L | 11/18/19 18:54 | 11/22/19 13:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.7* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:20* | *1* |
| *Y Carrier* | *75.5* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:20* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 2.64 | | 0.568 | 0.594 | 5.00 | 0.731 | pCi/L | | 12/11/19 08:45 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

## Client Sample ID: MW-12

**Date Collected: 11/14/19 10:17**
**Date Received: 11/15/19 08:55**

## Lab Sample ID: 500-173472-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0821 | U | 0.0891 | 0.0894 | 1.00 | 0.144 | pCi/L | 11/18/19 17:31 | 12/10/19 05:41 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.7* | | *40 - 110* | *11/18/19 17:31* | *12/10/19 05:41* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.486 | U | 0.347 | 0.350 | 1.00 | 0.543 | pCi/L | 11/18/19 18:54 | 11/22/19 13:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.7* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:20* | *1* |
| *Y Carrier* | *75.9* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:20* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.568** | | 0.358 | 0.361 | 5.00 | 0.543 | pCi/L | | 12/11/19 08:45 | 1 |

## Client Sample ID: MW-15

**Date Collected: 11/14/19 11:53**
**Date Received: 11/15/19 08:55**

## Lab Sample ID: 500-173472-10

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0937 | U | 0.0715 | 0.0720 | 1.00 | 0.104 | pCi/L | 11/18/19 17:31 | 12/10/19 07:50 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.2* | | *40 - 110* | *11/18/19 17:31* | *12/10/19 07:50* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0442 | U | 0.268 | 0.268 | 1.00 | 0.475 | pCi/L | 11/18/19 18:54 | 11/22/19 13:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.2* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:20* | *1* |
| *Y Carrier* | *75.1* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:20* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.138 | U | 0.277 | 0.278 | 5.00 | 0.475 | pCi/L | | 12/11/19 08:45 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Rad

### Prep Batch: 450986

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-173472-2 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-173472-3 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-173472-4 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-173472-5 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-173472-6 | Duplicate | Total/NA | Water | PrecSep-21 | |
| 500-173472-7 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-173472-8 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-173472-9 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-173472-10 | MW-15 | Total/NA | Water | PrecSep-21 | |
| MB 160-450986/21-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-450986/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 450991

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-173472-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-173472-2 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-173472-3 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-173472-4 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-173472-5 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-173472-6 | Duplicate | Total/NA | Water | PrecSep_0 | |
| 500-173472-7 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-173472-8 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-173472-9 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-173472-10 | MW-15 | Total/NA | Water | PrecSep_0 | |
| MB 160-450991/21-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-450991/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-450986/21-A**
**Matrix: Water**
**Analysis Batch: 453777**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 450986**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.01935 | U | 0.0610 | 0.0610 | 1.00 | 0.112 | pCi/L | 11/18/19 17:40 | 12/10/19 07:50 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.2* | | *40 - 110* | *11/18/19 17:40* | *12/10/19 07:50* | *1* |

**Lab Sample ID: LCS 160-450986/1-A**
**Matrix: Water**
**Analysis Batch: 453777**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 450986**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.3 | 10.72 | | 1.10 | 1.00 | 0.0992 | pCi/L | 94 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *92.8* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-450991/21-A**
**Matrix: Water**
**Analysis Batch: 451601**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 450991**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.08470 | U | 0.248 | 0.249 | 1.00 | 0.431 | pCi/L | 11/18/19 18:54 | 11/22/19 13:20 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.2* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:20* | *1* |
| *Y Carrier* | *78.9* | | *40 - 110* | *11/18/19 18:54* | *11/22/19 13:20* | *1* |

**Lab Sample ID: LCS 160-450991/1-A**
**Matrix: Water**
**Analysis Batch: 451695**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 450991**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.37 | 10.48 | | 1.26 | 1.00 | 0.573 | pCi/L | 112 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *92.8* | | *40 - 110* |
| *Y Carrier* | *76.3* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

## Client Sample ID: MW-01
**Date Collected: 11/13/19 11:20**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 450986 | 11/18/19 17:31 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 453777 | 12/10/19 05:41 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 450991 | 11/18/19 18:54 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 451601 | 11/22/19 13:18 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 453917 | 12/11/19 08:45 | SMP | TAL SL |

## Client Sample ID: MW-08
**Date Collected: 11/13/19 12:30**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 450986 | 11/18/19 17:31 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 453777 | 12/10/19 05:41 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 450991 | 11/18/19 18:54 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 451601 | 11/22/19 13:19 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 453917 | 12/11/19 08:45 | SMP | TAL SL |

## Client Sample ID: MW-18
**Date Collected: 11/13/19 13:50**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 450986 | 11/18/19 17:31 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 453777 | 12/10/19 05:41 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 450991 | 11/18/19 18:54 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 451601 | 11/22/19 13:19 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 453917 | 12/11/19 08:45 | SMP | TAL SL |

## Client Sample ID: MW-19
**Date Collected: 11/13/19 14:42**
**Date Received: 11/14/19 09:40**

## Lab Sample ID: 500-173472-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 450986 | 11/18/19 17:31 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 453777 | 12/10/19 05:41 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 450991 | 11/18/19 18:54 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 451601 | 11/22/19 13:19 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 453917 | 12/11/19 08:45 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

## Client Sample ID: MW-17

**Lab Sample ID: 500-173472-5**

**Date Collected: 11/13/19 15:11**

**Matrix: Water**

**Date Received: 11/14/19 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 450986 | 11/18/19 17:31 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 453777 | 12/10/19 05:41 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 450991 | 11/18/19 18:54 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 451601 | 11/22/19 13:19 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 453917 | 12/11/19 08:45 | SMP | TAL SL |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-173472-6**

**Date Collected: 11/13/19 00:00**

**Matrix: Water**

**Date Received: 11/14/19 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 450986 | 11/18/19 17:31 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 453777 | 12/10/19 05:41 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 450991 | 11/18/19 18:54 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 451601 | 11/22/19 13:19 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 453917 | 12/11/19 08:45 | SMP | TAL SL |

## Client Sample ID: MW-09

**Lab Sample ID: 500-173472-7**

**Date Collected: 11/14/19 08:32**

**Matrix: Water**

**Date Received: 11/15/19 08:55**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 450986 | 11/18/19 17:31 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 453777 | 12/10/19 05:41 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 450991 | 11/18/19 18:54 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 451601 | 11/22/19 13:19 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 453917 | 12/11/19 08:45 | SMP | TAL SL |

## Client Sample ID: MW-11

**Lab Sample ID: 500-173472-8**

**Date Collected: 11/14/19 09:30**

**Matrix: Water**

**Date Received: 11/15/19 08:55**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 450986 | 11/18/19 17:31 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 453777 | 12/10/19 05:41 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 450991 | 11/18/19 18:54 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 451601 | 11/22/19 13:20 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 453917 | 12/11/19 08:45 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

## Client Sample ID: MW-12

**Lab Sample ID: 500-173472-9**

**Date Collected: 11/14/19 10:17**

**Matrix: Water**

**Date Received: 11/15/19 08:55**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 450986 | 11/18/19 17:31 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 453777 | 12/10/19 05:41 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 450991 | 11/18/19 18:54 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 451601 | 11/22/19 13:20 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 453917 | 12/11/19 08:45 | SMP | TAL SL |

## Client Sample ID: MW-15

**Lab Sample ID: 500-173472-10**

**Date Collected: 11/14/19 11:53**

**Matrix: Water**

**Date Received: 11/15/19 08:55**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 450986 | 11/18/19 17:31 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 453777 | 12/10/19 07:50 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 450991 | 11/18/19 18:54 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 451601 | 11/22/19 13:20 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 453917 | 12/11/19 08:45 | SMP | TAL SL |

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | 100201 | 04-30-20 |

## Laboratory: Eurofins TestAmerica, St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | 200023 | 11-30-19 * |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

500-173472 COC

## Chain of Custody Record

Lab Job #: 500-173472

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 33, 3.9 (Corr 1.7)

| Client | Client Project # |
|---|---|
| KPRG | 12313.1 |
| Project Name: Powerton CCR | |
| Project Location/State: Pekin, IL | Lab Project # |
| Sampler: Mitchel Dolan | Lab PM |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | Parameter: Total Metals | Parameter: Sulfate | Parameter: TDS, Cl, Fl | Parameter: Rad 226/228 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 11/13/19 | 1120 | 6 | GW | 3 | X | X | X | X | |
| 2 | | MW-08 | | 1230 | | | | | | | | |
| 3 | | MW-18 | | 1350 | | | | | | | | |
| 4 | | MW-19 | | 1442 | | | | | | | | |
| 5 | | MW-17 | | 1511 | | | | | | | | |
| 6 | | Duplicate | | — | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 11/13/19 | 1630 | FEDEX | | 11/13/19 | 1630 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |

Lab Courier
Shipped
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:



TAL-4124-500 (1209)

12/11/2019

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone: 500-173472 COC
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-173472

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler:

Client: KPRG | Client Project #: 12313.1
Project Name: Powerton CCR
Project Location/State: Pekin IL | Lab Project #:
Sampler: Michael Dolan | Lab PM: Erin Lang

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | 3 | 8 | 8 | 5 | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Parameter | Total Metals | Sulfate | TDS, Cl, Fl | Rad 226/228 | | | | | | |
| 1 | | MW-09 | 11/14/19 | 0832 | 6 | GW | | X | X | X | X | | | | | | |
| 2 | | MW-11 | ↓ | 0930 | ↓ | ↓ | | ↓ | ↓ | ↓ | ↓ | | | | | | |
| 3 | | MW-12 | | 1017 | | | | | | | | | | | | | |
| 4 | | MW-15 | | 1153 | 2 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 11/14/19 | 1400 | FEDEX | | 11/14/19 | 1400 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | [signature] | TA | 11-15-19 | 0855 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | | | | |

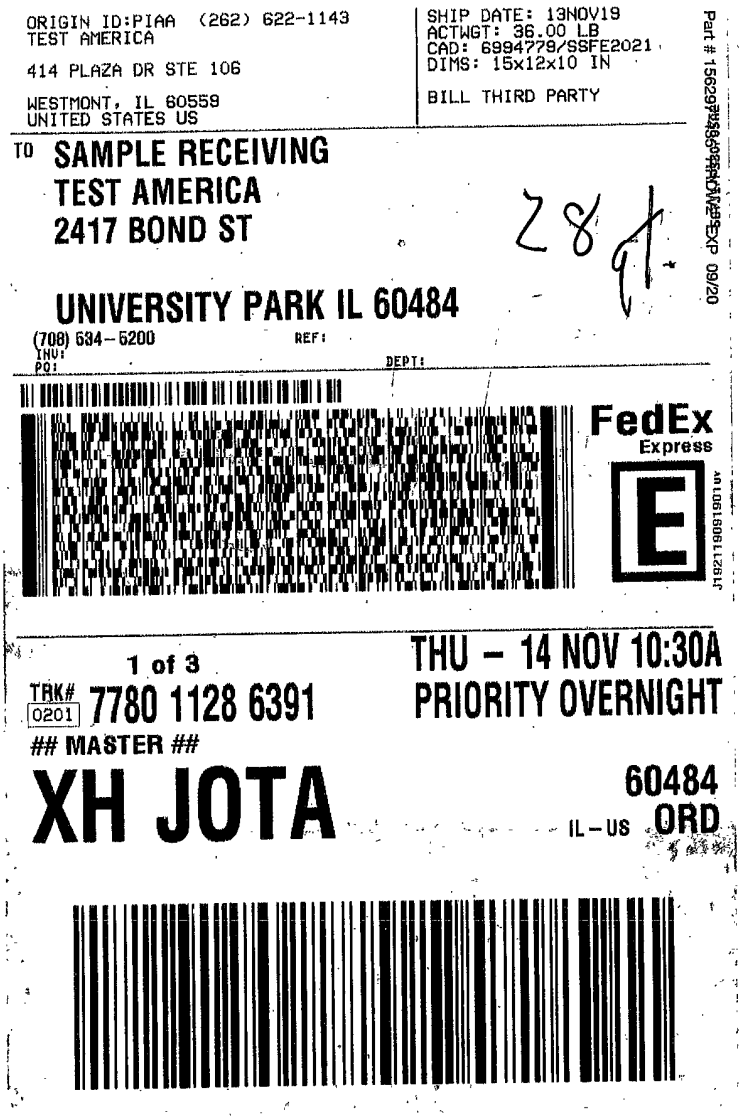
Lab Courier
Shipped
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

500-173472 Waybill


ORIGIN ID:PIAA (262) 622-1143
TEST AMERICA

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 13NOV19
ACTWGT: 36.00 LB
CAD: 6994779/SSFE2021
DIMS: 15x12x10 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(708) 534-5200 REF:
INV:
PO: DEPT:

FedEx Express

1 of 3

TRK# 0201 7780 1128 6391

## MASTER ##

XH JOTA

THU - 14 NOV 10:30A
PRIORITY OVERNIGHT

60484
IL-US ORD



ORIGIN ID:PIAA (262) 622-1143
TEST AMERICA

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 13NOV19
ACTWGT: 45.00 LB
CAD: 6994779/SSFE2021
DIMS: 24x18x12 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
TEST AMERICA
2417 BOND ST

RT 519 5
ST 16 10:30

UNIVERSITY PARK IL 60484
(708) 534-6200
INV:
PO:
REF:
DEPT:

48 lbs

FedEx Express

3 of 3
MPS# 0263 7780 1128 6417
Mstr# 7780 1128 6391

THU - 14 NOV 10:30A
PRIORITY OVERNIGHT

0201

XH JOTA

60484
IL-US ORD

ORIGIN ID:PIAA (262) 622-1143
TEST AMERICA

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 13NOV19
ACTWGT: 65.00 LB
CAD: 6994779/SSFE2021
DIMS: 24x18x12 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
TEST AMERICA
2417 BOND ST

500-173472

48 lbs

UNIVERSITY PARK IL 60484
(708) 534-6200
INV:
PO:
REF:
DEPT:

FedEx Express

2 of 3
MPS# 0263 7780 1128 6406
Mstr# 7780 1128 6391

THU - 14 NOV
PRIORITY

0201

XH JOTA

RT 519 5
ST 16 10:30


ORIGIN ID:PIAA (262) 622-1143
TEST AMERICA
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
ST 21
18x12 IN
SAMPLE RECEIVING
TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(708) 534-5200
500-173472 Waybill
FedEx
Express
4 of 4
MPS#
0263
780 3439 9763
Mstr#
780 3439 9730
FRI - 15 NOV 3:00P
STANDARD OVERNIGHT
XH JOTA
0201
60484
IL-US ORD

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-128618.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-173472-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 11/26/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-173472-1) | 11/13/19 | 11:20 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-08 (500-173472-2) | 11/13/19 | 12:30 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-18 (500-173472-3) | 11/13/19 | 13:50 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-19 (500-173472-4) | 11/13/19 | 14:42 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-17 (500-173472-5) | 11/13/19 | 15:11 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-173472-6) | 11/13/19 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 11/14/19 1600 | TA | [signature] | 11/15/19 08:55 | TASTL |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-128655.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-173472-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 11/26/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-09 (500-173472-7) | 11/14/19 | 08:32 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-11 (500-173472-8) | 11/14/19 | 09:30 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-12 (500-173472-9) | 11/14/19 | 10:17 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-15 (500-173472-10) | 11/14/19 | 11:53 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 11/15/19 1700 | TA | [signature] | 11-16-19 08:30 | TA STL |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-173472-2

**Login Number: 173472**
**List Number: 1**
**Creator: James, Jeff A**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.3,3.9,1.7, 1.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-173472-2

**Login Number: 173472**
**List Number: 2**
**Creator: Harris, Lorin C**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 11/15/19 01:49 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | False | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-173472-2

**Login Number: 173472**
**List Number: 3**
**Creator: Hellm, Michael**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 11/16/19 10:16 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 24.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-173472-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) |
| 500-173472-1 | MW-01 | 86.0 |
| 500-173472-2 | MW-08 | 90.1 |
| 500-173472-3 | MW-18 | 77.9 |
| 500-173472-4 | MW-19 | 83.9 |
| 500-173472-5 | MW-17 | 85.7 |
| 500-173472-6 | Duplicate | 97.9 |
| 500-173472-7 | MW-09 | 94.0 |
| 500-173472-8 | MW-11 | 93.7 |
| 500-173472-9 | MW-12 | 82.7 |
| 500-173472-10 | MW-15 | 87.2 |
| LCS 160-450986/1-A | Lab Control Sample | 92.8 |
| MB 160-450986/21-A | Method Blank | 95.2 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) | Y Carrier (40-110) |
| 500-173472-1 | MW-01 | 86.0 | 79.3 |
| 500-173472-2 | MW-08 | 90.1 | 77.4 |
| 500-173472-3 | MW-18 | 77.9 | 78.1 |
| 500-173472-4 | MW-19 | 83.9 | 80.0 |
| 500-173472-5 | MW-17 | 85.7 | 75.1 |
| 500-173472-6 | Duplicate | 97.9 | 77.0 |
| 500-173472-7 | MW-09 | 94.0 | 76.3 |
| 500-173472-8 | MW-11 | 93.7 | 75.5 |
| 500-173472-9 | MW-12 | 82.7 | 75.9 |
| 500-173472-10 | MW-15 | 87.2 | 75.1 |
| LCS 160-450991/1-A | Lab Control Sample | 92.8 | 76.3 |
| MB 160-450991/21-A | Method Blank | 95.2 | 78.9 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

Y Carrier = Y Carrier

eurofins | Environment Testing TestAmerica



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-175686-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*1/7/2020 6:54:04 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-175686-1

## Job ID: 500-175686-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-175686-1**

**Comments**
No additional comments.

**Receipt**
The sample was received on 12/30/2019 8:40 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.1° C.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-175686-1

## Client Sample ID: MW-01

## Lab Sample ID: 500-175686-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.0021 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0041 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-175686-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-175686-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-175686-1 | MW-01 | Water | 12/26/19 08:58 | 12/30/19 08:40 | |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-175686-1

## Client Sample ID: MW-01

**Date Collected: 12/26/19 08:58**
**Date Received: 12/30/19 08:40**

## Lab Sample ID: 500-175686-1

**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.0021 | | 0.0010 | | mg/L | | 12/31/19 06:44 | 12/31/19 14:36 | 1 |
| Lead | 0.0041 | | 0.00050 | | mg/L | | 12/31/19 06:44 | 12/31/19 14:36 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-175686-1

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-175686-1

## Metals

### Filtration Batch: 522853

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 500-522853/1-C | Method Blank | Total Recoverable | Water | FILTRATION | |

### Prep Batch: 523029

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-175686-1 | MW-01 | Total Recoverable | Water | 3005A | |
| MB 500-522853/1-C | Method Blank | Total Recoverable | Water | 3005A | 522853 |
| LCS 500-523029/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 523516

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-175686-1 | MW-01 | Total Recoverable | Water | 6020A | 523029 |
| MB 500-522853/1-C | Method Blank | Total Recoverable | Water | 6020A | 523029 |
| LCS 500-523029/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 523029 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-522853/1-C**
**Matrix: Water**
**Analysis Batch: 523516**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 523029**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/31/19 06:44 | 12/31/19 14:10 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/31/19 06:44 | 12/31/19 14:10 | 1 |

**Lab Sample ID: LCS 500-523029/2-A**
**Matrix: Water**
**Analysis Batch: 523516**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 523029**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Cobalt | 0.500 | 0.529 | | mg/L | | 106 | 80 - 120 |
| Lead | 0.100 | 0.106 | | mg/L | | 106 | 80 - 120 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-175686-1

## Client Sample ID: MW-01

**Date Collected: 12/26/19 08:58**
**Date Received: 12/30/19 08:40**

## Lab Sample ID: 500-175686-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 523029 | 12/31/19 06:44 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 523516 | 12/31/19 14:36 | FXG | TAL CHI |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-175686-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | 100201 | 04-30-20 |

# TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60
Phone: 708.534.5200 Fax: 708.534

500-175686 COC

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-175686

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 5.1

| Client | Client Project # | Preservative | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KPRG | 12313.1 | | | | | | | | | | | |
| Project Name: Powerton CCR | | Parameter | Cobalt (total) | Lead (total) | | | | | | | | |
| Project Location/State: Pekin, IL | Lab Project # | | | | | | | | | | | |
| Sampler: Michael Dolan | Lab PM: Eric Lang | | | | | | | | | | | |

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Cobalt (total) | Lead (total) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 12/26 | 0858 | 1 | W | x | x | |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 12/27/19 | 1430 | FEDEX | ~~KPRG~~ | 12/27/19 | 1430 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | [signature] | TAEHT | 12/30/19 | 0840 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | | | | |

Lab Courier: TA
Shipped:
Hand Delivered:

Matrix Key

| | |
|---|---|
| WW – Wastewater | SE – Sediment |
| W – Water | SO – Soil |
| S – Soil | L – Leachate |
| SL – Sludge | WI – Wipe |
| MS – Miscellaneous | DW – Drinking Water |
| OL – Oil | O – Other |
| A – Air | |

Client Comments: Rush T.A. (3-day)

Lab Comments:

TAL-4124-500 (1209)



1/7/2020

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

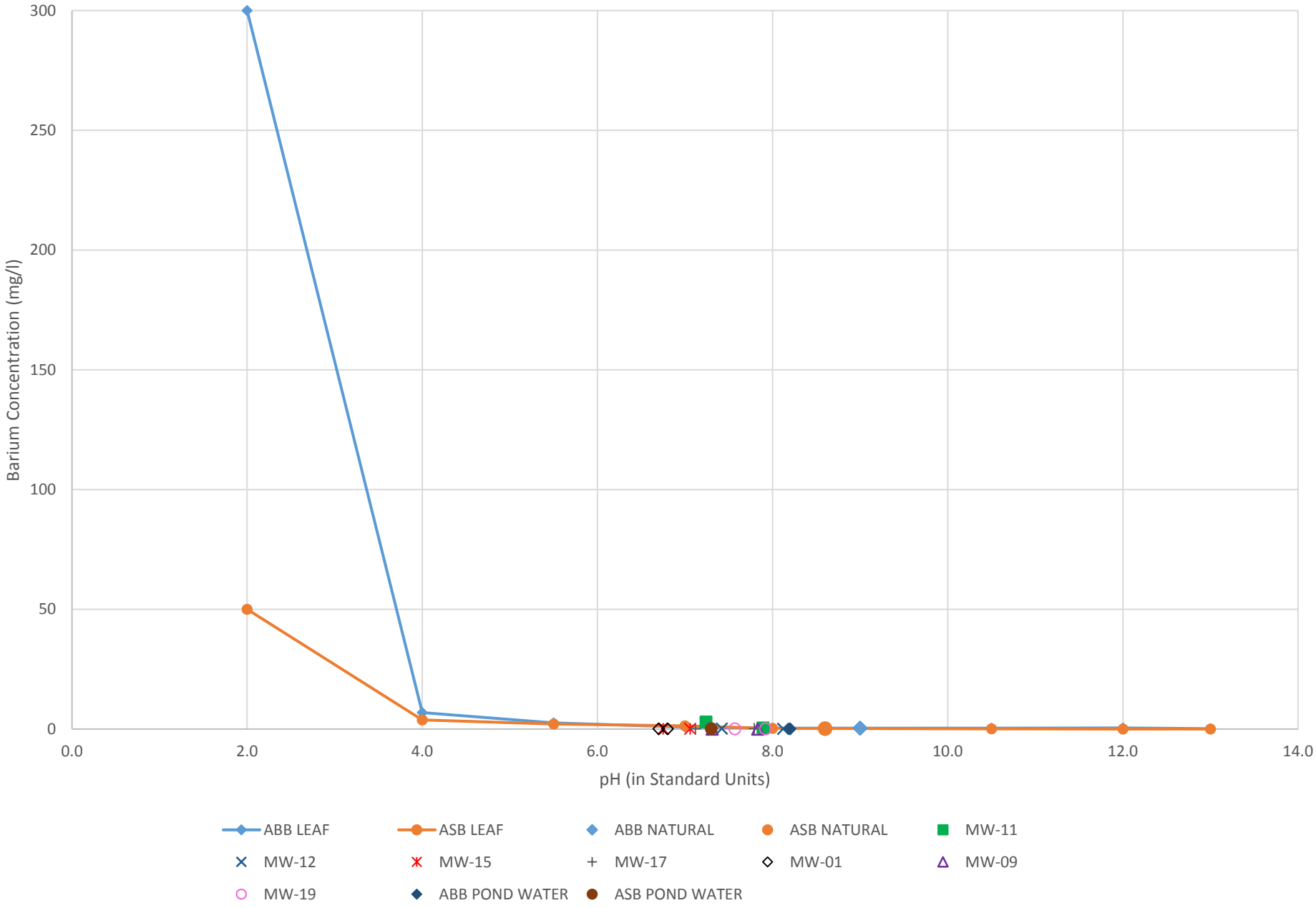
Job Number: 500-175686-1

**Login Number: 175686**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 5.1 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

Figure 3. Barium Concentration vs. pH Value - Powerton Station (May/August 2018 Data)



TestAmerica

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# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-85446-1
Client Project/Site: Midwest Generation

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*1/18/2019 1:57:25 PM*

Carrie Gamber, Senior Project Manager
(412)963-2428
carrie.gamber@testamericainc.com

LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

*PA Lab ID: 02-00416*

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## Job ID: 180-85446-1

**Laboratory: TestAmerica Pittsburgh**

**Narrative**

# CASE NARRATIVE

## Client: KPRG and Associates, Inc.

## Project: Midwest Generation

## Report Number: 180-85446-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

**RECEIPT**

The samples were received on 01/05/2019; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.9 C.

The Field Sampler was not listed on the Chain of Custody.

**IC**

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**METALS**

Molybdenum was detected in method blank MB 180-267216/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

The continuing calibration verification (CCV) recovered above the upper control limit for beryllium. The samples associated with this CCV were less than the reporting limit for the affected analytes; therefore, the data have been reported. The following samples were impacted: ABB (180-85446-1), ASB (180-85446-2), (180-85446-H-2-C MS), (180-85446-H-2-D MSD), (180-85446-H-2-B PDS) and (180-85446-H-2-B SD ^5).

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85446-1

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| ^ | ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85446-1

## Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200005 | 06-30-19 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| EPA 6020A | 3005A | Water | Lithium |

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85446-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 180-85446-1 | ABB | Water | 01/04/19 11:00 | 01/05/19 09:30 |
| 180-85446-2 | ASB | Water | 01/04/19 12:00 | 01/05/19 09:30 |

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85446-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| EPA 9056A | Anions, Ion Chromatography | SW846 | TAL PIT |
| EPA 6020A | Metals (ICP/MS) | SW846 | TAL PIT |
| EPA 7470A | Mercury (CVAA) | SW846 | TAL PIT |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL PIT |
| 7470A | Preparation, Mercury | SW846 | TAL PIT |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85446-1

## Client Sample ID: ABB

**Lab Sample ID: 180-85446-1**

**Date Collected: 01/04/19 11:00**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | EPA 9056A | | 1 | | | 267731 | 01/13/19 07:44 | CMR | TAL PIT |
| | Instrument ID: CHICS2100B | | | | | | | | | |
| Total Recoverable | Prep | 3005A | | | 50 mL | 50 mL | 267216 | 01/07/19 11:48 | NAM | TAL PIT |
| Total Recoverable | Analysis | EPA 6020A | | 1 | | | 267457 | 01/08/19 20:24 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Total/NA | Prep | 7470A | | | 50 mL | 50 mL | 267213 | 01/07/19 11:26 | KA | TAL PIT |
| Total/NA | Analysis | EPA 7470A | | 1 | | | 267249 | 01/07/19 18:31 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |

## Client Sample ID: ASB

**Lab Sample ID: 180-85446-2**

**Date Collected: 01/04/19 12:00**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | EPA 9056A | | 1 | | | 267731 | 01/13/19 08:15 | CMR | TAL PIT |
| | Instrument ID: CHICS2100B | | | | | | | | | |
| Total Recoverable | Prep | 3005A | | | 50 mL | 50 mL | 267216 | 01/07/19 11:48 | NAM | TAL PIT |
| Total Recoverable | Analysis | EPA 6020A | | 1 | | | 267457 | 01/08/19 20:28 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Total/NA | Prep | 7470A | | | 50 mL | 50 mL | 267213 | 01/07/19 11:26 | KA | TAL PIT |
| Total/NA | Analysis | EPA 7470A | | 1 | | | 267249 | 01/07/19 18:32 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |

**Laboratory References:**

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

**Analyst References:**

Lab: TAL PIT

Batch Type: Prep

KA = Kayla Kalamasz

NAM = Nicole Marfisi

Batch Type: Analysis

CMR = Carl Reagle

KA = Kayla Kalamasz

WTR = Bill Reinheimer

## Client Sample ID: ABB

**Lab Sample ID: 180-85446-1**

**Date Collected: 01/04/19 11:00**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.8 | | 0.10 | 0.026 | mg/L | | | 01/13/19 07:44 | 1 |

### Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 1.9 | | 1.0 | 0.32 | ug/L | | 01/07/19 11:48 | 01/08/19 20:24 | 1 |
| Barium | 56 | | 10 | 0.37 | ug/L | | 01/07/19 11:48 | 01/08/19 20:24 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/07/19 11:48 | 01/08/19 20:24 | 1 |
| Beryllium | ND | ^ | 1.0 | 0.057 | ug/L | | 01/07/19 11:48 | 01/08/19 20:24 | 1 |
| Chromium | 3.4 | | 2.0 | 0.63 | ug/L | | 01/07/19 11:48 | 01/08/19 20:24 | 1 |
| Lead | 0.28 | J | 1.0 | 0.094 | ug/L | | 01/07/19 11:48 | 01/08/19 20:24 | 1 |
| Selenium | 2.0 | J | 5.0 | 0.81 | ug/L | | 01/07/19 11:48 | 01/08/19 20:24 | 1 |
| Cobalt | 0.14 | J | 0.50 | 0.075 | ug/L | | 01/07/19 11:48 | 01/08/19 20:24 | 1 |
| Molybdenum | 96 | | 5.0 | 0.47 | ug/L | | 01/07/19 11:48 | 01/08/19 20:24 | 1 |
| Antimony | 1.4 | J | 2.0 | 1.1 | ug/L | | 01/07/19 11:48 | 01/08/19 20:24 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/07/19 11:48 | 01/08/19 20:24 | 1 |
| Lithium | 4.0 | J | 5.0 | 2.6 | ug/L | | 01/07/19 11:48 | 01/08/19 20:24 | 1 |

### Method: EPA 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/07/19 11:26 | 01/07/19 18:31 | 1 |

## Client Sample ID: ASB

**Lab Sample ID: 180-85446-2**

**Date Collected: 01/04/19 12:00**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.46 | | 0.10 | 0.026 | mg/L | | | 01/13/19 08:15 | 1 |

### Method: EPA 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 3.2 | | 1.0 | 0.32 | ug/L | | 01/07/19 11:48 | 01/08/19 20:28 | 1 |
| Barium | 150 | | 10 | 0.37 | ug/L | | 01/07/19 11:48 | 01/08/19 20:28 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/07/19 11:48 | 01/08/19 20:28 | 1 |
| Beryllium | 0.069 | J ^ | 1.0 | 0.057 | ug/L | | 01/07/19 11:48 | 01/08/19 20:28 | 1 |
| Chromium | 3.6 | | 2.0 | 0.63 | ug/L | | 01/07/19 11:48 | 01/08/19 20:28 | 1 |
| Lead | 0.69 | J | 1.0 | 0.094 | ug/L | | 01/07/19 11:48 | 01/08/19 20:28 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/07/19 11:48 | 01/08/19 20:28 | 1 |
| Cobalt | 0.96 | | 0.50 | 0.075 | ug/L | | 01/07/19 11:48 | 01/08/19 20:28 | 1 |
| Molybdenum | 10 | | 5.0 | 0.47 | ug/L | | 01/07/19 11:48 | 01/08/19 20:28 | 1 |
| Antimony | 1.9 | J | 2.0 | 1.1 | ug/L | | 01/07/19 11:48 | 01/08/19 20:28 | 1 |
| Thallium | 0.091 | J | 1.0 | 0.063 | ug/L | | 01/07/19 11:48 | 01/08/19 20:28 | 1 |
| Lithium | 13 | | 5.0 | 2.6 | ug/L | | 01/07/19 11:48 | 01/08/19 20:28 | 1 |

### Method: EPA 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/07/19 11:26 | 01/07/19 18:32 | 1 |

## Method: EPA 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 180-267731/6**
**Matrix: Water**
**Analysis Batch: 267731**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.10 | 0.026 | mg/L | | | 01/13/19 06:56 | 1 |

**Lab Sample ID: LCS 180-267731/5**
**Matrix: Water**
**Analysis Batch: 267731**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 1.25 | 1.32 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: 180-85446-2 MS**
**Matrix: Water**
**Analysis Batch: 267731**

**Client Sample ID: ASB**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.51 | | 6.25 | 7.35 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: 180-85446-2 MSD**
**Matrix: Water**
**Analysis Batch: 267731**

**Client Sample ID: ASB**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.51 | | 6.25 | 7.28 | | mg/L | | 108 | 80 - 120 | 1 | 15 |

## Method: EPA 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 180-267216/1-A**
**Matrix: Water**
**Analysis Batch: 267457**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 267216**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 1.0 | 0.32 | ug/L | | 01/07/19 11:48 | 01/08/19 19:14 | 1 |
| Barium | ND | | 10 | 0.37 | ug/L | | 01/07/19 11:48 | 01/08/19 19:14 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/07/19 11:48 | 01/08/19 19:14 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/07/19 11:48 | 01/08/19 19:14 | 1 |
| Chromium | ND | | 2.0 | 0.63 | ug/L | | 01/07/19 11:48 | 01/08/19 19:14 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/07/19 11:48 | 01/08/19 19:14 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/07/19 11:48 | 01/08/19 19:14 | 1 |
| Cobalt | ND | | 0.50 | 0.075 | ug/L | | 01/07/19 11:48 | 01/08/19 19:14 | 1 |
| Molybdenum | ND | | 5.0 | 0.47 | ug/L | | 01/07/19 11:48 | 01/08/19 19:14 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/07/19 11:48 | 01/08/19 19:14 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/07/19 11:48 | 01/08/19 19:14 | 1 |
| Lithium | ND | | 5.0 | 2.6 | ug/L | | 01/07/19 11:48 | 01/08/19 19:14 | 1 |

**Lab Sample ID: MB 180-267216/1-A**
**Matrix: Water**
**Analysis Batch: 267572**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 267216**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 1.0 | 0.32 | ug/L | | 01/07/19 11:48 | 01/09/19 20:11 | 1 |

## Method: EPA 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 180-267216/1-A**
**Matrix: Water**
**Analysis Batch: 267572**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 267216**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Barium | ND | | 10 | 0.37 | ug/L | | 01/07/19 11:48 | 01/09/19 20:11 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/07/19 11:48 | 01/09/19 20:11 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/07/19 11:48 | 01/09/19 20:11 | 1 |
| Chromium | ND | | 2.0 | 0.63 | ug/L | | 01/07/19 11:48 | 01/09/19 20:11 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/07/19 11:48 | 01/09/19 20:11 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/07/19 11:48 | 01/09/19 20:11 | 1 |
| Cobalt | ND | | 0.50 | 0.075 | ug/L | | 01/07/19 11:48 | 01/09/19 20:11 | 1 |
| Molybdenum | 0.664 | J | 5.0 | 0.47 | ug/L | | 01/07/19 11:48 | 01/09/19 20:11 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/07/19 11:48 | 01/09/19 20:11 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/07/19 11:48 | 01/09/19 20:11 | 1 |
| Lithium | ND | | 5.0 | 2.6 | ug/L | | 01/07/19 11:48 | 01/09/19 20:11 | 1 |

**Lab Sample ID: LCS 180-267216/2-A**
**Matrix: Water**
**Analysis Batch: 267457**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 267216**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 40.0 | 40.5 | | ug/L | | 101 | 80 - 120 |
| Barium | 2000 | 2040 | | ug/L | | 102 | 80 - 120 |
| Cadmium | 50.0 | 53.0 | | ug/L | | 106 | 80 - 120 |
| Beryllium | 50.0 | 56.7 | | ug/L | | 113 | 80 - 120 |
| Chromium | 200 | 209 | | ug/L | | 105 | 80 - 120 |
| Lead | 20.0 | 21.3 | | ug/L | | 106 | 80 - 120 |
| Selenium | 10.0 | 9.95 | | ug/L | | 99 | 80 - 120 |
| Cobalt | 500 | 515 | | ug/L | | 103 | 80 - 120 |
| Molybdenum | 1000 | 1070 | | ug/L | | 107 | 80 - 120 |
| Antimony | 500 | 517 | | ug/L | | 103 | 80 - 120 |
| Thallium | 50.0 | 53.2 | | ug/L | | 106 | 80 - 120 |
| Lithium | 50.0 | 46.7 | | ug/L | | 93 | 80 - 120 |

**Lab Sample ID: LCS 180-267216/2-A**
**Matrix: Water**
**Analysis Batch: 267572**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 267216**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 40.0 | 39.4 | | ug/L | | 98 | 80 - 120 |
| Barium | 2000 | 1820 | | ug/L | | 91 | 80 - 120 |
| Cadmium | 50.0 | 56.5 | | ug/L | | 113 | 80 - 120 |
| Beryllium | 50.0 | 50.2 | | ug/L | | 100 | 80 - 120 |
| Chromium | 200 | 192 | | ug/L | | 96 | 80 - 120 |
| Lead | 20.0 | 20.8 | | ug/L | | 104 | 80 - 120 |
| Selenium | 10.0 | 8.24 | | ug/L | | 82 | 80 - 120 |
| Cobalt | 500 | 452 | | ug/L | | 90 | 80 - 120 |
| Molybdenum | 1000 | 1090 | | ug/L | | 109 | 80 - 120 |
| Antimony | 500 | 467 | | ug/L | | 93 | 80 - 120 |
| Thallium | 50.0 | 51.0 | | ug/L | | 102 | 80 - 120 |
| Lithium | 50.0 | 54.4 | | ug/L | | 109 | 80 - 120 |

## Method: EPA 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 180-85446-2 MS**
**Matrix: Water**
**Analysis Batch: 267572**

**Client Sample ID: ASB**
**Prep Type: Total Recoverable**
**Prep Batch: 267216**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 3.2 | | 40.0 | 43.3 | | ug/L | | 100 | 75 - 125 |
| Barium | 150 | | 2000 | 1970 | | ug/L | | 91 | 75 - 125 |
| Cadmium | ND | | 50.0 | 57.7 | | ug/L | | 115 | 75 - 125 |
| Beryllium | 0.069 | J ^ | 50.0 | 49.2 | | ug/L | | 98 | 75 - 125 |
| Chromium | 3.6 | | 200 | 189 | | ug/L | | 93 | 75 - 125 |
| Lead | 0.69 | J | 20.0 | 22.1 | | ug/L | | 107 | 75 - 125 |
| Selenium | ND | | 10.0 | 9.53 | | ug/L | | 95 | 75 - 125 |
| Cobalt | 0.96 | | 500 | 440 | | ug/L | | 88 | 75 - 125 |
| Molybdenum | 10 | | 1000 | 1150 | | ug/L | | 114 | 75 - 125 |
| Antimony | 1.9 | J | 500 | 483 | | ug/L | | 96 | 75 - 125 |
| Thallium | 0.091 | J | 50.0 | 50.8 | | ug/L | | 101 | 75 - 125 |
| Lithium | 13 | | 50.0 | 67.9 | | ug/L | | 110 | 75 - 125 |

**Lab Sample ID: 180-85446-2 MSD**
**Matrix: Water**
**Analysis Batch: 267457**

**Client Sample ID: ASB**
**Prep Type: Total Recoverable**
**Prep Batch: 267216**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 3.2 | | 40.0 | 42.7 | | ug/L | | 99 | 75 - 125 | 172 | 20 |
| Barium | 150 | | 2000 | 2280 | | ug/L | | 106 | 75 - 125 | 175 | 20 |
| Cadmium | ND | | 50.0 | 55.9 | | ug/L | | 112 | 75 - 125 | NC | 20 |
| Beryllium | 0.069 | J ^ | 50.0 | 57.6 | ^ | ug/L | | 115 | 75 - 125 | NC | 20 |
| Chromium | 3.6 | | 200 | 226 | | ug/L | | 111 | 75 - 125 | 194 | 20 |
| Lead | 0.69 | J | 20.0 | 22.5 | | ug/L | | 109 | 75 - 125 | 189 | 20 |
| Selenium | ND | | 10.0 | 9.14 | | ug/L | | 91 | 75 - 125 | NC | 20 |
| Cobalt | 0.96 | | 500 | 489 | | ug/L | | 98 | 75 - 125 | 200 | 20 |
| Molybdenum | 10 | | 1000 | 1110 | | ug/L | | 110 | 75 - 125 | 197 | 20 |
| Antimony | 1.9 | J | 500 | 545 | | ug/L | | 109 | 75 - 125 | 199 | 20 |
| Thallium | 0.091 | J | 50.0 | 53.6 | | ug/L | | 107 | 75 - 125 | NC | 20 |
| Lithium | 13 | | 50.0 | 62.3 | | ug/L | | 99 | 75 - 125 | 132 | 20 |

## Method: EPA 7470A - Mercury (CVAA)

**Lab Sample ID: MB 180-267213/1-A**
**Matrix: Water**
**Analysis Batch: 267249**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 267213**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/07/19 11:26 | 01/07/19 18:19 | 1 |

**Lab Sample ID: LCS 180-267213/2-A**
**Matrix: Water**
**Analysis Batch: 267249**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 267213**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 2.50 | 2.66 | | ug/L | | 106 | 80 - 120 |

# QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85446-1

## HPLC/IC

### Analysis Batch: 267731

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85446-1 | ABB | Total/NA | Water | EPA 9056A | |
| 180-85446-2 | ASB | Total/NA | Water | EPA 9056A | |
| MB 180-267731/6 | Method Blank | Total/NA | Water | EPA 9056A | |
| LCS 180-267731/5 | Lab Control Sample | Total/NA | Water | EPA 9056A | |
| 180-85446-2 MS | ASB | Total/NA | Water | EPA 9056A | |
| 180-85446-2 MSD | ASB | Total/NA | Water | EPA 9056A | |

## Metals

### Prep Batch: 267213

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85446-1 | ABB | Total/NA | Water | 7470A | |
| 180-85446-2 | ASB | Total/NA | Water | 7470A | |
| MB 180-267213/1-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 180-267213/2-A | Lab Control Sample | Total/NA | Water | 7470A | |

### Prep Batch: 267216

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85446-1 | ABB | Total Recoverable | Water | 3005A | |
| 180-85446-2 | ASB | Total Recoverable | Water | 3005A | |
| MB 180-267216/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 180-267216/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 180-85446-2 MS | ASB | Total Recoverable | Water | 3005A | |
| 180-85446-2 MSD | ASB | Total Recoverable | Water | 3005A | |

### Analysis Batch: 267249

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85446-1 | ABB | Total/NA | Water | EPA 7470A | 267213 |
| 180-85446-2 | ASB | Total/NA | Water | EPA 7470A | 267213 |
| MB 180-267213/1-A | Method Blank | Total/NA | Water | EPA 7470A | 267213 |
| LCS 180-267213/2-A | Lab Control Sample | Total/NA | Water | EPA 7470A | 267213 |

### Analysis Batch: 267457

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85446-1 | ABB | Total Recoverable | Water | EPA 6020A | 267216 |
| 180-85446-2 | ASB | Total Recoverable | Water | EPA 6020A | 267216 |
| MB 180-267216/1-A | Method Blank | Total Recoverable | Water | EPA 6020A | 267216 |
| LCS 180-267216/2-A | Lab Control Sample | Total Recoverable | Water | EPA 6020A | 267216 |
| 180-85446-2 MSD | ASB | Total Recoverable | Water | EPA 6020A | 267216 |

### Analysis Batch: 267572

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 180-267216/1-A | Method Blank | Total Recoverable | Water | EPA 6020A | 267216 |
| LCS 180-267216/2-A | Lab Control Sample | Total Recoverable | Water | EPA 6020A | 267216 |
| 180-85446-2 MS | ASB | Total Recoverable | Water | EPA 6020A | 267216 |

# Chain of Custody Record

273172

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

| Client Contact | Project Manager: | Site Contact: | Date: | COC No: |
|---|---|---|---|---|
| Company Name: KPRG and Associates | Tel/Fax: | Lab Contact: | Carrier: | ____ of ____ COCs |
| Address: 14665 W Lisbon Rd Ste 1A | Analysis Turnaround Time | | | Sampler: |
| City/State/Zip: Brookfield / WI 53005 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| Phone: 262-781-0475 | TAT if different from Below ____ | | | Walk-in Client: |
| Fax: | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: NRG | ☐ 1 week | | | |
| Site: Powerton | ☐ 2 days | | | Job / SDG No.: |
| PO# 23517.0 | ☐ 1 day | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | Fluoride | Metals | Rad 226/228 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ABB | 1-4-19 | 1100 | G | W | 4 | N | N | X | X | X | |
| ASB | 1-4-19 | 1200 | G | W | 4 | N | N | X | X | X | |
| | | | | | | | | 1 | 4 | 4 | |

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
CCR Appedix 4 metals → As, Ba, Cd, Co, Pb, Li, Hg, Mo, Se, Tl / Date for all samples is 1-4-19

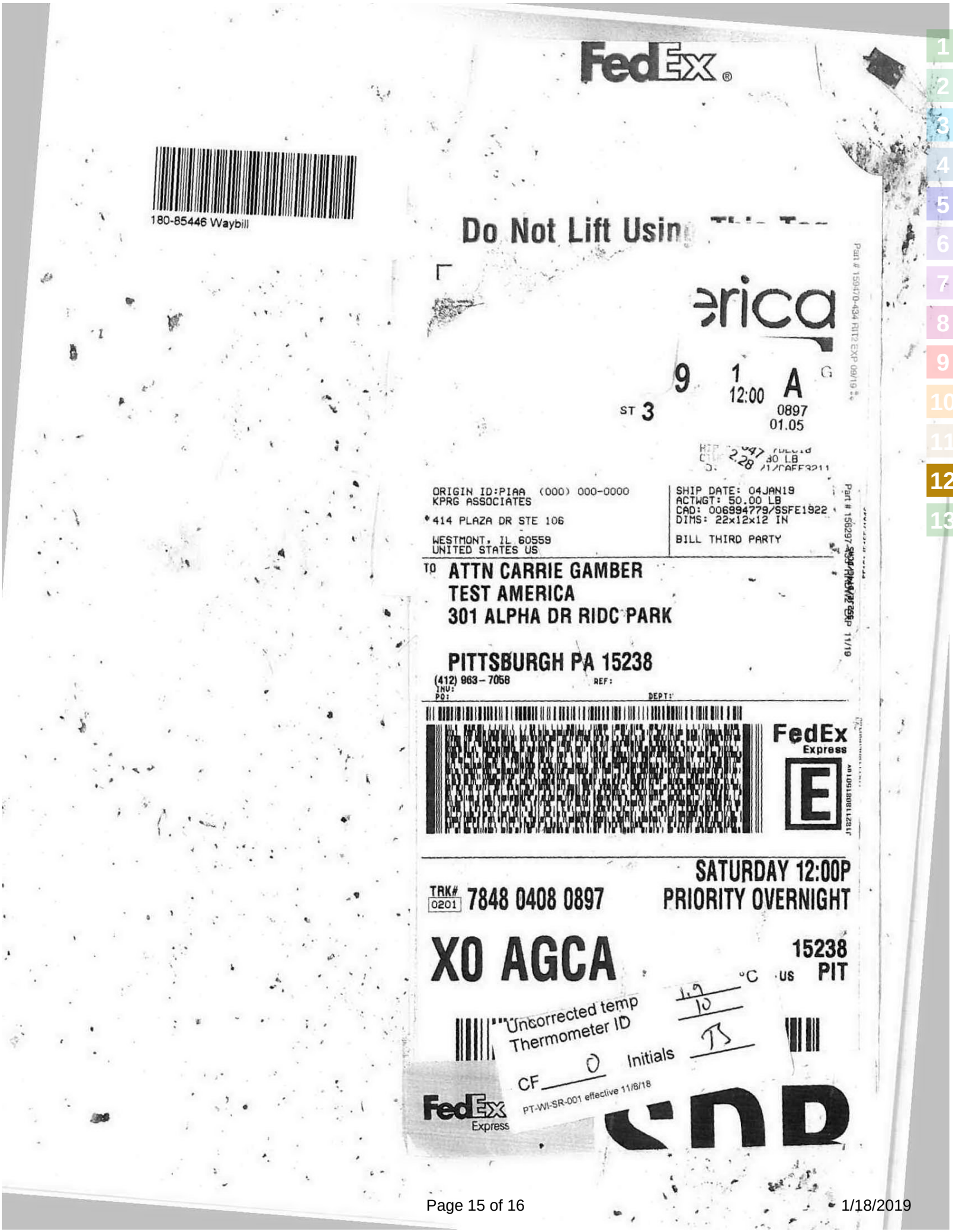
Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| Mitchel Dolan | KPRG | 1-4-19/1400 | FEDEX | | 1-4-19/1400 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| | | | Pauline Watson | TAPH | 1-5-19 - 9:30 |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |

180-85446 Chain of Custody



1/18/2019


FedEx
180-85446 Waybill
Do Not Lift Usin
erica
9 1 A
12:00
ST 3
0897
01.05
ORIGIN ID:PIAA (000) 000-0000
KPRG ASSOCIATES
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 04JAN19
ACTWGT: 50.00 LB
CAD: 006994779/SSFE1922
DIMS: 22x12x12 IN
BILL THIRD PARTY
TO ATTN CARRIE GAMBER
TEST AMERICA
301 ALPHA DR RIDC PARK
PITTSBURGH PA 15238
(412) 963-7058
REF:
INV:
PO:
DEPT:
FedEx Express
TRK# 0201 7848 0408 0897
SATURDAY 12:00P
PRIORITY OVERNIGHT
XO AGCA
15238
PIT
°C
US
Uncorrected temp
Thermometer ID
Initials
CF
PT-WI-SR-001 effective 11/6/18
FedEx Express

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 180-85446-1

**Login Number: 85446**
**List Number: 1**
**Creator: Watson, Debbie**

**List Source: TestAmerica Pittsburgh**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica

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# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-85446-2
Client Project/Site: Midwest Generation

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*2/7/2019 4:39:54 PM*

Carrie Gamber, Senior Project Manager
(412)963-2428
carrie.gamber@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

*PA Lab ID: 02-00416*

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## Job ID: 180-85446-2

**Laboratory: TestAmerica Pittsburgh**

**Narrative**

# CASE NARRATIVE

## Client: KPRG and Associates, Inc.

## Project: Midwest Generation

## Report Number: 180-85446-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

**RECEIPT**

The samples were received on 01/05/2019; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.9 C.

The Field Sampler was not listed on the Chain of Custody.

**903.0**

The following samples were prepared at a reduced aliquot: ABB (180-85446-1) and ASB (180-85446-2). Sample 180-85446-1 was reduced due to yellow discoloration. Sample 180-85446-2 was reduced due to sediment.

**904.0**

The following samples were prepared at a reduced aliquot due to limited sample volume due to re-extract: ABB (180-85446-1) and ASB (180-85446-2).

Method(s) PrecSep_0: Radium 228 Prep Batch 160-410725: The following samples were prepared at a reduced aliquot: ABB (180-85446-1) and ASB (180-85446-2). Sample 180-85446-1 was reduced due to yellow discoloration. Sample 180-85446-2 was reduced due to sediment.

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| G | The Sample MDC is greater than the requested RL. |
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85446-2

## Laboratory: TestAmerica Pittsburgh

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200005 | 06-30-19 |

## Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Alaska | State Program | 10 | MO00054 | 06-30-19 |
| ANAB | DoD ELAP | | L2305 | 04-06-19 |
| Arizona | State Program | 9 | AZ0813 | 12-08-19 |
| California | State Program | 9 | 2886 | 06-30-19 |
| Connecticut | State Program | 1 | PH-0241 | 03-31-19 |
| Florida | NELAP | 4 | E87689 | 06-30-19 |
| Illinois | NELAP | 5 | 200023 | 11-30-19 |
| Iowa | State Program | 7 | 373 | 12-01-20 |
| Kansas | NELAP | 7 | E-10236 | 10-31-19 |
| Kentucky (DW) | State Program | 4 | 90125 | 12-31-18 * |
| Louisiana | NELAP | 6 | 04080 | 06-30-19 |
| Louisiana (DW) | NELAP | 6 | LA011 | 12-31-19 |
| Maryland | State Program | 3 | 310 | 09-30-19 |
| Michigan | State Program | 5 | 9005 | 06-30-19 |
| Missouri | State Program | 7 | 780 | 06-30-19 |
| Nevada | State Program | 9 | MO000542018-1 | 07-31-19 |
| New Jersey | NELAP | 2 | MO002 | 06-30-19 |
| New York | NELAP | 2 | 11616 | 03-31-19 |
| North Dakota | State Program | 8 | R207 | 06-30-19 |
| NRC | NRC | | 24-24817-01 | 12-31-22 |
| Oklahoma | State Program | 6 | 9997 | 08-31-19 |
| Pennsylvania | NELAP | 3 | 68-00540 | 02-28-19 * |
| South Carolina | State Program | 4 | 85002001 | 06-30-19 |
| Texas | NELAP | 6 | T104704193-18-12 | 07-31-19 |
| US Fish & Wildlife | Federal | | 058448 | 07-31-19 |
| USDA | Federal | | P330-17-0028 | 02-02-20 |
| Utah | NELAP | 8 | MO000542018-10 | 07-31-19 |
| Virginia | NELAP | 3 | 460230 | 06-14-19 |
| Washington | State Program | 10 | C592 | 08-30-19 |
| West Virginia DEP | State Program | 3 | 381 | 08-31-19 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85446-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 180-85446-1 | ABB | Water | 01/04/19 11:00 | 01/05/19 09:30 |
| 180-85446-2 | ASB | Water | 01/04/19 12:00 | 01/05/19 09:30 |

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85446-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85446-2

## Client Sample ID: ABB

**Lab Sample ID: 180-85446-1**

**Date Collected: 01/04/19 11:00**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 750.59 mL | 1.0 g | 409814 | 01/09/19 09:10 | SJC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 413802 | 02/06/19 08:40 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 196.71 mL | 1.0 g | 412615 | 01/28/19 08:01 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413086 | 01/31/19 09:19 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |

## Client Sample ID: ASB

**Lab Sample ID: 180-85446-2**

**Date Collected: 01/04/19 12:00**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 750.46 mL | 1.0 g | 409814 | 01/09/19 09:10 | SJC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 413802 | 02/06/19 08:40 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 264.91 mL | 1.0 g | 412615 | 01/28/19 08:01 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413086 | 01/31/19 09:19 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

**Analyst References:**

Lab: TAL SL

Batch Type: Prep

JLC = Jessica Chapman

SJC = Sarah Cooper

Batch Type: Analysis

KLS = Kody Saulters

## Client Sample ID: ABB

**Lab Sample ID: 180-85446-1**

**Date Collected: 01/04/19 11:00**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0261 | U | 0.0578 | 0.0578 | 1.00 | 0.107 | pCi/L | 01/09/19 09:10 | 02/06/19 08:40 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.2* | | *40 - 110* | *01/09/19 09:10* | *02/06/19 08:40* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.85 | U G | 1.61 | 1.62 | 1.00 | 2.59 | pCi/L | 01/28/19 08:01 | 01/31/19 09:19 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.3* | | *40 - 110* | *01/28/19 08:01* | *01/31/19 09:19* | *1* |
| *Y Carrier* | *75.5* | | *40 - 110* | *01/28/19 08:01* | *01/31/19 09:19* | *1* |

## Client Sample ID: ASB

**Lab Sample ID: 180-85446-2**

**Date Collected: 01/04/19 12:00**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.144** | | 0.0952 | 0.0961 | 1.00 | 0.125 | pCi/L | 01/09/19 09:10 | 02/06/19 08:40 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.6* | | *40 - 110* | *01/09/19 09:10* | *02/06/19 08:40* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.02 | U G | 1.08 | 1.08 | 1.00 | 1.76 | pCi/L | 01/28/19 08:01 | 01/31/19 09:19 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.7* | | *40 - 110* | *01/28/19 08:01* | *01/31/19 09:19* | *1* |
| *Y Carrier* | *74.4* | | *40 - 110* | *01/28/19 08:01* | *01/31/19 09:19* | *1* |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-409814/22-A**
**Matrix: Water**
**Analysis Batch: 413803**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 409814**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.01039 | U | 0.0415 | 0.0415 | 1.00 | 0.0985 | pCi/L | 01/09/19 09:10 | 02/06/19 08:42 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* | *01/09/19 09:10* | *02/06/19 08:42* | *1* |

**Lab Sample ID: LCS 160-409814/1-A**
**Matrix: Water**
**Analysis Batch: 413801**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 409814**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 15.1 | 14.10 | | 1.44 | 1.00 | 0.116 | pCi/L | 93 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *97.9* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-412615/22-A**
**Matrix: Water**
**Analysis Batch: 413086**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 412615**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.743 | U G | 1.16 | 1.18 | 1.00 | 1.79 | pCi/L | 01/28/19 08:01 | 01/31/19 09:20 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *108* | | *40 - 110* | *01/28/19 08:01* | *01/31/19 09:20* | *1* |
| *Y Carrier* | *74.8* | | *40 - 110* | *01/28/19 08:01* | *01/31/19 09:20* | *1* |

**Lab Sample ID: LCS 160-412615/1-A**
**Matrix: Water**
**Analysis Batch: 413086**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 412615**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 47.6 | 41.82 | | 4.97 | 1.00 | 1.83 | pCi/L | 88 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *99.4* | | *40 - 110* |
| *Y Carrier* | *79.3* | | *40 - 110* |

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85446-2

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCSD 160-412615/2-A**
**Matrix: Water**
**Analysis Batch: 413086**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 412615**

| Analyte | | | Spike Added | LCSD Result | LCSD Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 47.6 | 41.03 | | 4.84 | 1.00 | 1.63 | pCi/L | 86 | 56 - 140 | 0.08 | 1 |

| *Carrier* | *LCSD %Yield* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *104* | | *40 - 110* |
| *Y Carrier* | *79.6* | | *40 - 110* |

# QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85446-2

## Rad

### Prep Batch: 409814

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85446-1 | ABB | Total/NA | Water | PrecSep-21 | |
| 180-85446-2 | ASB | Total/NA | Water | PrecSep-21 | |
| MB 160-409814/22-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-409814/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 412615

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85446-1 | ABB | Total/NA | Water | PrecSep_0 | |
| 180-85446-2 | ASB | Total/NA | Water | PrecSep_0 | |
| MB 160-412615/22-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-412615/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| LCSD 160-412615/2-A | Lab Control Sample Dup | Total/NA | Water | PrecSep_0 | |

# Chain of Custody Record

273172

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

| Client Contact | Project Manager: | Site Contact: | Date: | COC No: |
|---|---|---|---|---|
| Company Name: KPRG and Associates | Tel/Fax: | Lab Contact: | Carrier: | ____ of ____ COCs |
| Address: 14665 W Lisbon Rd Ste 1A | Analysis Turnaround Time | | | Sampler: |
| City/State/Zip: Brookfield / WI 53005 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| Phone: 262-781-0475 | TAT if different from Below ____ | | | Walk-in Client: |
| Fax: | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: NRG | ☐ 1 week | | | |
| Site: Powerton | ☐ 2 days | | | Job / SDG No.: |
| PO# 23517.0 | ☐ 1 day | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | Fluoride | Metals | Rad 226/228 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ABB | 1-4-19 | 1100 | G | W | 4 | N | N | X | X | X | |
| ASB | 1-4-19 | 1200 | G | W | 4 | N | N | X | X | X | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
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| | | | | | | | | | | | |
| | | | | | | | | 1 | 4 | 4 | |

180-85446 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

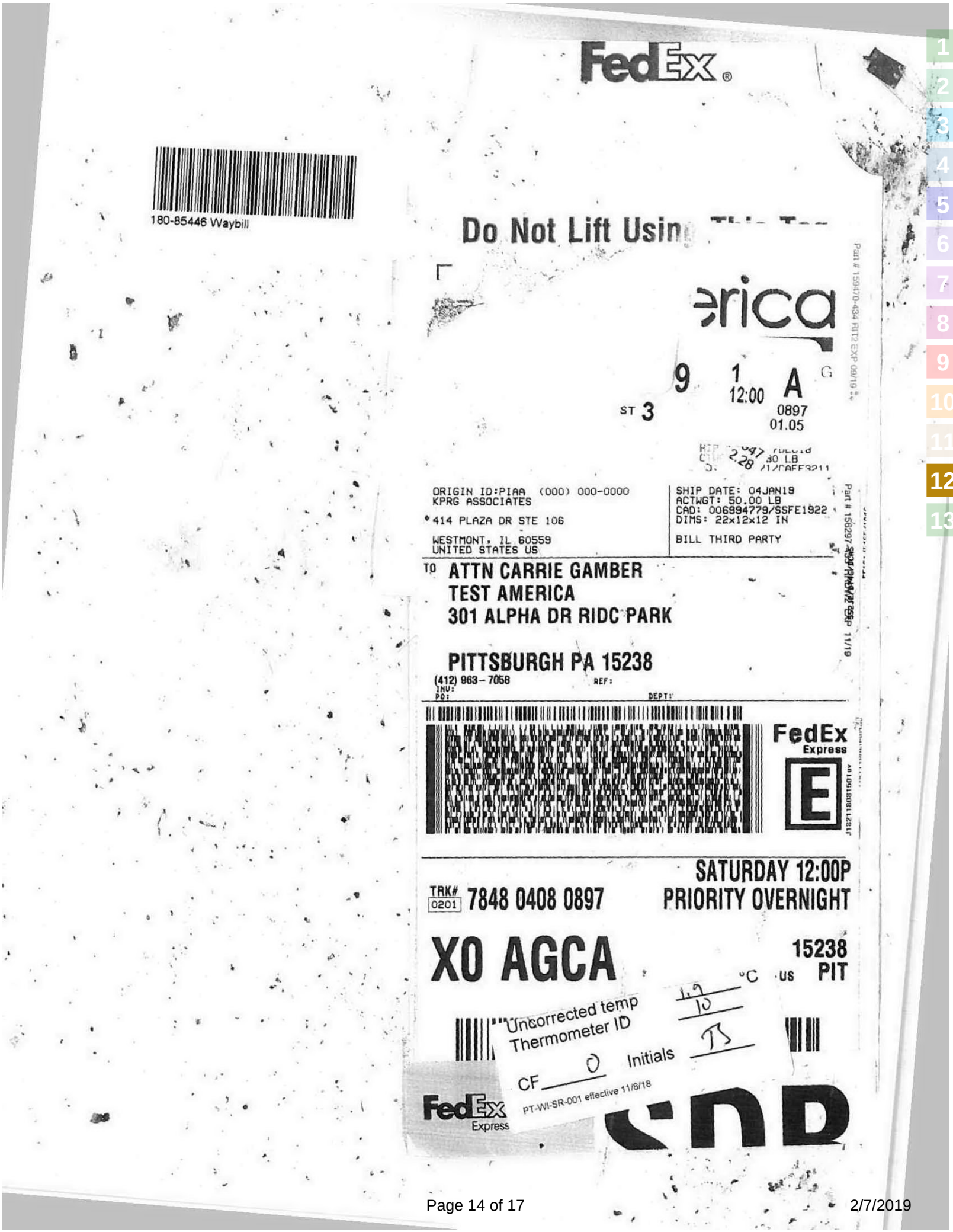
**Special Instructions/QC Requirements & Comments:**
CCR Appedix 4 metals → As, Ba, Cd, Co, Pb, Li, Hg, Mo, Se, Tl / Date for all samples is 1-4-19

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| Mitchel Dolan | KPRG | 1-4-19/1400 | FEDEX | | 1-4-19/1400 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| | | | Pauline Watson | TAPH | 1-5-19 - 9:30 |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |



2/7/2019


FedEx
180-85446 Waybill
Do Not Lift Usin
erica
9 1 A
12:00
ST 3
0897
01.05
ORIGIN ID:PIAA (000) 000-0000
KPRG ASSOCIATES
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 04JAN19
ACTWGT: 50.00 LB
CAD: 006994779/SSFE1922
DIMS: 22x12x12 IN
BILL THIRD PARTY
TO ATTN CARRIE GAMBER
TEST AMERICA
301 ALPHA DR RIDC PARK
PITTSBURGH PA 15238
(412) 963-7058
REF:
INV:
PO:
DEPT:
FedEx Express
SATURDAY 12:00P
TRK# 0201 7848 0408 0897
PRIORITY OVERNIGHT
XO AGCA
15238
PIT
°C
US
Uncorrected temp
Thermometer ID
Initials
CF
PT-WI-SR-001 effective 11/6/18
FedEx Express

**TestAmerica Pittsburgh**
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Gamber, Carrie L | Carrier Tracking No(s): | COC No: 180-351860.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: carrie.gamber@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 180-85446-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 1/17/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Midwest Generation | Project #: 18018377 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | |
| ABB (180-85446-1) | 1/4/19 | 11:00 Central | | Water | | | X | X | 2 | |
| ASB (180-85446-2) | 1/4/19 | 12:00 Central | | Water | | | X | X | 2 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Relinquished by: | 1/7/19 1700 | TA Pitt | | 1-8-19/0855 | TASL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 180-85446-2

**Login Number: 85446**
**List Number: 1**
**Creator: Watson, Debbie**

**List Source: TestAmerica Pittsburgh**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 180-85446-2

**Login Number: 85446**
**List Number: 2**
**Creator: Press, Nicholas B**

**List Source: TestAmerica St. Louis**
**List Creation: 01/08/19 02:44 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 19.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-85447-1
Client Project/Site: Midwest Generation

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*2/21/2019 3:09:58 PM*

Carrie Gamber, Senior Project Manager
(412)963-2428
carrie.gamber@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

*PA Lab ID: 02-00416*

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## Job ID: 180-85447-1

**Laboratory: TestAmerica Pittsburgh**

**Narrative**

# CASE NARRATIVE

## Client: KPRG and Associates, Inc.

## Project: Midwest Generation

## Report Number: 180-85447-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

**RECEIPT**

The samples were received on 01/05/2019; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.9 C.

The Field Sampler was not listed on the Chain of Custody.

One out of two containers for the following sample did not match the information listed on the Chain-of-Custody (COC): ABB PRETEST (180-85447-1). The container label lists a sample collection time of 11:00, while the COC lists 11:10. The time on the COC was used.

**METALS**

A couple samples were diluted due to the high concentration of non-target metals or due to the sample matrix. Elevated reporting limits (RLs) are provided.

Lead was detected in method blank MB 180-268107/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Chromium and Cobalt were detected in method blank MB 180-268586/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

**GENERAL CHEMSITRY**

Several samples were diluted due to the nature of the sample matrix or due to the detection of non-target analytes for IC (Nitrate). Nitric Acid is used to adjust the pH of the sample per the leach method. Elevated reporting limits (RLs) are provided.

The continuing calibration verification (CCV) associated with batch 180-269858 recovered outside acceptance criteria, biased low, for Fluoride. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect or at an estimated level for this analyte, the data have been reported. The samples contained high concentrations of Nitric Acid which caused the CCV after it to fail low for this analyte.

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-1

## Qualifiers

### HPLC/IC

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### Metals

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| B | Compound was found in the blank and sample. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| E | Result exceeded calibration range. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-1

## Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200005 | 06-30-19 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 2540G | | Solid | Percent Moisture |
| 2540G | | Solid | Percent Solids |
| EPA 6020A | 3010A | Solid | Lithium |
| SM 2510B | | Solid | Specific Conductance |
| SM 2580B | | Solid | Oxidation Reduction Potential |

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 180-85447-1 | ABB PRETEST | Solid | 01/04/19 11:10 | 01/05/19 09:30 |
| 180-85447-2 | ABB pH 13.0 | Solid | 01/04/19 11:10 | 01/05/19 09:30 |
| 180-85447-3 | ABB pH 12.0 | Solid | 01/04/19 11:10 | 01/05/19 09:30 |
| 180-85447-4 | ABB pH 10.5 | Solid | 01/04/19 11:10 | 01/05/19 09:30 |
| 180-85447-6 | ABB pH 8.0 | Solid | 01/04/19 11:10 | 01/05/19 09:30 |
| 180-85447-7 | ABB pH 7.0 | Solid | 01/04/19 11:10 | 01/05/19 09:30 |
| 180-85447-8 | ABB pH 5.5 | Solid | 01/04/19 11:10 | 01/05/19 09:30 |
| 180-85447-9 | ABB pH 4.0 | Solid | 01/04/19 11:10 | 01/05/19 09:30 |
| 180-85447-10 | ABB pH 2.0 | Solid | 01/04/19 11:10 | 01/05/19 09:30 |
| 180-85447-11 | ABB pH NATURAL | Solid | 01/04/19 11:10 | 01/05/19 09:30 |
| 180-85447-12 | ASB PRETEST | Solid | 01/04/19 11:45 | 01/05/19 09:30 |
| 180-85447-13 | ASB pH 13.0 | Solid | 01/04/19 11:45 | 01/05/19 09:30 |
| 180-85447-14 | ASB pH 12.0 | Solid | 01/04/19 11:45 | 01/05/19 09:30 |
| 180-85447-15 | ASB pH 10.5 | Solid | 01/04/19 11:45 | 01/05/19 09:30 |
| 180-85447-17 | ASB pH 8.0 | Solid | 01/04/19 11:45 | 01/05/19 09:30 |
| 180-85447-18 | ASB pH 7.0 | Solid | 01/04/19 11:45 | 01/05/19 09:30 |
| 180-85447-19 | ASB pH 5.5 | Solid | 01/04/19 11:45 | 01/05/19 09:30 |
| 180-85447-20 | ASB pH 4.0 | Solid | 01/04/19 11:45 | 01/05/19 09:30 |
| 180-85447-21 | ASB pH 2.0 | Solid | 01/04/19 11:45 | 01/05/19 09:30 |
| 180-85447-22 | ASB pH NATURAL | Solid | 01/04/19 11:45 | 01/05/19 09:30 |
| 180-85447-23 | MB LOW | Solid | 01/04/19 00:00 | 01/05/19 09:30 |
| 180-85447-24 | MB NATURAL | Solid | 01/04/19 00:00 | 01/05/19 09:30 |
| 180-85447-25 | MB HIGH | Solid | 01/04/19 00:00 | 01/05/19 09:30 |
| 180-85447-49 | MB LOW 1 | Solid | 01/21/19 00:00 | 01/05/19 09:30 |
| 180-85447-51 | MB LOW 2 | Solid | 01/31/19 00:00 | 01/05/19 09:30 |

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| EPA 9056A | Anions, Ion Chromatography | SW846 | TAL PIT |
| EPA 6020A | Metals (ICP/MS) | SW846 | TAL PIT |
| EPA 7470A | Mercury (CVAA) | SW846 | TAL PIT |
| 2540G | SM 2540G | SM22 | TAL PIT |
| EPA 9040C | pH | SW846 | TAL PIT |
| SM 2510B | Conductivity, Specific Conductance | SM | TAL PIT |
| SM 2580B | Reduction-Oxidation (REDOX) Potential | SM | TAL PIT |
| 1313 | Liquid-Solid Partitioning as a Function of pH via Parallel Batch | SW846 | TAL PIT |
| 3010A | Preparation, Total Metals | SW846 | TAL PIT |
| 7470A | Preparation, Mercury | SW846 | TAL PIT |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM22 = Standard Methods For The Examination Of Water And Wastewater, 22nd Edition

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-1

## Client Sample ID: ABB PRETEST

**Lab Sample ID: 180-85447-1**

**Date Collected: 01/04/19 11:10**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 2540G | | 1 | | | 267637 | 01/11/19 08:56 | JMS | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268604 | 01/23/19 07:40 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB pH 13.0

**Lab Sample ID: 180-85447-2**

**Date Collected: 01/04/19 11:10**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 5 | | | 268208 | 01/18/19 11:10 | CMR | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268107 | 01/17/19 07:12 | RJR | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268295 | 01/18/19 17:20 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268065 | 01/16/19 15:06 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268204 | 01/17/19 17:47 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268142 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268140 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-1

## Client Sample ID: ABB pH 12.0

**Lab Sample ID: 180-85447-3**

**Date Collected: 01/04/19 11:10**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 1 | | | 268079 | 01/17/19 14:37 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268107 | 01/17/19 07:12 | RJR | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268295 | 01/18/19 17:30 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268065 | 01/16/19 15:06 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268204 | 01/17/19 17:48 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268142 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268140 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB pH 10.5

**Lab Sample ID: 180-85447-4**

**Date Collected: 01/04/19 11:10**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 10 | | | 268298 | 01/19/19 10:55 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268263 | 01/18/19 12:59 | NAM | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268357 | 01/19/19 17:28 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268340 | 01/21/19 10:49 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268542 | 01/22/19 18:02 | KA | TAL PIT |
| | Instrument ID: HGZ | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268260 | 01/18/19 10:20 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268262 | 01/18/19 10:40 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-1

## Client Sample ID: ABB pH 10.5

**Date Collected: 01/04/19 11:10**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-4

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | SM 2580B | | 1 | | | 268261 | 01/18/19 10:20 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB pH 8.0

**Date Collected: 01/04/19 11:10**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-6

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 1 | | | 268079 | 01/17/19 14:53 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268107 | 01/17/19 07:12 | RJR | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268295 | 01/18/19 17:34 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268065 | 01/16/19 15:06 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268204 | 01/17/19 17:49 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268142 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268140 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB pH 7.0

**Date Collected: 01/04/19 11:10**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-7

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 1 | | | 268079 | 01/17/19 15:08 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268107 | 01/17/19 07:12 | RJR | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268295 | 01/18/19 17:37 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268065 | 01/16/19 15:06 | KA | TAL PIT |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-1

## Client Sample ID: ABB pH 7.0

**Lab Sample ID: 180-85447-7**

**Date Collected: 01/04/19 11:10**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | EPA 7470A | | 1 | | | 268204 | 01/17/19 17:50 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268142 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268140 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB pH 5.5

**Lab Sample ID: 180-85447-8**

**Date Collected: 01/04/19 11:10**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 5 | | | 268298 | 01/19/19 11:10 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268263 | 01/18/19 12:59 | NAM | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268357 | 01/19/19 17:32 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268340 | 01/21/19 10:49 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268542 | 01/22/19 18:03 | KA | TAL PIT |
| | Instrument ID: HGZ | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268260 | 01/18/19 10:20 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268262 | 01/18/19 10:40 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268261 | 01/18/19 10:20 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB pH 4.0

**Lab Sample ID: 180-85447-9**

**Date Collected: 01/04/19 11:10**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-1

## Client Sample ID: ABB pH 4.0

**Date Collected: 01/04/19 11:10**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-9

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | EPA 9056A | | 10 | | | 268298 | 01/19/19 11:25 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268263 | 01/18/19 12:59 | NAM | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268357 | 01/19/19 17:35 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268340 | 01/21/19 10:49 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268542 | 01/22/19 18:04 | KA | TAL PIT |
| | Instrument ID: HGZ | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268260 | 01/18/19 10:20 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268262 | 01/18/19 10:40 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268261 | 01/18/19 10:20 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB pH 2.0

**Date Collected: 01/04/19 11:10**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-10

**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Analysis | EPA 9056A | | 50 | | | 269858 | 02/07/19 23:30 | CMR | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 269867 | 02/07/19 11:53 | NAM | TAL PIT |
| Leach | Analysis | EPA 6020A | | 10 | 1.0 mL | 1.0 mL | 270330 | 02/12/19 18:46 | WTR | TAL PIT |
| | Instrument ID: X | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 269834 | 02/07/19 10:44 | RJR | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 269950 | 02/08/19 10:23 | RJR | TAL PIT |
| | Instrument ID: HGZ | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 269862 | 02/07/19 08:30 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 269868 | 02/07/19 08:30 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 269865 | 02/07/19 08:30 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB pH NATURAL

**Lab Sample ID: 180-85447-11**

**Date Collected: 01/04/19 11:10**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 1 | | | 268079 | 01/17/19 12:00 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268107 | 01/17/19 07:12 | RJR | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268295 | 01/18/19 17:40 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268065 | 01/16/19 15:06 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268204 | 01/17/19 17:45 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268142 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268140 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB PRETEST

**Lab Sample ID: 180-85447-12**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 2540G | | 1 | | | 267637 | 01/11/19 08:56 | JMS | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268604 | 01/23/19 07:40 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB pH 13.0

**Lab Sample ID: 180-85447-13**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |

## Client Sample ID: ASB pH 13.0

**Lab Sample ID: 180-85447-13**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | EPA 9056A | | 5 | | | 268208 | 01/18/19 11:26 | CMR | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268107 | 01/17/19 07:12 | RJR | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268295 | 01/18/19 17:43 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268065 | 01/16/19 15:06 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268204 | 01/17/19 17:51 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268142 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268140 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB pH 12.0

**Lab Sample ID: 180-85447-14**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 5 | | | 268079 | 01/17/19 18:02 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268107 | 01/17/19 07:12 | RJR | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268295 | 01/18/19 17:47 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268065 | 01/16/19 15:06 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268204 | 01/17/19 17:56 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268142 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268140 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB pH 10.5

**Lab Sample ID: 180-85447-15**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 1 | | | 268079 | 01/17/19 15:24 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268107 | 01/17/19 07:12 | RJR | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268295 | 01/18/19 17:50 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268065 | 01/16/19 15:06 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268204 | 01/17/19 17:57 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268142 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268140 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB pH 8.0

**Lab Sample ID: 180-85447-17**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 1 | | | 268079 | 01/17/19 15:40 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268107 | 01/17/19 07:12 | RJR | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268295 | 01/18/19 17:53 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268065 | 01/16/19 15:06 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268204 | 01/17/19 17:58 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268142 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |

## Client Sample ID: ASB pH 8.0

**Lab Sample ID: 180-85447-17**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | SM 2580B | | 1 | | | 268140 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB pH 7.0

**Lab Sample ID: 180-85447-18**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 2.5 | | | 268079 | 01/17/19 18:18 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268107 | 01/17/19 07:12 | RJR | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268295 | 01/18/19 17:57 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268065 | 01/16/19 15:06 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268204 | 01/17/19 17:59 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268142 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268140 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB pH 5.5

**Lab Sample ID: 180-85447-19**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 10 | | | 268298 | 01/19/19 11:41 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268263 | 01/18/19 12:59 | NAM | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268357 | 01/19/19 17:38 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268340 | 01/21/19 10:49 | KA | TAL PIT |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-1

## Client Sample ID: ASB pH 5.5

**Lab Sample ID: 180-85447-19**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | EPA 7470A | | 1 | | | 268542 | 01/22/19 18:05 | KA | TAL PIT |
| | Instrument ID: HGZ | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268260 | 01/18/19 10:20 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268262 | 01/18/19 10:40 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268261 | 01/18/19 10:20 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB pH 4.0

**Lab Sample ID: 180-85447-20**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 25 | | | 268716 | 01/24/19 19:53 | CMR | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268586 | 01/23/19 12:55 | NAM | TAL PIT |
| Leach | Analysis | EPA 6020A | | 10 | | | 268821 | 01/25/19 14:30 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 269197 | 01/31/19 07:10 | RJR | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 269298 | 01/31/19 16:42 | RJR | TAL PIT |
| | Instrument ID: HGZ | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268604 | 01/23/19 07:40 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268609 | 01/23/19 07:40 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268608 | 01/23/19 07:40 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB pH 2.0

**Lab Sample ID: 180-85447-21**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |

## Client Sample ID: ASB pH 2.0

**Lab Sample ID: 180-85447-21**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | EPA 9056A | | 50 | | | 269858 | 02/07/19 23:46 | CMR | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 269867 | 02/07/19 11:53 | NAM | TAL PIT |
| Leach | Analysis | EPA 6020A | | 10 | 1.0 mL | 1.0 mL | 270330 | 02/12/19 18:51 | WTR | TAL PIT |
| | Instrument ID: X | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 269834 | 02/07/19 10:44 | RJR | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 269950 | 02/08/19 10:22 | RJR | TAL PIT |
| | Instrument ID: HGZ | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 269862 | 02/07/19 08:30 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 269868 | 02/07/19 08:30 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 269865 | 02/07/19 08:30 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ASB pH NATURAL

**Lab Sample ID: 180-85447-22**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 1 | | | 268079 | 01/17/19 10:28 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268107 | 01/17/19 07:12 | RJR | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268295 | 01/18/19 18:00 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268065 | 01/16/19 15:06 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268204 | 01/17/19 17:46 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268142 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 936.4 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268140 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: MB LOW

**Lab Sample ID: 180-85447-23**

**Date Collected: 01/04/19 00:00**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 100 | | | 268298 | 01/19/19 11:56 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268263 | 01/18/19 12:59 | NAM | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268357 | 01/19/19 17:41 | WTR | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268340 | 01/21/19 10:49 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268542 | 01/22/19 18:06 | KA | TAL PIT |
| | Instrument ID: HGZ | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268260 | 01/18/19 10:20 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268262 | 01/18/19 10:40 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268246 | 01/16/19 10:20 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268261 | 01/18/19 10:20 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: MB NATURAL

**Lab Sample ID: 180-85447-24**

**Date Collected: 01/04/19 00:00**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 1 | | | 268079 | 01/17/19 10:43 | MJH | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268107 | 01/17/19 07:12 | RJR | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268295 | 01/18/19 18:10 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268065 | 01/16/19 15:06 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268204 | 01/17/19 18:03 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268142 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |

## Client Sample ID: MB NATURAL

**Lab Sample ID: 180-85447-24**

**Date Collected: 01/04/19 00:00**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | SM 2580B | | 1 | | | 268140 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: MB HIGH

**Lab Sample ID: 180-85447-25**

**Date Collected: 01/04/19 00:00**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 5 | | | 268208 | 01/18/19 11:41 | CMR | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268107 | 01/17/19 07:12 | RJR | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268295 | 01/18/19 18:13 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 268065 | 01/16/19 15:06 | KA | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 268204 | 01/17/19 18:00 | KA | TAL PIT |
| | Instrument ID: HGY | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268135 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268142 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268040 | 01/14/19 09:05 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268140 | 01/16/19 09:05 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: MB LOW 1

**Lab Sample ID: 180-85447-49**

**Date Collected: 01/21/19 00:00**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Analysis | EPA 9056A | | 100 | | | 268716 | 01/24/19 20:09 | CMR | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268586 | 01/23/19 12:55 | NAM | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 268763 | 01/24/19 18:46 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 268586 | 01/23/19 12:55 | NAM | TAL PIT |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-1

## Client Sample ID: MB LOW 1

**Lab Sample ID: 180-85447-49**

**Date Collected: 01/21/19 00:00**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Analysis | EPA 6020A | | 1 | | | 268821 | 01/25/19 14:33 | RSK | TAL PIT |
| | Instrument ID: A | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 269197 | 01/31/19 07:10 | RJR | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 269298 | 01/31/19 16:43 | RJR | TAL PIT |
| | Instrument ID: HGZ | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 268604 | 01/23/19 07:40 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 268609 | 01/23/19 07:40 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 268574 | 01/21/19 07:40 | LWM | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 268608 | 01/23/19 07:40 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: MB LOW 2

**Lab Sample ID: 180-85447-51**

**Date Collected: 01/31/19 00:00**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Analysis | EPA 9056A | | 100 | | | 269858 | 02/08/19 00:02 | CMR | TAL PIT |
| | Instrument ID: CHIC2100A | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Prep | 3010A | | | 50 mL | 50 mL | 269867 | 02/07/19 11:53 | NAM | TAL PIT |
| Leach | Analysis | EPA 6020A | | 1 | | | 269977 | 02/08/19 00:37 | WTR | TAL PIT |
| | Instrument ID: M | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Prep | 7470A | | | 50 mL | 50 mL | 269834 | 02/07/19 10:44 | RJR | TAL PIT |
| Leach | Analysis | EPA 7470A | | 1 | | | 269950 | 02/08/19 10:21 | RJR | TAL PIT |
| | Instrument ID: HGZ | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 269862 | 02/07/19 08:30 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 269868 | 02/07/19 08:30 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 269578 | 02/05/19 08:30 | MTW | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 269865 | 02/07/19 08:30 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

**Laboratory References:**

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

**Analyst References:**

Lab: TAL PIT

Batch Type: Leach

LWM = Larry Matko

MTW = Michael Wesoloski

Batch Type: Prep

KA = Kayla Kalamasz

NAM = Nicole Marfisi

RJR = Ron Rosenbaum

Batch Type: Analysis

CMR = Carl Reagle

JMS = Jessica Scalise

KA = Kayla Kalamasz

MJH = Matthew Hartman

MTW = Michael Wesoloski

RJR = Ron Rosenbaum

RSK = Robert Kurtz

WTR = Bill Reinheimer

## Client Sample ID: ABB PRETEST

**Lab Sample ID: 180-85447-1**
**Matrix: Solid**
**Date Collected: 01/04/19 11:10**
**Date Received: 01/05/19 09:30**

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Percent Moisture | 1.4 | | 0.1 | 0.1 | % | | | 01/11/19 08:56 | 1 |
| Percent Solids | 98.6 | | 0.1 | 0.1 | % | | | 01/11/19 08:56 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 6.7 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| pH | 6.1 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| pH | 12.5 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| pH | 3.6 | | 0.1 | 0.1 | SU | | | 01/23/19 07:40 | 1 |

## Client Sample ID: ABB pH 13.0

**Lab Sample ID: 180-85447-2**
**Matrix: Solid**
**Date Collected: 01/04/19 11:10**
**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.62 | | 0.50 | 0.13 | mg/L | | | 01/18/19 11:10 | 5 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 5.5 | | 1.0 | 0.32 | ug/L | | 01/17/19 07:12 | 01/18/19 17:20 | 1 |
| Barium | 150 | | 10 | 0.37 | ug/L | | 01/17/19 07:12 | 01/18/19 17:20 | 1 |
| Cadmium | 0.20 | J | 1.0 | 0.13 | ug/L | | 01/17/19 07:12 | 01/18/19 17:20 | 1 |
| Beryllium | 0.14 | J | 1.0 | 0.057 | ug/L | | 01/17/19 07:12 | 01/18/19 17:20 | 1 |
| Chromium | 4.7 | | 2.0 | 0.63 | ug/L | | 01/17/19 07:12 | 01/18/19 17:20 | 1 |
| Lead | 2.1 | B | 1.0 | 0.094 | ug/L | | 01/17/19 07:12 | 01/18/19 17:20 | 1 |
| Selenium | 1.6 | J | 5.0 | 0.81 | ug/L | | 01/17/19 07:12 | 01/18/19 17:20 | 1 |
| Cobalt | 1.6 | | 0.50 | 0.075 | ug/L | | 01/17/19 07:12 | 01/18/19 17:20 | 1 |
| Molybdenum | 1.6 | J | 5.0 | 0.47 | ug/L | | 01/17/19 07:12 | 01/18/19 17:20 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/17/19 07:12 | 01/18/19 17:20 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/17/19 07:12 | 01/18/19 17:20 | 1 |
| Lithium | ND | | 5.0 | 2.6 | ug/L | | 01/17/19 07:12 | 01/18/19 17:20 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/16/19 15:06 | 01/17/19 17:47 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 12.7 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| Specific Conductance | 20000 | | 1.0 | 1.0 | umhos/cm | | | 01/16/19 09:05 | 1 |
| Oxidation Reduction Potential | - 166 | | 10 | 10 | millivolts | | | 01/16/19 09:05 | 1 |

## Client Sample ID: ABB pH 12.0

**Lab Sample ID: 180-85447-3**
**Matrix: Solid**
**Date Collected: 01/04/19 11:10**
**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.88 | | 0.10 | 0.026 | mg/L | | | 01/17/19 14:37 | 1 |

## Client Sample ID: ABB pH 12.0

**Lab Sample ID: 180-85447-3**

**Date Collected: 01/04/19 11:10**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 15 | | 1.0 | 0.32 | ug/L | | 01/17/19 07:12 | 01/18/19 17:30 | 1 |
| Barium | 440 | | 10 | 0.37 | ug/L | | 01/17/19 07:12 | 01/18/19 17:30 | 1 |
| Cadmium | 0.37 | J | 1.0 | 0.13 | ug/L | | 01/17/19 07:12 | 01/18/19 17:30 | 1 |
| Beryllium | 0.32 | J | 1.0 | 0.057 | ug/L | | 01/17/19 07:12 | 01/18/19 17:30 | 1 |
| Chromium | 17 | | 2.0 | 0.63 | ug/L | | 01/17/19 07:12 | 01/18/19 17:30 | 1 |
| Lead | 5.8 | B | 1.0 | 0.094 | ug/L | | 01/17/19 07:12 | 01/18/19 17:30 | 1 |
| Selenium | 5.4 | | 5.0 | 0.81 | ug/L | | 01/17/19 07:12 | 01/18/19 17:30 | 1 |
| Cobalt | 3.6 | | 0.50 | 0.075 | ug/L | | 01/17/19 07:12 | 01/18/19 17:30 | 1 |
| Molybdenum | 6.0 | | 5.0 | 0.47 | ug/L | | 01/17/19 07:12 | 01/18/19 17:30 | 1 |
| Antimony | 2.1 | | 2.0 | 1.1 | ug/L | | 01/17/19 07:12 | 01/18/19 17:30 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/17/19 07:12 | 01/18/19 17:30 | 1 |
| Lithium | 3.8 | J | 5.0 | 2.6 | ug/L | | 01/17/19 07:12 | 01/18/19 17:30 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.082 | J | 0.20 | 0.065 | ug/L | | 01/16/19 15:06 | 01/17/19 17:48 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 11.5 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| Specific Conductance | 1200 | | 1.0 | 1.0 | umhos/cm | | | 01/16/19 09:05 | 1 |
| Oxidation Reduction Potential | - 25 | | 10 | 10 | millivolts | | | 01/16/19 09:05 | 1 |

## Client Sample ID: ABB pH 10.5

**Lab Sample ID: 180-85447-4**

**Date Collected: 01/04/19 11:10**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.95 | J | 1.0 | 0.26 | mg/L | | | 01/19/19 10:55 | 10 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10 | | 1.0 | 0.32 | ug/L | | 01/18/19 12:59 | 01/19/19 17:28 | 1 |
| Barium | 390 | | 10 | 0.37 | ug/L | | 01/18/19 12:59 | 01/19/19 17:28 | 1 |
| Cadmium | 0.35 | J | 1.0 | 0.13 | ug/L | | 01/18/19 12:59 | 01/19/19 17:28 | 1 |
| Beryllium | 0.18 | J | 1.0 | 0.057 | ug/L | | 01/18/19 12:59 | 01/19/19 17:28 | 1 |
| Chromium | 13 | | 2.0 | 0.63 | ug/L | | 01/18/19 12:59 | 01/19/19 17:28 | 1 |
| Lead | 3.9 | | 1.0 | 0.094 | ug/L | | 01/18/19 12:59 | 01/19/19 17:28 | 1 |
| Selenium | 3.2 | J | 5.0 | 0.81 | ug/L | | 01/18/19 12:59 | 01/19/19 17:28 | 1 |
| Cobalt | 2.9 | | 0.50 | 0.075 | ug/L | | 01/18/19 12:59 | 01/19/19 17:28 | 1 |
| Molybdenum | 6.7 | | 5.0 | 0.47 | ug/L | | 01/18/19 12:59 | 01/19/19 17:28 | 1 |
| Antimony | 2.0 | | 2.0 | 1.1 | ug/L | | 01/18/19 12:59 | 01/19/19 17:28 | 1 |
| Thallium | 0.091 | J | 1.0 | 0.063 | ug/L | | 01/18/19 12:59 | 01/19/19 17:28 | 1 |
| Lithium | 3.0 | J | 5.0 | 2.6 | ug/L | | 01/18/19 12:59 | 01/19/19 17:28 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/21/19 10:49 | 01/22/19 18:02 | 1 |

## Client Sample ID: ABB pH 10.5

**Lab Sample ID: 180-85447-4**
**Date Collected: 01/04/19 11:10**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 10.8 | | 0.1 | 0.1 | SU | | | 01/18/19 10:20 | 1 |
| Specific Conductance | 590 | | 1.0 | 1.0 | umhos/cm | | | 01/18/19 10:40 | 1 |
| Oxidation Reduction Potential | 96 | | 10 | 10 | millivolts | | | 01/18/19 10:20 | 1 |

## Client Sample ID: ABB pH 8.0

**Lab Sample ID: 180-85447-6**
**Date Collected: 01/04/19 11:10**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.72 | | 0.10 | 0.026 | mg/L | | | 01/17/19 14:53 | 1 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 2.2 | | 1.0 | 0.32 | ug/L | | 01/17/19 07:12 | 01/18/19 17:34 | 1 |
| Barium | 340 | | 10 | 0.37 | ug/L | | 01/17/19 07:12 | 01/18/19 17:34 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/17/19 07:12 | 01/18/19 17:34 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/17/19 07:12 | 01/18/19 17:34 | 1 |
| Chromium | 1.9 | J | 2.0 | 0.63 | ug/L | | 01/17/19 07:12 | 01/18/19 17:34 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/17/19 07:12 | 01/18/19 17:34 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/17/19 07:12 | 01/18/19 17:34 | 1 |
| Cobalt | 0.095 | J | 0.50 | 0.075 | ug/L | | 01/17/19 07:12 | 01/18/19 17:34 | 1 |
| Molybdenum | 3.6 | J | 5.0 | 0.47 | ug/L | | 01/17/19 07:12 | 01/18/19 17:34 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/17/19 07:12 | 01/18/19 17:34 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/17/19 07:12 | 01/18/19 17:34 | 1 |
| Lithium | 5.0 | | 5.0 | 2.6 | ug/L | | 01/17/19 07:12 | 01/18/19 17:34 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/16/19 15:06 | 01/17/19 17:49 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 7.9 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| Specific Conductance | 650 | | 1.0 | 1.0 | umhos/cm | | | 01/16/19 09:05 | 1 |
| Oxidation Reduction Potential | 170 | | 10 | 10 | millivolts | | | 01/16/19 09:05 | 1 |

## Client Sample ID: ABB pH 7.0

**Lab Sample ID: 180-85447-7**
**Date Collected: 01/04/19 11:10**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.58 | | 0.10 | 0.026 | mg/L | | | 01/17/19 15:08 | 1 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 2.3 | | 1.0 | 0.32 | ug/L | | 01/17/19 07:12 | 01/18/19 17:37 | 1 |
| Barium | 840 | | 10 | 0.37 | ug/L | | 01/17/19 07:12 | 01/18/19 17:37 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/17/19 07:12 | 01/18/19 17:37 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/17/19 07:12 | 01/18/19 17:37 | 1 |

## Client Sample ID: ABB pH 7.0

**Lab Sample ID: 180-85447-7**
**Matrix: Solid**
**Date Collected: 01/04/19 11:10**
**Date Received: 01/05/19 09:30**

### Method: EPA 6020A - Metals (ICP/MS) - Leach (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chromium** | **1.7** | **J** | 2.0 | 0.63 | ug/L | | 01/17/19 07:12 | 01/18/19 17:37 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/17/19 07:12 | 01/18/19 17:37 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/17/19 07:12 | 01/18/19 17:37 | 1 |
| **Cobalt** | **0.23** | **J** | 0.50 | 0.075 | ug/L | | 01/17/19 07:12 | 01/18/19 17:37 | 1 |
| **Molybdenum** | **3.4** | **J** | 5.0 | 0.47 | ug/L | | 01/17/19 07:12 | 01/18/19 17:37 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/17/19 07:12 | 01/18/19 17:37 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/17/19 07:12 | 01/18/19 17:37 | 1 |
| **Lithium** | **7.4** | | 5.0 | 2.6 | ug/L | | 01/17/19 07:12 | 01/18/19 17:37 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/16/19 15:06 | 01/17/19 17:50 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **7.2** | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| **Specific Conductance** | **1300** | | 1.0 | 1.0 | umhos/cm | | | 01/16/19 09:05 | 1 |
| **Oxidation Reduction Potential** | **210** | | 10 | 10 | millivolts | | | 01/16/19 09:05 | 1 |

## Client Sample ID: ABB pH 5.5

**Lab Sample ID: 180-85447-8**
**Matrix: Solid**
**Date Collected: 01/04/19 11:10**
**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.50 | 0.13 | mg/L | | | 01/19/19 11:10 | 5 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **1.1** | | 1.0 | 0.32 | ug/L | | 01/18/19 12:59 | 01/19/19 17:32 | 1 |
| **Barium** | **2600** | | 10 | 0.37 | ug/L | | 01/18/19 12:59 | 01/19/19 17:32 | 1 |
| **Cadmium** | **0.55** | **J** | 1.0 | 0.13 | ug/L | | 01/18/19 12:59 | 01/19/19 17:32 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/18/19 12:59 | 01/19/19 17:32 | 1 |
| **Chromium** | **1.7** | **J** | 2.0 | 0.63 | ug/L | | 01/18/19 12:59 | 01/19/19 17:32 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/18/19 12:59 | 01/19/19 17:32 | 1 |
| **Selenium** | **0.85** | **J** | 5.0 | 0.81 | ug/L | | 01/18/19 12:59 | 01/19/19 17:32 | 1 |
| **Cobalt** | **6.7** | | 0.50 | 0.075 | ug/L | | 01/18/19 12:59 | 01/19/19 17:32 | 1 |
| **Molybdenum** | **3.3** | **J** | 5.0 | 0.47 | ug/L | | 01/18/19 12:59 | 01/19/19 17:32 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/18/19 12:59 | 01/19/19 17:32 | 1 |
| **Thallium** | **0.15** | **J** | 1.0 | 0.063 | ug/L | | 01/18/19 12:59 | 01/19/19 17:32 | 1 |
| **Lithium** | **34** | | 5.0 | 2.6 | ug/L | | 01/18/19 12:59 | 01/19/19 17:32 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/21/19 10:49 | 01/22/19 18:03 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **5.9** | | 0.1 | 0.1 | SU | | | 01/18/19 10:20 | 1 |
| **Specific Conductance** | **4400** | | 1.0 | 1.0 | umhos/cm | | | 01/18/19 10:40 | 1 |
| **Oxidation Reduction Potential** | **240** | | 10 | 10 | millivolts | | | 01/18/19 10:20 | 1 |

## Client Sample ID: ABB pH 4.0

**Lab Sample ID: 180-85447-9**

**Date Collected: 01/04/19 11:10**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **3.4** | | 1.0 | 0.26 | mg/L | | | 01/19/19 11:25 | 10 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **3.5** | | 1.0 | 0.32 | ug/L | | 01/18/19 12:59 | 01/19/19 17:35 | 1 |
| **Barium** | **6900** | | 10 | 0.37 | ug/L | | 01/18/19 12:59 | 01/19/19 17:35 | 1 |
| **Cadmium** | **12** | | 1.0 | 0.13 | ug/L | | 01/18/19 12:59 | 01/19/19 17:35 | 1 |
| **Beryllium** | **16** | | 1.0 | 0.057 | ug/L | | 01/18/19 12:59 | 01/19/19 17:35 | 1 |
| **Chromium** | **29** | | 2.0 | 0.63 | ug/L | | 01/18/19 12:59 | 01/19/19 17:35 | 1 |
| **Lead** | **4.5** | | 1.0 | 0.094 | ug/L | | 01/18/19 12:59 | 01/19/19 17:35 | 1 |
| **Selenium** | **9.1** | | 5.0 | 0.81 | ug/L | | 01/18/19 12:59 | 01/19/19 17:35 | 1 |
| **Cobalt** | **160** | | 0.50 | 0.075 | ug/L | | 01/18/19 12:59 | 01/19/19 17:35 | 1 |
| **Molybdenum** | **0.83** | **J** | 5.0 | 0.47 | ug/L | | 01/18/19 12:59 | 01/19/19 17:35 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/18/19 12:59 | 01/19/19 17:35 | 1 |
| **Thallium** | **1.1** | | 1.0 | 0.063 | ug/L | | 01/18/19 12:59 | 01/19/19 17:35 | 1 |
| **Lithium** | **310** | | 5.0 | 2.6 | ug/L | | 01/18/19 12:59 | 01/19/19 17:35 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/21/19 10:49 | 01/22/19 18:04 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **3.8** | | 0.1 | 0.1 | SU | | | 01/18/19 10:20 | 1 |
| **Specific Conductance** | **14000** | | 1.0 | 1.0 | umhos/cm | | | 01/18/19 10:40 | 1 |
| **Oxidation Reduction Potential** | **350** | | 10 | 10 | millivolts | | | 01/18/19 10:20 | 1 |

## Client Sample ID: ABB pH 2.0

**Lab Sample ID: 180-85447-10**

**Date Collected: 01/04/19 11:10**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 5.0 | 1.3 | mg/L | | | 02/07/19 23:30 | 50 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **40** | | 10 | 3.2 | ug/L | | 02/07/19 11:53 | 02/12/19 18:46 | 10 |
| **Barium** | **300000** | | 100 | 3.7 | ug/L | | 02/07/19 11:53 | 02/12/19 18:46 | 10 |
| **Cadmium** | **17** | | 10 | 1.3 | ug/L | | 02/07/19 11:53 | 02/12/19 18:46 | 10 |
| **Beryllium** | **160** | | 10 | 0.57 | ug/L | | 02/07/19 11:53 | 02/12/19 18:46 | 10 |
| **Chromium** | **2400** | | 20 | 6.3 | ug/L | | 02/07/19 11:53 | 02/12/19 18:46 | 10 |
| **Lead** | **180** | | 10 | 0.94 | ug/L | | 02/07/19 11:53 | 02/12/19 18:46 | 10 |
| **Selenium** | **28** | **J** | 50 | 8.1 | ug/L | | 02/07/19 11:53 | 02/12/19 18:46 | 10 |
| **Cobalt** | **1300** | | 5.0 | 0.75 | ug/L | | 02/07/19 11:53 | 02/12/19 18:46 | 10 |
| Molybdenum | ND | | 50 | 4.7 | ug/L | | 02/07/19 11:53 | 02/12/19 18:46 | 10 |
| Antimony | ND | | 20 | 11 | ug/L | | 02/07/19 11:53 | 02/12/19 18:46 | 10 |
| **Thallium** | **4.7** | **J** | 10 | 0.63 | ug/L | | 02/07/19 11:53 | 02/12/19 18:46 | 10 |
| **Lithium** | **2800** | | 50 | 26 | ug/L | | 02/07/19 11:53 | 02/12/19 18:46 | 10 |

## Client Sample ID: ABB pH 2.0

**Lab Sample ID: 180-85447-10**
**Date Collected: 01/04/19 11:10**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.97 | | 0.20 | 0.065 | ug/L | | 02/07/19 10:44 | 02/08/19 10:23 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 2.2 | | 0.1 | 0.1 | SU | | | 02/07/19 08:30 | 1 |
| Specific Conductance | 78000 | | 1.0 | 1.0 | umhos/cm | | | 02/07/19 08:30 | 1 |
| Oxidation Reduction Potential | 590 | | 10 | 10 | millivolts | | | 02/07/19 08:30 | 1 |

## Client Sample ID: ABB pH NATURAL

**Lab Sample ID: 180-85447-11**
**Date Collected: 01/04/19 11:10**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.4 | | 0.10 | 0.026 | mg/L | | | 01/17/19 12:00 | 1 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 4.8 | | 1.0 | 0.32 | ug/L | | 01/17/19 07:12 | 01/18/19 17:40 | 1 |
| Barium | 350 | | 10 | 0.37 | ug/L | | 01/17/19 07:12 | 01/18/19 17:40 | 1 |
| Cadmium | 0.18 | J | 1.0 | 0.13 | ug/L | | 01/17/19 07:12 | 01/18/19 17:40 | 1 |
| Beryllium | 0.11 | J | 1.0 | 0.057 | ug/L | | 01/17/19 07:12 | 01/18/19 17:40 | 1 |
| Chromium | 8.5 | | 2.0 | 0.63 | ug/L | | 01/17/19 07:12 | 01/18/19 17:40 | 1 |
| Lead | 3.3 | B | 1.0 | 0.094 | ug/L | | 01/17/19 07:12 | 01/18/19 17:40 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/17/19 07:12 | 01/18/19 17:40 | 1 |
| Cobalt | 1.4 | | 0.50 | 0.075 | ug/L | | 01/17/19 07:12 | 01/18/19 17:40 | 1 |
| Molybdenum | 3.9 | J | 5.0 | 0.47 | ug/L | | 01/17/19 07:12 | 01/18/19 17:40 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/17/19 07:12 | 01/18/19 17:40 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/17/19 07:12 | 01/18/19 17:40 | 1 |
| Lithium | 3.4 | J | 5.0 | 2.6 | ug/L | | 01/17/19 07:12 | 01/18/19 17:40 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/16/19 15:06 | 01/17/19 17:45 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 9.0 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| Specific Conductance | 210 | | 1.0 | 1.0 | umhos/cm | | | 01/16/19 09:05 | 1 |
| Oxidation Reduction Potential | 310 | | 10 | 10 | millivolts | | | 01/16/19 09:05 | 1 |

## Client Sample ID: ASB PRETEST

**Lab Sample ID: 180-85447-12**
**Date Collected: 01/04/19 11:45**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Percent Moisture | 1.3 | | 0.1 | 0.1 | % | | | 01/11/19 08:56 | 1 |
| Percent Solids | 98.7 | | 0.1 | 0.1 | % | | | 01/11/19 08:56 | 1 |

## Client Sample ID: ASB PRETEST

**Lab Sample ID: 180-85447-12**
**Matrix: Solid**
**Date Collected: 01/04/19 11:45**
**Date Received: 01/05/19 09:30**

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 8.0 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| pH | 7.8 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| pH | 4.9 | | 0.1 | 0.1 | SU | | | 01/23/19 07:40 | 1 |

## Client Sample ID: ASB pH 13.0

**Lab Sample ID: 180-85447-13**
**Matrix: Solid**
**Date Collected: 01/04/19 11:45**
**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.62 | | 0.50 | 0.13 | mg/L | | | 01/18/19 11:26 | 5 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 30 | | 1.0 | 0.32 | ug/L | | 01/17/19 07:12 | 01/18/19 17:43 | 1 |
| Barium | 29 | | 10 | 0.37 | ug/L | | 01/17/19 07:12 | 01/18/19 17:43 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/17/19 07:12 | 01/18/19 17:43 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/17/19 07:12 | 01/18/19 17:43 | 1 |
| Chromium | 3.2 | | 2.0 | 0.63 | ug/L | | 01/17/19 07:12 | 01/18/19 17:43 | 1 |
| Lead | 0.43 | J B | 1.0 | 0.094 | ug/L | | 01/17/19 07:12 | 01/18/19 17:43 | 1 |
| Selenium | 11 | | 5.0 | 0.81 | ug/L | | 01/17/19 07:12 | 01/18/19 17:43 | 1 |
| Cobalt | 0.97 | | 0.50 | 0.075 | ug/L | | 01/17/19 07:12 | 01/18/19 17:43 | 1 |
| Molybdenum | 6.4 | | 5.0 | 0.47 | ug/L | | 01/17/19 07:12 | 01/18/19 17:43 | 1 |
| Antimony | 4.1 | | 2.0 | 1.1 | ug/L | | 01/17/19 07:12 | 01/18/19 17:43 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/17/19 07:12 | 01/18/19 17:43 | 1 |
| Lithium | ND | | 5.0 | 2.6 | ug/L | | 01/17/19 07:12 | 01/18/19 17:43 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/16/19 15:06 | 01/17/19 17:51 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 12.7 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| Specific Conductance | 16000 | | 1.0 | 1.0 | umhos/cm | | | 01/16/19 09:05 | 1 |
| Oxidation Reduction Potential | - 86 | | 10 | 10 | millivolts | | | 01/16/19 09:05 | 1 |

## Client Sample ID: ASB pH 12.0

**Lab Sample ID: 180-85447-14**
**Matrix: Solid**
**Date Collected: 01/04/19 11:45**
**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 2.0 | | 0.50 | 0.13 | mg/L | | | 01/17/19 18:02 | 5 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 23 | | 1.0 | 0.32 | ug/L | | 01/17/19 07:12 | 01/18/19 17:47 | 1 |
| Barium | 30 | | 10 | 0.37 | ug/L | | 01/17/19 07:12 | 01/18/19 17:47 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/17/19 07:12 | 01/18/19 17:47 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/17/19 07:12 | 01/18/19 17:47 | 1 |

## Client Sample ID: ASB pH 12.0

**Date Collected: 01/04/19 11:45**
**Date Received: 01/05/19 09:30**

**Lab Sample ID: 180-85447-14**
**Matrix: Solid**

### Method: EPA 6020A - Metals (ICP/MS) - Leach (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chromium | 3.9 | | 2.0 | 0.63 | ug/L | | 01/17/19 07:12 | 01/18/19 17:47 | 1 |
| Lead | 0.24 | J B | 1.0 | 0.094 | ug/L | | 01/17/19 07:12 | 01/18/19 17:47 | 1 |
| Selenium | 8.8 | | 5.0 | 0.81 | ug/L | | 01/17/19 07:12 | 01/18/19 17:47 | 1 |
| Cobalt | 0.39 | J | 0.50 | 0.075 | ug/L | | 01/17/19 07:12 | 01/18/19 17:47 | 1 |
| Molybdenum | 5.6 | | 5.0 | 0.47 | ug/L | | 01/17/19 07:12 | 01/18/19 17:47 | 1 |
| Antimony | 3.2 | | 2.0 | 1.1 | ug/L | | 01/17/19 07:12 | 01/18/19 17:47 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/17/19 07:12 | 01/18/19 17:47 | 1 |
| Lithium | ND | | 5.0 | 2.6 | ug/L | | 01/17/19 07:12 | 01/18/19 17:47 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/16/19 15:06 | 01/17/19 17:56 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 12.4 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| Specific Conductance | 6200 | | 1.0 | 1.0 | umhos/cm | | | 01/16/19 09:05 | 1 |
| Oxidation Reduction Potential | -24 | | 10 | 10 | millivolts | | | 01/16/19 09:05 | 1 |

## Client Sample ID: ASB pH 10.5

**Date Collected: 01/04/19 11:45**
**Date Received: 01/05/19 09:30**

**Lab Sample ID: 180-85447-15**
**Matrix: Solid**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.2 | | 0.10 | 0.026 | mg/L | | | 01/17/19 15:24 | 1 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 12 | | 1.0 | 0.32 | ug/L | | 01/17/19 07:12 | 01/18/19 17:50 | 1 |
| Barium | 44 | | 10 | 0.37 | ug/L | | 01/17/19 07:12 | 01/18/19 17:50 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/17/19 07:12 | 01/18/19 17:50 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/17/19 07:12 | 01/18/19 17:50 | 1 |
| Chromium | 4.1 | | 2.0 | 0.63 | ug/L | | 01/17/19 07:12 | 01/18/19 17:50 | 1 |
| Lead | 0.19 | J B | 1.0 | 0.094 | ug/L | | 01/17/19 07:12 | 01/18/19 17:50 | 1 |
| Selenium | 3.8 | J | 5.0 | 0.81 | ug/L | | 01/17/19 07:12 | 01/18/19 17:50 | 1 |
| Cobalt | 0.21 | J | 0.50 | 0.075 | ug/L | | 01/17/19 07:12 | 01/18/19 17:50 | 1 |
| Molybdenum | 3.8 | J | 5.0 | 0.47 | ug/L | | 01/17/19 07:12 | 01/18/19 17:50 | 1 |
| Antimony | 2.2 | | 2.0 | 1.1 | ug/L | | 01/17/19 07:12 | 01/18/19 17:50 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/17/19 07:12 | 01/18/19 17:50 | 1 |
| Lithium | ND | | 5.0 | 2.6 | ug/L | | 01/17/19 07:12 | 01/18/19 17:50 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/16/19 15:06 | 01/17/19 17:57 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 10.8 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| Specific Conductance | 760 | | 1.0 | 1.0 | umhos/cm | | | 01/16/19 09:05 | 1 |
| Oxidation Reduction Potential | 45 | | 10 | 10 | millivolts | | | 01/16/19 09:05 | 1 |

## Client Sample ID: ASB pH 8.0

**Lab Sample ID: 180-85447-17**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.41 | | 0.10 | 0.026 | mg/L | | | 01/17/19 15:40 | 1 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 2.3 | | 1.0 | 0.32 | ug/L | | 01/17/19 07:12 | 01/18/19 17:53 | 1 |
| Barium | 270 | | 10 | 0.37 | ug/L | | 01/17/19 07:12 | 01/18/19 17:53 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/17/19 07:12 | 01/18/19 17:53 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/17/19 07:12 | 01/18/19 17:53 | 1 |
| Chromium | 1.8 | J | 2.0 | 0.63 | ug/L | | 01/17/19 07:12 | 01/18/19 17:53 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/17/19 07:12 | 01/18/19 17:53 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/17/19 07:12 | 01/18/19 17:53 | 1 |
| Cobalt | 0.081 | J | 0.50 | 0.075 | ug/L | | 01/17/19 07:12 | 01/18/19 17:53 | 1 |
| Molybdenum | 2.7 | J | 5.0 | 0.47 | ug/L | | 01/17/19 07:12 | 01/18/19 17:53 | 1 |
| Antimony | 1.1 | J | 2.0 | 1.1 | ug/L | | 01/17/19 07:12 | 01/18/19 17:53 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/17/19 07:12 | 01/18/19 17:53 | 1 |
| Lithium | 14 | | 5.0 | 2.6 | ug/L | | 01/17/19 07:12 | 01/18/19 17:53 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/16/19 15:06 | 01/17/19 17:58 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 8.3 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| Specific Conductance | 720 | | 1.0 | 1.0 | umhos/cm | | | 01/16/19 09:05 | 1 |
| Oxidation Reduction Potential | 160 | | 10 | 10 | millivolts | | | 01/16/19 09:05 | 1 |

## Client Sample ID: ASB pH 7.0

**Lab Sample ID: 180-85447-18**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.29 | | 0.25 | 0.066 | mg/L | | | 01/17/19 18:18 | 2.5 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 4.2 | | 1.0 | 0.32 | ug/L | | 01/17/19 07:12 | 01/18/19 17:57 | 1 |
| Barium | 1300 | | 10 | 0.37 | ug/L | | 01/17/19 07:12 | 01/18/19 17:57 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/17/19 07:12 | 01/18/19 17:57 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/17/19 07:12 | 01/18/19 17:57 | 1 |
| Chromium | 1.6 | J | 2.0 | 0.63 | ug/L | | 01/17/19 07:12 | 01/18/19 17:57 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/17/19 07:12 | 01/18/19 17:57 | 1 |
| Selenium | 0.96 | J | 5.0 | 0.81 | ug/L | | 01/17/19 07:12 | 01/18/19 17:57 | 1 |
| Cobalt | 0.59 | | 0.50 | 0.075 | ug/L | | 01/17/19 07:12 | 01/18/19 17:57 | 1 |
| Molybdenum | 3.4 | J | 5.0 | 0.47 | ug/L | | 01/17/19 07:12 | 01/18/19 17:57 | 1 |
| Antimony | 1.1 | J | 2.0 | 1.1 | ug/L | | 01/17/19 07:12 | 01/18/19 17:57 | 1 |
| Thallium | 0.088 | J | 1.0 | 0.063 | ug/L | | 01/17/19 07:12 | 01/18/19 17:57 | 1 |
| Lithium | 35 | | 5.0 | 2.6 | ug/L | | 01/17/19 07:12 | 01/18/19 17:57 | 1 |

## Client Sample ID: ASB pH 7.0

**Lab Sample ID: 180-85447-18**
**Date Collected: 01/04/19 11:45**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/16/19 15:06 | 01/17/19 17:59 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 7.4 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| Specific Conductance | 4200 | | 1.0 | 1.0 | umhos/cm | | | 01/16/19 09:05 | 1 |
| Oxidation Reduction Potential | 210 | | 10 | 10 | millivolts | | | 01/16/19 09:05 | 1 |

## Client Sample ID: ASB pH 5.5

**Lab Sample ID: 180-85447-19**
**Date Collected: 01/04/19 11:45**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 1.0 | 0.26 | mg/L | | | 01/19/19 11:41 | 10 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 2.1 | | 1.0 | 0.32 | ug/L | | 01/18/19 12:59 | 01/19/19 17:38 | 1 |
| Barium | 2100 | | 10 | 0.37 | ug/L | | 01/18/19 12:59 | 01/19/19 17:38 | 1 |
| Cadmium | 1.6 | | 1.0 | 0.13 | ug/L | | 01/18/19 12:59 | 01/19/19 17:38 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/18/19 12:59 | 01/19/19 17:38 | 1 |
| Chromium | 1.7 | J | 2.0 | 0.63 | ug/L | | 01/18/19 12:59 | 01/19/19 17:38 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/18/19 12:59 | 01/19/19 17:38 | 1 |
| Selenium | 1.2 | J | 5.0 | 0.81 | ug/L | | 01/18/19 12:59 | 01/19/19 17:38 | 1 |
| Cobalt | 33 | | 0.50 | 0.075 | ug/L | | 01/18/19 12:59 | 01/19/19 17:38 | 1 |
| Molybdenum | 3.9 | J | 5.0 | 0.47 | ug/L | | 01/18/19 12:59 | 01/19/19 17:38 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/18/19 12:59 | 01/19/19 17:38 | 1 |
| Thallium | 0.40 | J | 1.0 | 0.063 | ug/L | | 01/18/19 12:59 | 01/19/19 17:38 | 1 |
| Lithium | 140 | | 5.0 | 2.6 | ug/L | | 01/18/19 12:59 | 01/19/19 17:38 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/21/19 10:49 | 01/22/19 18:05 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 5.7 | | 0.1 | 0.1 | SU | | | 01/18/19 10:20 | 1 |
| Specific Conductance | 15000 | | 1.0 | 1.0 | umhos/cm | | | 01/18/19 10:40 | 1 |
| Oxidation Reduction Potential | 240 | | 10 | 10 | millivolts | | | 01/18/19 10:20 | 1 |

## Client Sample ID: ASB pH 4.0

**Lab Sample ID: 180-85447-20**
**Date Collected: 01/04/19 11:45**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 7.9 | | 2.5 | 0.66 | mg/L | | | 01/24/19 19:53 | 25 |

## Client Sample ID: ASB pH 4.0

**Lab Sample ID: 180-85447-20**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 14 | | 10 | 3.2 | ug/L | | 01/23/19 12:55 | 01/25/19 14:30 | 10 |
| Barium | 3800 | | 100 | 3.7 | ug/L | | 01/23/19 12:55 | 01/25/19 14:30 | 10 |
| Cadmium | 29 | | 10 | 1.3 | ug/L | | 01/23/19 12:55 | 01/25/19 14:30 | 10 |
| Beryllium | 22 | | 10 | 0.57 | ug/L | | 01/23/19 12:55 | 01/25/19 14:30 | 10 |
| Chromium | 21 | B | 20 | 6.3 | ug/L | | 01/23/19 12:55 | 01/25/19 14:30 | 10 |
| Lead | 5.9 | J | 10 | 0.94 | ug/L | | 01/23/19 12:55 | 01/25/19 14:30 | 10 |
| Selenium | 32 | J | 50 | 8.1 | ug/L | | 01/23/19 12:55 | 01/25/19 14:30 | 10 |
| Cobalt | 360 | | 5.0 | 0.75 | ug/L | | 01/23/19 12:55 | 01/25/19 14:30 | 10 |
| Molybdenum | ND | | 50 | 4.7 | ug/L | | 01/23/19 12:55 | 01/25/19 14:30 | 10 |
| Antimony | ND | | 20 | 11 | ug/L | | 01/23/19 12:55 | 01/25/19 14:30 | 10 |
| Thallium | 2.3 | J | 10 | 0.63 | ug/L | | 01/23/19 12:55 | 01/25/19 14:30 | 10 |
| Lithium | 520 | | 50 | 26 | ug/L | | 01/23/19 12:55 | 01/25/19 14:30 | 10 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/31/19 07:10 | 01/31/19 16:42 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 4.1 | | 0.1 | 0.1 | SU | | | 01/23/19 07:40 | 1 |
| Specific Conductance | 26000 | | 1.0 | 1.0 | umhos/cm | | | 01/23/19 07:40 | 1 |
| Oxidation Reduction Potential | 360 | | 10 | 10 | millivolts | | | 01/23/19 07:40 | 1 |

## Client Sample ID: ASB pH 2.0

**Lab Sample ID: 180-85447-21**

**Date Collected: 01/04/19 11:45**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.9 | J | 5.0 | 1.3 | mg/L | | | 02/07/19 23:46 | 50 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 42 | | 10 | 3.2 | ug/L | | 02/07/19 11:53 | 02/12/19 18:51 | 10 |
| Barium | 50000 | | 100 | 3.7 | ug/L | | 02/07/19 11:53 | 02/12/19 18:51 | 10 |
| Cadmium | 37 | | 10 | 1.3 | ug/L | | 02/07/19 11:53 | 02/12/19 18:51 | 10 |
| Beryllium | 150 | | 10 | 0.57 | ug/L | | 02/07/19 11:53 | 02/12/19 18:51 | 10 |
| Chromium | 700 | | 20 | 6.3 | ug/L | | 02/07/19 11:53 | 02/12/19 18:51 | 10 |
| Lead | 200 | | 10 | 0.94 | ug/L | | 02/07/19 11:53 | 02/12/19 18:51 | 10 |
| Selenium | 41 | J | 50 | 8.1 | ug/L | | 02/07/19 11:53 | 02/12/19 18:51 | 10 |
| Cobalt | 1200 | | 5.0 | 0.75 | ug/L | | 02/07/19 11:53 | 02/12/19 18:51 | 10 |
| Molybdenum | ND | | 50 | 4.7 | ug/L | | 02/07/19 11:53 | 02/12/19 18:51 | 10 |
| Antimony | ND | | 20 | 11 | ug/L | | 02/07/19 11:53 | 02/12/19 18:51 | 10 |
| Thallium | 8.8 | J | 10 | 0.63 | ug/L | | 02/07/19 11:53 | 02/12/19 18:51 | 10 |
| Lithium | 2400 | | 50 | 26 | ug/L | | 02/07/19 11:53 | 02/12/19 18:51 | 10 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 02/07/19 10:44 | 02/08/19 10:22 | 1 |

## Client Sample ID: ASB pH 2.0

**Lab Sample ID: 180-85447-21**
**Date Collected: 01/04/19 11:45**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 2.4 | | 0.1 | 0.1 | SU | | | 02/07/19 08:30 | 1 |
| Specific Conductance | 77000 | | 1.0 | 1.0 | umhos/cm | | | 02/07/19 08:30 | 1 |
| Oxidation Reduction Potential | 550 | | 10 | 10 | millivolts | | | 02/07/19 08:30 | 1 |

## Client Sample ID: ASB pH NATURAL

**Lab Sample ID: 180-85447-22**
**Date Collected: 01/04/19 11:45**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.45 | | 0.10 | 0.026 | mg/L | | | 01/17/19 10:28 | 1 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 3.3 | | 1.0 | 0.32 | ug/L | | 01/17/19 07:12 | 01/18/19 18:00 | 1 |
| Barium | 150 | | 10 | 0.37 | ug/L | | 01/17/19 07:12 | 01/18/19 18:00 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/17/19 07:12 | 01/18/19 18:00 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/17/19 07:12 | 01/18/19 18:00 | 1 |
| Chromium | 2.0 | | 2.0 | 0.63 | ug/L | | 01/17/19 07:12 | 01/18/19 18:00 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/17/19 07:12 | 01/18/19 18:00 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/17/19 07:12 | 01/18/19 18:00 | 1 |
| Cobalt | ND | | 0.50 | 0.075 | ug/L | | 01/17/19 07:12 | 01/18/19 18:00 | 1 |
| Molybdenum | 2.9 | J | 5.0 | 0.47 | ug/L | | 01/17/19 07:12 | 01/18/19 18:00 | 1 |
| Antimony | 1.3 | J | 2.0 | 1.1 | ug/L | | 01/17/19 07:12 | 01/18/19 18:00 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/17/19 07:12 | 01/18/19 18:00 | 1 |
| Lithium | 9.7 | | 5.0 | 2.6 | ug/L | | 01/17/19 07:12 | 01/18/19 18:00 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/16/19 15:06 | 01/17/19 17:46 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 8.6 | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| Specific Conductance | 300 | | 1.0 | 1.0 | umhos/cm | | | 01/16/19 09:05 | 1 |
| Oxidation Reduction Potential | 180 | | 10 | 10 | millivolts | | | 01/16/19 09:05 | 1 |

## Client Sample ID: MB LOW

**Lab Sample ID: 180-85447-23**
**Date Collected: 01/04/19 00:00**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 10 | 2.6 | mg/L | | | 01/19/19 11:56 | 100 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 1.0 | 0.32 | ug/L | | 01/18/19 12:59 | 01/19/19 17:41 | 1 |
| Barium | 1.9 | J | 10 | 0.37 | ug/L | | 01/18/19 12:59 | 01/19/19 17:41 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/18/19 12:59 | 01/19/19 17:41 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/18/19 12:59 | 01/19/19 17:41 | 1 |

## Client Sample ID: MB LOW

**Lab Sample ID: 180-85447-23**

**Date Collected: 01/04/19 00:00**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

### Method: EPA 6020A - Metals (ICP/MS) - Leach (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Chromium** | **1.6** | **J** | 2.0 | 0.63 | ug/L | | 01/18/19 12:59 | 01/19/19 17:41 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/18/19 12:59 | 01/19/19 17:41 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/18/19 12:59 | 01/19/19 17:41 | 1 |
| Cobalt | ND | | 0.50 | 0.075 | ug/L | | 01/18/19 12:59 | 01/19/19 17:41 | 1 |
| Molybdenum | ND | | 5.0 | 0.47 | ug/L | | 01/18/19 12:59 | 01/19/19 17:41 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/18/19 12:59 | 01/19/19 17:41 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/18/19 12:59 | 01/19/19 17:41 | 1 |
| Lithium | ND | | 5.0 | 2.6 | ug/L | | 01/18/19 12:59 | 01/19/19 17:41 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/21/19 10:49 | 01/22/19 18:06 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **0.8** | | 0.1 | 0.1 | SU | | | 01/18/19 10:20 | 1 |
| **Specific Conductance** | **120000** | | 1.0 | 1.0 | umhos/cm | | | 01/18/19 10:40 | 1 |
| **Oxidation Reduction Potential** | **580** | | 10 | 10 | millivolts | | | 01/18/19 10:20 | 1 |

## Client Sample ID: MB NATURAL

**Lab Sample ID: 180-85447-24**

**Date Collected: 01/04/19 00:00**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.10 | 0.026 | mg/L | | | 01/17/19 10:43 | 1 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 1.0 | 0.32 | ug/L | | 01/17/19 07:12 | 01/18/19 18:10 | 1 |
| **Barium** | **7.5** | **J** | 10 | 0.37 | ug/L | | 01/17/19 07:12 | 01/18/19 18:10 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/17/19 07:12 | 01/18/19 18:10 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/17/19 07:12 | 01/18/19 18:10 | 1 |
| **Chromium** | **1.8** | **J** | 2.0 | 0.63 | ug/L | | 01/17/19 07:12 | 01/18/19 18:10 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/17/19 07:12 | 01/18/19 18:10 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/17/19 07:12 | 01/18/19 18:10 | 1 |
| Cobalt | ND | | 0.50 | 0.075 | ug/L | | 01/17/19 07:12 | 01/18/19 18:10 | 1 |
| Molybdenum | ND | | 5.0 | 0.47 | ug/L | | 01/17/19 07:12 | 01/18/19 18:10 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/17/19 07:12 | 01/18/19 18:10 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/17/19 07:12 | 01/18/19 18:10 | 1 |
| Lithium | ND | | 5.0 | 2.6 | ug/L | | 01/17/19 07:12 | 01/18/19 18:10 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/16/19 15:06 | 01/17/19 18:03 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **7.5** | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| **Specific Conductance** | **4.2** | | 1.0 | 1.0 | umhos/cm | | | 01/16/19 09:05 | 1 |
| **Oxidation Reduction Potential** | **140** | | 10 | 10 | millivolts | | | 01/16/19 09:05 | 1 |

## Client Sample ID: MB HIGH

**Lab Sample ID: 180-85447-25**

**Date Collected: 01/04/19 00:00**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.50 | 0.13 | mg/L | | | 01/18/19 11:41 | 5 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 1.0 | 0.32 | ug/L | | 01/17/19 07:12 | 01/18/19 18:13 | 1 |
| **Barium** | **1.7** | **J** | 10 | 0.37 | ug/L | | 01/17/19 07:12 | 01/18/19 18:13 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/17/19 07:12 | 01/18/19 18:13 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/17/19 07:12 | 01/18/19 18:13 | 1 |
| **Chromium** | **2.1** | | 2.0 | 0.63 | ug/L | | 01/17/19 07:12 | 01/18/19 18:13 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/17/19 07:12 | 01/18/19 18:13 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/17/19 07:12 | 01/18/19 18:13 | 1 |
| Cobalt | ND | | 0.50 | 0.075 | ug/L | | 01/17/19 07:12 | 01/18/19 18:13 | 1 |
| Molybdenum | ND | | 5.0 | 0.47 | ug/L | | 01/17/19 07:12 | 01/18/19 18:13 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/17/19 07:12 | 01/18/19 18:13 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/17/19 07:12 | 01/18/19 18:13 | 1 |
| Lithium | ND | | 5.0 | 2.6 | ug/L | | 01/17/19 07:12 | 01/18/19 18:13 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/16/19 15:06 | 01/17/19 18:00 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **12.8** | | 0.1 | 0.1 | SU | | | 01/16/19 09:05 | 1 |
| **Specific Conductance** | **23000** | | 1.0 | 1.0 | umhos/cm | | | 01/16/19 09:05 | 1 |
| **Oxidation Reduction Potential** | **- 34** | | 10 | 10 | millivolts | | | 01/16/19 09:05 | 1 |

## Client Sample ID: MB LOW 1

**Lab Sample ID: 180-85447-49**

**Date Collected: 01/21/19 00:00**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 10 | 2.6 | mg/L | | | 01/24/19 20:09 | 100 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 1.0 | 0.32 | ug/L | | 01/23/19 12:55 | 01/24/19 18:46 | 1 |
| **Barium** | **2.5** | **J** | 10 | 0.37 | ug/L | | 01/23/19 12:55 | 01/24/19 18:46 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/23/19 12:55 | 01/24/19 18:46 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/23/19 12:55 | 01/24/19 18:46 | 1 |
| **Chromium** | **1.4** | **J B** | 2.0 | 0.63 | ug/L | | 01/23/19 12:55 | 01/24/19 18:46 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/23/19 12:55 | 01/24/19 18:46 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/23/19 12:55 | 01/24/19 18:46 | 1 |
| Cobalt | ND | | 0.50 | 0.075 | ug/L | | 01/23/19 12:55 | 01/24/19 18:46 | 1 |
| Molybdenum | ND | | 5.0 | 0.47 | ug/L | | 01/23/19 12:55 | 01/24/19 18:46 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/23/19 12:55 | 01/24/19 18:46 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/23/19 12:55 | 01/24/19 18:46 | 1 |
| **Lithium** | **3.2** | **J** | 5.0 | 2.6 | ug/L | | 01/23/19 12:55 | 01/25/19 14:33 | 1 |

## Client Sample ID: MB LOW 1

**Lab Sample ID: 180-85447-49**

**Date Collected: 01/21/19 00:00**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/31/19 07:10 | 01/31/19 16:43 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **0.8** | | 0.1 | 0.1 | SU | | | 01/23/19 07:40 | 1 |
| **Specific Conductance** | **120000** | | 1.0 | 1.0 | umhos/cm | | | 01/23/19 07:40 | 1 |
| **Oxidation Reduction Potential** | **600** | | 10 | 10 | millivolts | | | 01/23/19 07:40 | 1 |

## Client Sample ID: MB LOW 2

**Lab Sample ID: 180-85447-51**

**Date Collected: 01/31/19 00:00**

**Matrix: Solid**

**Date Received: 01/05/19 09:30**

### Method: EPA 9056A - Anions, Ion Chromatography - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 10 | 2.6 | mg/L | | | 02/08/19 00:02 | 100 |

### Method: EPA 6020A - Metals (ICP/MS) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 1.0 | 0.32 | ug/L | | 02/07/19 11:53 | 02/08/19 00:37 | 1 |
| Barium | ND | | 10 | 0.37 | ug/L | | 02/07/19 11:53 | 02/08/19 00:37 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 02/07/19 11:53 | 02/08/19 00:37 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 02/07/19 11:53 | 02/08/19 00:37 | 1 |
| **Chromium** | **0.74** | **J** | 2.0 | 0.63 | ug/L | | 02/07/19 11:53 | 02/08/19 00:37 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 02/07/19 11:53 | 02/08/19 00:37 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 02/07/19 11:53 | 02/08/19 00:37 | 1 |
| Cobalt | ND | | 0.50 | 0.075 | ug/L | | 02/07/19 11:53 | 02/08/19 00:37 | 1 |
| **Molybdenum** | **0.85** | **J** | 5.0 | 0.47 | ug/L | | 02/07/19 11:53 | 02/08/19 00:37 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 02/07/19 11:53 | 02/08/19 00:37 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 02/07/19 11:53 | 02/08/19 00:37 | 1 |
| Lithium | ND | | 5.0 | 2.6 | ug/L | | 02/07/19 11:53 | 02/08/19 00:37 | 1 |

### Method: EPA 7470A - Mercury (CVAA) - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 02/07/19 10:44 | 02/08/19 10:21 | 1 |

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **pH** | **0.4** | | 0.1 | 0.1 | SU | | | 02/07/19 08:30 | 1 |
| **Specific Conductance** | **100000** | **E** | 1.0 | 1.0 | umhos/cm | | | 02/07/19 08:30 | 1 |
| **Oxidation Reduction Potential** | **540** | | 10 | 10 | millivolts | | | 02/07/19 08:30 | 1 |

## Method: EPA 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 180-268079/6**
**Matrix: Solid**
**Analysis Batch: 268079**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.10 | 0.026 | mg/L | | | 01/17/19 08:23 | 1 |

**Lab Sample ID: LCS 180-268079/5**
**Matrix: Solid**
**Analysis Batch: 268079**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 1.25 | 1.36 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: MB 180-268208/6**
**Matrix: Solid**
**Analysis Batch: 268208**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.10 | 0.026 | mg/L | | | 01/18/19 10:55 | 1 |

**Lab Sample ID: LCS 180-268208/5**
**Matrix: Solid**
**Analysis Batch: 268208**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 1.25 | 1.15 | | mg/L | | 92 | 80 - 120 |

**Lab Sample ID: MB 180-268298/6**
**Matrix: Solid**
**Analysis Batch: 268298**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.10 | 0.026 | mg/L | | | 01/19/19 10:04 | 1 |

**Lab Sample ID: LCS 180-268298/5**
**Matrix: Solid**
**Analysis Batch: 268298**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 1.25 | 1.27 | | mg/L | | 102 | 80 - 120 |

**Lab Sample ID: MB 180-268716/6**
**Matrix: Solid**
**Analysis Batch: 268716**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.10 | 0.026 | mg/L | | | 01/24/19 10:54 | 1 |

**Lab Sample ID: LCS 180-268716/5**
**Matrix: Solid**
**Analysis Batch: 268716**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 1.25 | 1.28 | | mg/L | | 102 | 80 - 120 |

**Lab Sample ID: MB 180-269858/61**
**Matrix: Solid**
**Analysis Batch: 269858**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.10 | 0.026 | mg/L | | | 02/07/19 20:36 | 1 |

**Lab Sample ID: LCS 180-269858/60**
**Matrix: Solid**
**Analysis Batch: 269858**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 1.25 | 1.23 | | mg/L | | 98 | 80 - 120 |

**Lab Sample ID: 180-85447-11 MS**
**Matrix: Solid**
**Analysis Batch: 268079**

**Client Sample ID: ABB pH NATURAL**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.4 | | 1.25 | 2.46 | | mg/L | | 84 | 80 - 120 |

**Lab Sample ID: 180-85447-11 MSD**
**Matrix: Solid**
**Analysis Batch: 268079**

**Client Sample ID: ABB pH NATURAL**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.4 | | 1.25 | 2.43 | | mg/L | | 81 | 80 - 120 | 2 | 15 |

## Method: EPA 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 180-268107/1-A**
**Matrix: Solid**
**Analysis Batch: 268295**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 268107**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 1.0 | 0.32 | ug/L | | 01/17/19 07:12 | 01/18/19 16:37 | 1 |
| Barium | ND | | 10 | 0.37 | ug/L | | 01/17/19 07:12 | 01/18/19 16:37 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/17/19 07:12 | 01/18/19 16:37 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/17/19 07:12 | 01/18/19 16:37 | 1 |
| Chromium | ND | | 2.0 | 0.63 | ug/L | | 01/17/19 07:12 | 01/18/19 16:37 | 1 |
| Lead | 0.110 | J | 1.0 | 0.094 | ug/L | | 01/17/19 07:12 | 01/18/19 16:37 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/17/19 07:12 | 01/18/19 16:37 | 1 |
| Cobalt | ND | | 0.50 | 0.075 | ug/L | | 01/17/19 07:12 | 01/18/19 16:37 | 1 |
| Molybdenum | ND | | 5.0 | 0.47 | ug/L | | 01/17/19 07:12 | 01/18/19 16:37 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/17/19 07:12 | 01/18/19 16:37 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/17/19 07:12 | 01/18/19 16:37 | 1 |
| Lithium | ND | | 5.0 | 2.6 | ug/L | | 01/17/19 07:12 | 01/18/19 16:37 | 1 |

**Lab Sample ID: LCS 180-268107/2-A**
**Matrix: Solid**
**Analysis Batch: 268295**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 268107**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 40.0 | 35.4 | | ug/L | | 89 | 80 - 120 |
| Barium | 2000 | 1880 | | ug/L | | 94 | 80 - 120 |
| Cadmium | 50.0 | 50.7 | | ug/L | | 101 | 80 - 120 |

## Method: EPA 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 180-268107/2-A**
**Matrix: Solid**
**Analysis Batch: 268295**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 268107**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Beryllium | 50.0 | 49.7 | | ug/L | | 99 | 80 - 120 |
| Chromium | 200 | 209 | | ug/L | | 104 | 80 - 120 |
| Lead | 20.0 | 21.3 | | ug/L | | 107 | 80 - 120 |
| Selenium | 10.0 | 10.2 | | ug/L | | 102 | 80 - 120 |
| Cobalt | 500 | 445 | | ug/L | | 89 | 80 - 120 |
| Molybdenum | 1000 | 1000 | | ug/L | | 100 | 80 - 120 |
| Antimony | 500 | 492 | | ug/L | | 98 | 80 - 120 |
| Thallium | 50.0 | 51.5 | | ug/L | | 103 | 80 - 120 |
| Lithium | 50.0 | 47.3 | | ug/L | | 95 | 80 - 120 |

**Lab Sample ID: MB 180-268263/1-A**
**Matrix: Solid**
**Analysis Batch: 268357**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 268263**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 1.0 | 0.32 | ug/L | | 01/18/19 12:59 | 01/19/19 17:12 | 1 |
| Barium | ND | | 10 | 0.37 | ug/L | | 01/18/19 12:59 | 01/19/19 17:12 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/18/19 12:59 | 01/19/19 17:12 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/18/19 12:59 | 01/19/19 17:12 | 1 |
| Chromium | ND | | 2.0 | 0.63 | ug/L | | 01/18/19 12:59 | 01/19/19 17:12 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/18/19 12:59 | 01/19/19 17:12 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/18/19 12:59 | 01/19/19 17:12 | 1 |
| Cobalt | ND | | 0.50 | 0.075 | ug/L | | 01/18/19 12:59 | 01/19/19 17:12 | 1 |
| Molybdenum | ND | | 5.0 | 0.47 | ug/L | | 01/18/19 12:59 | 01/19/19 17:12 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/18/19 12:59 | 01/19/19 17:12 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/18/19 12:59 | 01/19/19 17:12 | 1 |
| Lithium | ND | | 5.0 | 2.6 | ug/L | | 01/18/19 12:59 | 01/19/19 17:12 | 1 |

**Lab Sample ID: LCS 180-268263/2-A**
**Matrix: Solid**
**Analysis Batch: 268357**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 268263**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 40.0 | 38.2 | | ug/L | | 95 | 80 - 120 |
| Barium | 2000 | 2090 | | ug/L | | 105 | 80 - 120 |
| Cadmium | 50.0 | 56.4 | | ug/L | | 113 | 80 - 120 |
| Beryllium | 50.0 | 52.6 | | ug/L | | 105 | 80 - 120 |
| Chromium | 200 | 223 | | ug/L | | 112 | 80 - 120 |
| Lead | 20.0 | 21.5 | | ug/L | | 108 | 80 - 120 |
| Selenium | 10.0 | 8.28 | | ug/L | | 83 | 80 - 120 |
| Cobalt | 500 | 490 | | ug/L | | 98 | 80 - 120 |
| Molybdenum | 1000 | 1070 | | ug/L | | 107 | 80 - 120 |
| Antimony | 500 | 538 | | ug/L | | 108 | 80 - 120 |
| Thallium | 50.0 | 49.2 | | ug/L | | 98 | 80 - 120 |
| Lithium | 50.0 | 49.1 | | ug/L | | 98 | 80 - 120 |

## Method: EPA 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 180-268586/1-A**
**Matrix: Solid**
**Analysis Batch: 268763**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 268586**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 1.0 | 0.32 | ug/L | | 01/23/19 12:55 | 01/24/19 18:36 | 1 |
| Barium | ND | | 10 | 0.37 | ug/L | | 01/23/19 12:55 | 01/24/19 18:36 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 01/23/19 12:55 | 01/24/19 18:36 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 01/23/19 12:55 | 01/24/19 18:36 | 1 |
| Chromium | 1.33 | J | 2.0 | 0.63 | ug/L | | 01/23/19 12:55 | 01/24/19 18:36 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 01/23/19 12:55 | 01/24/19 18:36 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 01/23/19 12:55 | 01/24/19 18:36 | 1 |
| Cobalt | 0.0870 | J | 0.50 | 0.075 | ug/L | | 01/23/19 12:55 | 01/24/19 18:36 | 1 |
| Molybdenum | ND | | 5.0 | 0.47 | ug/L | | 01/23/19 12:55 | 01/24/19 18:36 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 01/23/19 12:55 | 01/24/19 18:36 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 01/23/19 12:55 | 01/24/19 18:36 | 1 |

**Lab Sample ID: MB 180-268586/1-A**
**Matrix: Solid**
**Analysis Batch: 268821**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 268586**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | ND | | 5.0 | 2.6 | ug/L | | 01/23/19 12:55 | 01/25/19 14:23 | 1 |

**Lab Sample ID: LCS 180-268586/2-A**
**Matrix: Solid**
**Analysis Batch: 268763**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 268586**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 40.0 | 40.2 | | ug/L | | 100 | 80 - 120 |
| Barium | 2000 | 2090 | | ug/L | | 105 | 80 - 120 |
| Cadmium | 50.0 | 55.2 | | ug/L | | 110 | 80 - 120 |
| Beryllium | 50.0 | 46.3 | | ug/L | | 93 | 80 - 120 |
| Chromium | 200 | 227 | | ug/L | | 113 | 80 - 120 |
| Lead | 20.0 | 21.7 | | ug/L | | 109 | 80 - 120 |
| Selenium | 10.0 | 9.45 | | ug/L | | 94 | 80 - 120 |
| Cobalt | 500 | 507 | | ug/L | | 101 | 80 - 120 |
| Molybdenum | 1000 | 1100 | | ug/L | | 110 | 80 - 120 |
| Antimony | 500 | 534 | | ug/L | | 107 | 80 - 120 |
| Thallium | 50.0 | 52.7 | | ug/L | | 105 | 80 - 120 |

**Lab Sample ID: LCS 180-268586/2-A**
**Matrix: Solid**
**Analysis Batch: 268821**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 268586**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 50.0 | 59.5 | | ug/L | | 119 | 80 - 120 |

**Lab Sample ID: MB 180-269867/1-A**
**Matrix: Solid**
**Analysis Batch: 269977**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 269867**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 1.0 | 0.32 | ug/L | | 02/07/19 11:53 | 02/08/19 00:28 | 1 |

## Method: EPA 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 180-269867/1-A**
**Matrix: Solid**
**Analysis Batch: 269977**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 269867**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Barium | ND | | 10 | 0.37 | ug/L | | 02/07/19 11:53 | 02/08/19 00:28 | 1 |
| Cadmium | ND | | 1.0 | 0.13 | ug/L | | 02/07/19 11:53 | 02/08/19 00:28 | 1 |
| Beryllium | ND | | 1.0 | 0.057 | ug/L | | 02/07/19 11:53 | 02/08/19 00:28 | 1 |
| Chromium | ND | | 2.0 | 0.63 | ug/L | | 02/07/19 11:53 | 02/08/19 00:28 | 1 |
| Lead | ND | | 1.0 | 0.094 | ug/L | | 02/07/19 11:53 | 02/08/19 00:28 | 1 |
| Selenium | ND | | 5.0 | 0.81 | ug/L | | 02/07/19 11:53 | 02/08/19 00:28 | 1 |
| Cobalt | ND | | 0.50 | 0.075 | ug/L | | 02/07/19 11:53 | 02/08/19 00:28 | 1 |
| Molybdenum | ND | | 5.0 | 0.47 | ug/L | | 02/07/19 11:53 | 02/08/19 00:28 | 1 |
| Antimony | ND | | 2.0 | 1.1 | ug/L | | 02/07/19 11:53 | 02/08/19 00:28 | 1 |
| Thallium | ND | | 1.0 | 0.063 | ug/L | | 02/07/19 11:53 | 02/08/19 00:28 | 1 |
| Lithium | ND | | 5.0 | 2.6 | ug/L | | 02/07/19 11:53 | 02/08/19 00:28 | 1 |

**Lab Sample ID: LCS 180-269867/2-A**
**Matrix: Solid**
**Analysis Batch: 269977**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 269867**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 40.0 | 40.7 | | ug/L | | 102 | 80 - 120 |
| Barium | 2000 | 1940 | | ug/L | | 97 | 80 - 120 |
| Cadmium | 50.0 | 50.6 | | ug/L | | 101 | 80 - 120 |
| Beryllium | 50.0 | 52.2 | | ug/L | | 104 | 80 - 120 |
| Chromium | 200 | 188 | | ug/L | | 94 | 80 - 120 |
| Lead | 20.0 | 20.3 | | ug/L | | 101 | 80 - 120 |
| Selenium | 10.0 | 8.48 | | ug/L | | 85 | 80 - 120 |
| Cobalt | 500 | 485 | | ug/L | | 97 | 80 - 120 |
| Molybdenum | 1000 | 995 | | ug/L | | 99 | 80 - 120 |
| Antimony | 500 | 478 | | ug/L | | 96 | 80 - 120 |
| Thallium | 50.0 | 48.7 | | ug/L | | 97 | 80 - 120 |
| Lithium | 50.0 | 51.7 | | ug/L | | 103 | 80 - 120 |

**Lab Sample ID: 180-85447-23 MS**
**Matrix: Solid**
**Analysis Batch: 268357**

**Client Sample ID: MB LOW**
**Prep Type: Leach**
**Prep Batch: 268263**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 40.0 | 38.9 | | ug/L | | 97 | 75 - 125 |
| Barium | 1.9 | J | 2000 | 2120 | | ug/L | | 106 | 75 - 125 |
| Cadmium | ND | | 50.0 | 55.6 | | ug/L | | 111 | 75 - 125 |
| Beryllium | ND | | 50.0 | 51.8 | | ug/L | | 104 | 75 - 125 |
| Chromium | 1.6 | J | 200 | 224 | | ug/L | | 111 | 75 - 125 |
| Lead | ND | | 20.0 | 21.3 | | ug/L | | 107 | 75 - 125 |
| Selenium | ND | | 10.0 | 9.68 | | ug/L | | 97 | 75 - 125 |
| Cobalt | ND | | 500 | 497 | | ug/L | | 99 | 75 - 125 |
| Molybdenum | ND | | 1000 | 1100 | | ug/L | | 110 | 75 - 125 |
| Antimony | ND | | 500 | 543 | | ug/L | | 109 | 75 - 125 |
| Thallium | ND | | 50.0 | 50.0 | | ug/L | | 100 | 75 - 125 |
| Lithium | ND | | 50.0 | 49.8 | | ug/L | | 100 | 75 - 125 |

## Method: EPA 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 180-85447-23 MSD** — **Client Sample ID: MB LOW**
**Matrix: Solid** — **Prep Type: Leach**
**Analysis Batch: 268357** — **Prep Batch: 268263**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 40.0 | 38.3 | | ug/L | | 96 | 75 - 125 | 1 | 20 |
| Barium | 1.9 | J | 2000 | 2100 | | ug/L | | 105 | 75 - 125 | 1 | 20 |
| Cadmium | ND | | 50.0 | 55.4 | | ug/L | | 111 | 75 - 125 | 0 | 20 |
| Beryllium | ND | | 50.0 | 52.7 | | ug/L | | 105 | 75 - 125 | 2 | 20 |
| Chromium | 1.6 | J | 200 | 226 | | ug/L | | 112 | 75 - 125 | 1 | 20 |
| Lead | ND | | 20.0 | 21.5 | | ug/L | | 107 | 75 - 125 | 0 | 20 |
| Selenium | ND | | 10.0 | 8.60 | | ug/L | | 86 | 75 - 125 | 12 | 20 |
| Cobalt | ND | | 500 | 494 | | ug/L | | 99 | 75 - 125 | 1 | 20 |
| Molybdenum | ND | | 1000 | 1100 | | ug/L | | 110 | 75 - 125 | 0 | 20 |
| Antimony | ND | | 500 | 533 | | ug/L | | 107 | 75 - 125 | 2 | 20 |
| Thallium | ND | | 50.0 | 50.1 | | ug/L | | 100 | 75 - 125 | 0 | 20 |
| Lithium | ND | | 50.0 | 49.2 | | ug/L | | 98 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 180-85447-49 MS** — **Client Sample ID: MB LOW 1**
**Matrix: Solid** — **Prep Type: Leach**
**Analysis Batch: 268763** — **Prep Batch: 268586**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 40.0 | 38.6 | | ug/L | | 97 | 75 - 125 |
| Barium | 2.5 | J | 2000 | 2090 | | ug/L | | 104 | 75 - 125 |
| Cadmium | ND | | 50.0 | 54.6 | | ug/L | | 109 | 75 - 125 |
| Beryllium | ND | | 50.0 | 49.7 | | ug/L | | 99 | 75 - 125 |
| Chromium | 1.4 | J B | 200 | 224 | | ug/L | | 111 | 75 - 125 |
| Lead | ND | | 20.0 | 21.8 | | ug/L | | 109 | 75 - 125 |
| Selenium | ND | | 10.0 | 8.68 | | ug/L | | 87 | 75 - 125 |
| Cobalt | ND | | 500 | 495 | | ug/L | | 99 | 75 - 125 |
| Molybdenum | ND | | 1000 | 1060 | | ug/L | | 106 | 75 - 125 |
| Antimony | ND | | 500 | 539 | | ug/L | | 108 | 75 - 125 |
| Thallium | ND | | 50.0 | 52.4 | | ug/L | | 105 | 75 - 125 |

**Lab Sample ID: 180-85447-49 MS** — **Client Sample ID: MB LOW 1**
**Matrix: Solid** — **Prep Type: Leach**
**Analysis Batch: 268821** — **Prep Batch: 268586**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 3.2 | J | 50.0 | 61.8 | | ug/L | | 117 | 75 - 125 |

**Lab Sample ID: 180-85447-49 MSD** — **Client Sample ID: MB LOW 1**
**Matrix: Solid** — **Prep Type: Leach**
**Analysis Batch: 268763** — **Prep Batch: 268586**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 40.0 | 39.3 | | ug/L | | 98 | 75 - 125 | 2 | 20 |
| Barium | 2.5 | J | 2000 | 2080 | | ug/L | | 104 | 75 - 125 | 0 | 20 |
| Cadmium | ND | | 50.0 | 54.5 | | ug/L | | 109 | 75 - 125 | 0 | 20 |
| Beryllium | ND | | 50.0 | 49.8 | | ug/L | | 100 | 75 - 125 | 0 | 20 |
| Chromium | 1.4 | J B | 200 | 226 | | ug/L | | 112 | 75 - 125 | 1 | 20 |
| Lead | ND | | 20.0 | 21.7 | | ug/L | | 109 | 75 - 125 | 0 | 20 |
| Selenium | ND | | 10.0 | 9.44 | | ug/L | | 94 | 75 - 125 | 8 | 20 |

## Method: EPA 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 180-85447-49 MSD**
**Matrix: Solid**
**Analysis Batch: 268763**

**Client Sample ID: MB LOW 1**
**Prep Type: Leach**
**Prep Batch: 268586**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cobalt | ND | | 500 | 489 | | ug/L | | 98 | 75 - 125 | 1 | 20 |
| Molybdenum | ND | | 1000 | 1070 | | ug/L | | 107 | 75 - 125 | 2 | 20 |
| Antimony | ND | | 500 | 530 | | ug/L | | 106 | 75 - 125 | 2 | 20 |
| Thallium | ND | | 50.0 | 52.0 | | ug/L | | 104 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 180-85447-49 MSD**
**Matrix: Solid**
**Analysis Batch: 268821**

**Client Sample ID: MB LOW 1**
**Prep Type: Leach**
**Prep Batch: 268586**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | 3.2 | J | 50.0 | 59.8 | | ug/L | | 113 | 75 - 125 | 3 | 20 |

**Lab Sample ID: 180-85447-51 MS**
**Matrix: Solid**
**Analysis Batch: 269977**

**Client Sample ID: MB LOW 2**
**Prep Type: Leach**
**Prep Batch: 269867**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 40.0 | 40.3 | | ug/L | | 101 | 75 - 125 |
| Barium | ND | | 2000 | 1920 | | ug/L | | 96 | 75 - 125 |
| Cadmium | ND | | 50.0 | 49.7 | | ug/L | | 99 | 75 - 125 |
| Beryllium | ND | | 50.0 | 52.6 | | ug/L | | 105 | 75 - 125 |
| Chromium | 0.74 | J | 200 | 204 | | ug/L | | 102 | 75 - 125 |
| Lead | ND | | 20.0 | 20.5 | | ug/L | | 103 | 75 - 125 |
| Selenium | ND | | 10.0 | 8.67 | | ug/L | | 87 | 75 - 125 |
| Cobalt | ND | | 500 | 515 | | ug/L | | 103 | 75 - 125 |
| Molybdenum | 0.85 | J | 1000 | 981 | | ug/L | | 98 | 75 - 125 |
| Antimony | ND | | 500 | 467 | | ug/L | | 93 | 75 - 125 |
| Thallium | ND | | 50.0 | 48.8 | | ug/L | | 98 | 75 - 125 |
| Lithium | ND | | 50.0 | 52.6 | | ug/L | | 105 | 75 - 125 |

**Lab Sample ID: 180-85447-51 MSD**
**Matrix: Solid**
**Analysis Batch: 269977**

**Client Sample ID: MB LOW 2**
**Prep Type: Leach**
**Prep Batch: 269867**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | | 40.0 | 39.8 | | ug/L | | 100 | 75 - 125 | 1 | 20 |
| Barium | ND | | 2000 | 1910 | | ug/L | | 95 | 75 - 125 | 1 | 20 |
| Cadmium | ND | | 50.0 | 50.0 | | ug/L | | 100 | 75 - 125 | 1 | 20 |
| Beryllium | ND | | 50.0 | 51.3 | | ug/L | | 103 | 75 - 125 | 2 | 20 |
| Chromium | 0.74 | J | 200 | 207 | | ug/L | | 103 | 75 - 125 | 1 | 20 |
| Lead | ND | | 20.0 | 20.6 | | ug/L | | 103 | 75 - 125 | 1 | 20 |
| Selenium | ND | | 10.0 | 8.44 | | ug/L | | 84 | 75 - 125 | 3 | 20 |
| Cobalt | ND | | 500 | 524 | | ug/L | | 105 | 75 - 125 | 2 | 20 |
| Molybdenum | 0.85 | J | 1000 | 1000 | | ug/L | | 100 | 75 - 125 | 2 | 20 |
| Antimony | ND | | 500 | 454 | | ug/L | | 91 | 75 - 125 | 3 | 20 |
| Thallium | ND | | 50.0 | 49.1 | | ug/L | | 98 | 75 - 125 | 1 | 20 |
| Lithium | ND | | 50.0 | 53.4 | | ug/L | | 107 | 75 - 125 | 1 | 20 |

## Method: EPA 7470A - Mercury (CVAA)

**Lab Sample ID: MB 180-268065/1-A**
**Matrix: Solid**
**Analysis Batch: 268204**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 268065**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/16/19 15:06 | 01/17/19 17:43 | 1 |

**Lab Sample ID: LCS 180-268065/2-A**
**Matrix: Solid**
**Analysis Batch: 268204**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 268065**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 2.50 | 2.50 | | ug/L | | 100 | 80 - 120 |

**Lab Sample ID: MB 180-268340/1-A**
**Matrix: Solid**
**Analysis Batch: 268542**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 268340**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/21/19 10:49 | 01/22/19 18:00 | 1 |

**Lab Sample ID: LCS 180-268340/2-A**
**Matrix: Solid**
**Analysis Batch: 268542**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 268340**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 2.50 | 2.32 | | ug/L | | 93 | 80 - 120 |

**Lab Sample ID: LCSD 180-268340/3-A**
**Matrix: Solid**
**Analysis Batch: 268542**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 268340**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 2.50 | 2.34 | | ug/L | | 93 | 80 - 120 | 1 | 20 |

**Lab Sample ID: MB 180-269197/1-A**
**Matrix: Solid**
**Analysis Batch: 269298**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 269197**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 01/31/19 07:10 | 01/31/19 16:40 | 1 |

**Lab Sample ID: LCS 180-269197/2-A**
**Matrix: Solid**
**Analysis Batch: 269298**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 269197**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 2.50 | 2.41 | | ug/L | | 96 | 80 - 120 |

**Lab Sample ID: MB 180-269834/1-A**
**Matrix: Solid**
**Analysis Batch: 269950**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 269834**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 0.20 | 0.065 | ug/L | | 02/07/19 10:44 | 02/08/19 10:06 | 1 |

**Lab Sample ID: LCS 180-269834/2-A**
**Matrix: Solid**
**Analysis Batch: 269950**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 269834**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 2.50 | 2.50 | | ug/L | | 100 | 80 - 120 |

**Lab Sample ID: 180-85447-25 MS**
**Matrix: Solid**
**Analysis Batch: 268204**

**Client Sample ID: MB HIGH**
**Prep Type: Leach**
**Prep Batch: 268065**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 1.00 | 1.00 | | ug/L | | 100 | 75 - 125 |

**Lab Sample ID: 180-85447-25 MSD**
**Matrix: Solid**
**Analysis Batch: 268204**

**Client Sample ID: MB HIGH**
**Prep Type: Leach**
**Prep Batch: 268065**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | | 1.00 | 1.01 | | ug/L | | 101 | 75 - 125 | 0 | 20 |

## Method: EPA 9040C - pH

**Lab Sample ID: LCS 180-268135/1**
**Matrix: Solid**
**Analysis Batch: 268135**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 7.00 | 7.0 | | SU | | 100 | 99 - 101 |

**Lab Sample ID: LCS 180-268260/1**
**Matrix: Solid**
**Analysis Batch: 268260**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 7.00 | 7.0 | | SU | | 100 | 99 - 101 |

**Lab Sample ID: LCS 180-268604/1**
**Matrix: Solid**
**Analysis Batch: 268604**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 7.00 | 7.0 | | SU | | 100 | 99 - 101 |

**Lab Sample ID: LCS 180-269862/1**
**Matrix: Solid**
**Analysis Batch: 269862**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 7.00 | 7.0 | | SU | | 100 | 99 - 101 |

## Method: EPA 9040C - pH (Continued)

**Lab Sample ID: 180-85447-11 DU**
**Matrix: Solid**
**Analysis Batch: 268135**

**Client Sample ID: ABB pH NATURAL**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 9.0 | | | 9.0 | | SU | | | | 0.1 | 2 |

**Lab Sample ID: 180-85447-14 DU**
**Matrix: Solid**
**Analysis Batch: 268135**

**Client Sample ID: ASB pH 12.0**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 12.4 | | | 12.4 | | SU | | | | 0 | 2 |

**Lab Sample ID: 180-85447-8 DU**
**Matrix: Solid**
**Analysis Batch: 268260**

**Client Sample ID: ABB pH 5.5**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 5.9 | | | 5.8 | | SU | | | | 0.2 | 2 |

**Lab Sample ID: 180-85447-20 DU**
**Matrix: Solid**
**Analysis Batch: 268604**

**Client Sample ID: ASB pH 4.0**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 4.1 | | | 4.1 | | SU | | | | 0.2 | 2 |

**Lab Sample ID: 180-85447-10 DU**
**Matrix: Solid**
**Analysis Batch: 269862**

**Client Sample ID: ABB pH 2.0**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 2.2 | | | 2.2 | | SU | | | | 0.5 | 2 |

## Method: SM 2510B - Conductivity, Specific Conductance

**Lab Sample ID: MB 180-268142/2**
**Matrix: Solid**
**Analysis Batch: 268142**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | ND | | 1.0 | 1.0 | umhos/cm | | | 01/16/19 09:05 | 1 |

**Lab Sample ID: LCS 180-268142/1**
**Matrix: Solid**
**Analysis Batch: 268142**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | | | 84.0 | 85.8 | | umhos/cm | | 102 | 90 - 110 | | |

## Method: SM 2510B - Conductivity, Specific Conductance (Continued)

**Lab Sample ID: MB 180-268262/2**
**Matrix: Solid**
**Analysis Batch: 268262**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | ND | | 1.0 | 1.0 | umhos/cm | | | 01/18/19 10:40 | 1 |

**Lab Sample ID: LCS 180-268262/1**
**Matrix: Solid**
**Analysis Batch: 268262**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductance | 84.0 | 87.2 | | umhos/cm | | 104 | 90 - 110 |

**Lab Sample ID: MB 180-268609/2**
**Matrix: Solid**
**Analysis Batch: 268609**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | ND | | 1.0 | 1.0 | umhos/cm | | | 01/23/19 07:40 | 1 |

**Lab Sample ID: LCS 180-268609/1**
**Matrix: Solid**
**Analysis Batch: 268609**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductance | 84.0 | 86.2 | | umhos/cm | | 103 | 90 - 110 |

**Lab Sample ID: MB 180-269868/2**
**Matrix: Solid**
**Analysis Batch: 269868**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | ND | | 1.0 | 1.0 | umhos/cm | | | 02/07/19 08:30 | 1 |

**Lab Sample ID: LCS 180-269868/1**
**Matrix: Solid**
**Analysis Batch: 269868**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductance | 84.0 | 86.8 | | umhos/cm | | 103 | 90 - 110 |

**Lab Sample ID: 180-85447-11 DU**
**Matrix: Solid**
**Analysis Batch: 268142**

**Client Sample ID: ABB pH NATURAL**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 210 | | 214 | | umhos/cm | | 0.3 | 20 |

**Lab Sample ID: 180-85447-14 DU**
**Matrix: Solid**
**Analysis Batch: 268142**

**Client Sample ID: ASB pH 12.0**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 6200 | | 6240 | | umhos/cm | | 0.05 | 20 |

**Lab Sample ID: 180-85447-8 DU** — **Client Sample ID: ABB pH 5.5**
**Matrix: Solid** — **Prep Type: Leach**
**Analysis Batch: 268262**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 4400 | | 4440 | | umhos/cm | | 0.07 | 20 |

**Lab Sample ID: 180-85447-20 DU** — **Client Sample ID: ASB pH 4.0**
**Matrix: Solid** — **Prep Type: Leach**
**Analysis Batch: 268609**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 26000 | | 26000 | | umhos/cm | | 0.08 | 20 |

**Lab Sample ID: 180-85447-10 DU** — **Client Sample ID: ABB pH 2.0**
**Matrix: Solid** — **Prep Type: Leach**
**Analysis Batch: 269868**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 78000 | | 78200 | | umhos/cm | | 0 | 20 |

## Method: SM 2580B - Reduction-Oxidation (REDOX) Potential

**Lab Sample ID: LCS 180-268140/1** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 268140**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 475 | 470 | | millivolts | | 99 | 90 - 110 |

**Lab Sample ID: LCS 180-268261/1** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 268261**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 475 | 475 | | millivolts | | 100 | 90 - 110 |

**Lab Sample ID: LCS 180-268608/1** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 268608**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 475 | 476 | | millivolts | | 100 | 90 - 110 |

**Lab Sample ID: LCS 180-269865/1** — **Client Sample ID: Lab Control Sample**
**Matrix: Solid** — **Prep Type: Total/NA**
**Analysis Batch: 269865**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 475 | 475 | | millivolts | | 100 | 90 - 110 |

## Method: SM 2580B - Reduction-Oxidation (REDOX) Potential (Continued)

**Lab Sample ID: 180-85447-11 DU** — **Client Sample ID: ABB pH NATURAL**
**Matrix: Solid** — **Prep Type: Leach**
**Analysis Batch: 268140**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 310 | | | 311 | | millivolts | | | | 1 | 20 |

**Lab Sample ID: 180-85447-14 DU** — **Client Sample ID: ASB pH 12.0**
**Matrix: Solid** — **Prep Type: Leach**
**Analysis Batch: 268140**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | - 24 | | | - 25 | | millivolts | | | | NC | 20 |

**Lab Sample ID: 180-85447-8 DU** — **Client Sample ID: ABB pH 5.5**
**Matrix: Solid** — **Prep Type: Leach**
**Analysis Batch: 268261**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 240 | | | 237 | | millivolts | | | | 0.8 | 20 |

**Lab Sample ID: 180-85447-20 DU** — **Client Sample ID: ASB pH 4.0**
**Matrix: Solid** — **Prep Type: Leach**
**Analysis Batch: 268608**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 360 | | | 353 | | millivolts | | | | 0.8 | 20 |

**Lab Sample ID: 180-85447-10 DU** — **Client Sample ID: ABB pH 2.0**
**Matrix: Solid** — **Prep Type: Leach**
**Analysis Batch: 269865**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 590 | | | 584 | | millivolts | | | | 0.3 | 20 |

## HPLC/IC

### Leach Batch: 268040

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-2 | ABB pH 13.0 | Leach | Solid | 1313 | |
| 180-85447-3 | ABB pH 12.0 | Leach | Solid | 1313 | |
| 180-85447-6 | ABB pH 8.0 | Leach | Solid | 1313 | |
| 180-85447-7 | ABB pH 7.0 | Leach | Solid | 1313 | |
| 180-85447-11 | ABB pH NATURAL | Leach | Solid | 1313 | |
| 180-85447-13 | ASB pH 13.0 | Leach | Solid | 1313 | |
| 180-85447-14 | ASB pH 12.0 | Leach | Solid | 1313 | |
| 180-85447-15 | ASB pH 10.5 | Leach | Solid | 1313 | |
| 180-85447-17 | ASB pH 8.0 | Leach | Solid | 1313 | |
| 180-85447-18 | ASB pH 7.0 | Leach | Solid | 1313 | |
| 180-85447-22 | ASB pH NATURAL | Leach | Solid | 1313 | |
| 180-85447-24 | MB NATURAL | Leach | Solid | 1313 | |
| 180-85447-25 | MB HIGH | Leach | Solid | 1313 | |
| 180-85447-11 MS | ABB pH NATURAL | Leach | Solid | 1313 | |
| 180-85447-11 MSD | ABB pH NATURAL | Leach | Solid | 1313 | |

### Analysis Batch: 268079

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-3 | ABB pH 12.0 | Leach | Solid | EPA 9056A | 268040 |
| 180-85447-6 | ABB pH 8.0 | Leach | Solid | EPA 9056A | 268040 |
| 180-85447-7 | ABB pH 7.0 | Leach | Solid | EPA 9056A | 268040 |
| 180-85447-11 | ABB pH NATURAL | Leach | Solid | EPA 9056A | 268040 |
| 180-85447-14 | ASB pH 12.0 | Leach | Solid | EPA 9056A | 268040 |
| 180-85447-15 | ASB pH 10.5 | Leach | Solid | EPA 9056A | 268040 |
| 180-85447-17 | ASB pH 8.0 | Leach | Solid | EPA 9056A | 268040 |
| 180-85447-18 | ASB pH 7.0 | Leach | Solid | EPA 9056A | 268040 |
| 180-85447-22 | ASB pH NATURAL | Leach | Solid | EPA 9056A | 268040 |
| 180-85447-24 | MB NATURAL | Leach | Solid | EPA 9056A | 268040 |
| MB 180-268079/6 | Method Blank | Total/NA | Solid | EPA 9056A | |
| LCS 180-268079/5 | Lab Control Sample | Total/NA | Solid | EPA 9056A | |
| 180-85447-11 MS | ABB pH NATURAL | Leach | Solid | EPA 9056A | 268040 |
| 180-85447-11 MSD | ABB pH NATURAL | Leach | Solid | EPA 9056A | 268040 |

### Analysis Batch: 268208

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-2 | ABB pH 13.0 | Leach | Solid | EPA 9056A | 268040 |
| 180-85447-13 | ASB pH 13.0 | Leach | Solid | EPA 9056A | 268040 |
| 180-85447-25 | MB HIGH | Leach | Solid | EPA 9056A | 268040 |
| MB 180-268208/6 | Method Blank | Total/NA | Solid | EPA 9056A | |
| LCS 180-268208/5 | Lab Control Sample | Total/NA | Solid | EPA 9056A | |

### Leach Batch: 268246

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-4 | ABB pH 10.5 | Leach | Solid | 1313 | |
| 180-85447-8 | ABB pH 5.5 | Leach | Solid | 1313 | |
| 180-85447-9 | ABB pH 4.0 | Leach | Solid | 1313 | |
| 180-85447-19 | ASB pH 5.5 | Leach | Solid | 1313 | |
| 180-85447-23 | MB LOW | Leach | Solid | 1313 | |

## HPLC/IC (Continued)

### Analysis Batch: 268298

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-4 | ABB pH 10.5 | Leach | Solid | EPA 9056A | 268246 |
| 180-85447-8 | ABB pH 5.5 | Leach | Solid | EPA 9056A | 268246 |
| 180-85447-9 | ABB pH 4.0 | Leach | Solid | EPA 9056A | 268246 |
| 180-85447-19 | ASB pH 5.5 | Leach | Solid | EPA 9056A | 268246 |
| 180-85447-23 | MB LOW | Leach | Solid | EPA 9056A | 268246 |
| MB 180-268298/6 | Method Blank | Total/NA | Solid | EPA 9056A | |
| LCS 180-268298/5 | Lab Control Sample | Total/NA | Solid | EPA 9056A | |

### Leach Batch: 268574

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-20 | ASB pH 4.0 | Leach | Solid | 1313 | |
| 180-85447-49 | MB LOW 1 | Leach | Solid | 1313 | |

### Analysis Batch: 268716

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-20 | ASB pH 4.0 | Leach | Solid | EPA 9056A | 268574 |
| 180-85447-49 | MB LOW 1 | Leach | Solid | EPA 9056A | 268574 |
| MB 180-268716/6 | Method Blank | Total/NA | Solid | EPA 9056A | |
| LCS 180-268716/5 | Lab Control Sample | Total/NA | Solid | EPA 9056A | |

### Leach Batch: 269578

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | 1313 | |
| 180-85447-21 | ASB pH 2.0 | Leach | Solid | 1313 | |
| 180-85447-51 | MB LOW 2 | Leach | Solid | 1313 | |

### Analysis Batch: 269858

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | EPA 9056A | 269578 |
| 180-85447-21 | ASB pH 2.0 | Leach | Solid | EPA 9056A | 269578 |
| 180-85447-51 | MB LOW 2 | Leach | Solid | EPA 9056A | 269578 |
| MB 180-269858/61 | Method Blank | Total/NA | Solid | EPA 9056A | |
| LCS 180-269858/60 | Lab Control Sample | Total/NA | Solid | EPA 9056A | |

## Metals

### Leach Batch: 268040

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-2 | ABB pH 13.0 | Leach | Solid | 1313 | |
| 180-85447-3 | ABB pH 12.0 | Leach | Solid | 1313 | |
| 180-85447-6 | ABB pH 8.0 | Leach | Solid | 1313 | |
| 180-85447-7 | ABB pH 7.0 | Leach | Solid | 1313 | |
| 180-85447-11 | ABB pH NATURAL | Leach | Solid | 1313 | |
| 180-85447-13 | ASB pH 13.0 | Leach | Solid | 1313 | |
| 180-85447-14 | ASB pH 12.0 | Leach | Solid | 1313 | |
| 180-85447-15 | ASB pH 10.5 | Leach | Solid | 1313 | |
| 180-85447-17 | ASB pH 8.0 | Leach | Solid | 1313 | |
| 180-85447-18 | ASB pH 7.0 | Leach | Solid | 1313 | |
| 180-85447-22 | ASB pH NATURAL | Leach | Solid | 1313 | |
| 180-85447-24 | MB NATURAL | Leach | Solid | 1313 | |

## Metals (Continued)

### Leach Batch: 268040 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-25 | MB HIGH | Leach | Solid | 1313 | |
| 180-85447-25 MS | MB HIGH | Leach | Solid | 1313 | |
| 180-85447-25 MSD | MB HIGH | Leach | Solid | 1313 | |

### Prep Batch: 268065

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-2 | ABB pH 13.0 | Leach | Solid | 7470A | 268040 |
| 180-85447-3 | ABB pH 12.0 | Leach | Solid | 7470A | 268040 |
| 180-85447-6 | ABB pH 8.0 | Leach | Solid | 7470A | 268040 |
| 180-85447-7 | ABB pH 7.0 | Leach | Solid | 7470A | 268040 |
| 180-85447-11 | ABB pH NATURAL | Leach | Solid | 7470A | 268040 |
| 180-85447-13 | ASB pH 13.0 | Leach | Solid | 7470A | 268040 |
| 180-85447-14 | ASB pH 12.0 | Leach | Solid | 7470A | 268040 |
| 180-85447-15 | ASB pH 10.5 | Leach | Solid | 7470A | 268040 |
| 180-85447-17 | ASB pH 8.0 | Leach | Solid | 7470A | 268040 |
| 180-85447-18 | ASB pH 7.0 | Leach | Solid | 7470A | 268040 |
| 180-85447-22 | ASB pH NATURAL | Leach | Solid | 7470A | 268040 |
| 180-85447-24 | MB NATURAL | Leach | Solid | 7470A | 268040 |
| 180-85447-25 | MB HIGH | Leach | Solid | 7470A | 268040 |
| MB 180-268065/1-A | Method Blank | Total/NA | Solid | 7470A | |
| LCS 180-268065/2-A | Lab Control Sample | Total/NA | Solid | 7470A | |
| 180-85447-25 MS | MB HIGH | Leach | Solid | 7470A | 268040 |
| 180-85447-25 MSD | MB HIGH | Leach | Solid | 7470A | 268040 |

### Prep Batch: 268107

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-2 | ABB pH 13.0 | Leach | Solid | 3010A | 268040 |
| 180-85447-3 | ABB pH 12.0 | Leach | Solid | 3010A | 268040 |
| 180-85447-6 | ABB pH 8.0 | Leach | Solid | 3010A | 268040 |
| 180-85447-7 | ABB pH 7.0 | Leach | Solid | 3010A | 268040 |
| 180-85447-11 | ABB pH NATURAL | Leach | Solid | 3010A | 268040 |
| 180-85447-13 | ASB pH 13.0 | Leach | Solid | 3010A | 268040 |
| 180-85447-14 | ASB pH 12.0 | Leach | Solid | 3010A | 268040 |
| 180-85447-15 | ASB pH 10.5 | Leach | Solid | 3010A | 268040 |
| 180-85447-17 | ASB pH 8.0 | Leach | Solid | 3010A | 268040 |
| 180-85447-18 | ASB pH 7.0 | Leach | Solid | 3010A | 268040 |
| 180-85447-22 | ASB pH NATURAL | Leach | Solid | 3010A | 268040 |
| 180-85447-24 | MB NATURAL | Leach | Solid | 3010A | 268040 |
| 180-85447-25 | MB HIGH | Leach | Solid | 3010A | 268040 |
| MB 180-268107/1-A | Method Blank | Total/NA | Solid | 3010A | |
| LCS 180-268107/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |

### Analysis Batch: 268204

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-2 | ABB pH 13.0 | Leach | Solid | EPA 7470A | 268065 |
| 180-85447-3 | ABB pH 12.0 | Leach | Solid | EPA 7470A | 268065 |
| 180-85447-6 | ABB pH 8.0 | Leach | Solid | EPA 7470A | 268065 |
| 180-85447-7 | ABB pH 7.0 | Leach | Solid | EPA 7470A | 268065 |
| 180-85447-11 | ABB pH NATURAL | Leach | Solid | EPA 7470A | 268065 |
| 180-85447-13 | ASB pH 13.0 | Leach | Solid | EPA 7470A | 268065 |
| 180-85447-14 | ASB pH 12.0 | Leach | Solid | EPA 7470A | 268065 |

## Metals (Continued)

### Analysis Batch: 268204 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-15 | ASB pH 10.5 | Leach | Solid | EPA 7470A | 268065 |
| 180-85447-17 | ASB pH 8.0 | Leach | Solid | EPA 7470A | 268065 |
| 180-85447-18 | ASB pH 7.0 | Leach | Solid | EPA 7470A | 268065 |
| 180-85447-22 | ASB pH NATURAL | Leach | Solid | EPA 7470A | 268065 |
| 180-85447-24 | MB NATURAL | Leach | Solid | EPA 7470A | 268065 |
| 180-85447-25 | MB HIGH | Leach | Solid | EPA 7470A | 268065 |
| MB 180-268065/1-A | Method Blank | Total/NA | Solid | EPA 7470A | 268065 |
| LCS 180-268065/2-A | Lab Control Sample | Total/NA | Solid | EPA 7470A | 268065 |
| 180-85447-25 MS | MB HIGH | Leach | Solid | EPA 7470A | 268065 |
| 180-85447-25 MSD | MB HIGH | Leach | Solid | EPA 7470A | 268065 |

### Leach Batch: 268246

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-4 | ABB pH 10.5 | Leach | Solid | 1313 | |
| 180-85447-8 | ABB pH 5.5 | Leach | Solid | 1313 | |
| 180-85447-9 | ABB pH 4.0 | Leach | Solid | 1313 | |
| 180-85447-19 | ASB pH 5.5 | Leach | Solid | 1313 | |
| 180-85447-23 | MB LOW | Leach | Solid | 1313 | |
| 180-85447-23 MS | MB LOW | Leach | Solid | 1313 | |
| 180-85447-23 MSD | MB LOW | Leach | Solid | 1313 | |

### Prep Batch: 268263

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-4 | ABB pH 10.5 | Leach | Solid | 3010A | 268246 |
| 180-85447-8 | ABB pH 5.5 | Leach | Solid | 3010A | 268246 |
| 180-85447-9 | ABB pH 4.0 | Leach | Solid | 3010A | 268246 |
| 180-85447-19 | ASB pH 5.5 | Leach | Solid | 3010A | 268246 |
| 180-85447-23 | MB LOW | Leach | Solid | 3010A | 268246 |
| MB 180-268263/1-A | Method Blank | Total/NA | Solid | 3010A | |
| LCS 180-268263/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |
| 180-85447-23 MS | MB LOW | Leach | Solid | 3010A | 268246 |
| 180-85447-23 MSD | MB LOW | Leach | Solid | 3010A | 268246 |

### Analysis Batch: 268295

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-2 | ABB pH 13.0 | Leach | Solid | EPA 6020A | 268107 |
| 180-85447-3 | ABB pH 12.0 | Leach | Solid | EPA 6020A | 268107 |
| 180-85447-6 | ABB pH 8.0 | Leach | Solid | EPA 6020A | 268107 |
| 180-85447-7 | ABB pH 7.0 | Leach | Solid | EPA 6020A | 268107 |
| 180-85447-11 | ABB pH NATURAL | Leach | Solid | EPA 6020A | 268107 |
| 180-85447-13 | ASB pH 13.0 | Leach | Solid | EPA 6020A | 268107 |
| 180-85447-14 | ASB pH 12.0 | Leach | Solid | EPA 6020A | 268107 |
| 180-85447-15 | ASB pH 10.5 | Leach | Solid | EPA 6020A | 268107 |
| 180-85447-17 | ASB pH 8.0 | Leach | Solid | EPA 6020A | 268107 |
| 180-85447-18 | ASB pH 7.0 | Leach | Solid | EPA 6020A | 268107 |
| 180-85447-22 | ASB pH NATURAL | Leach | Solid | EPA 6020A | 268107 |
| 180-85447-24 | MB NATURAL | Leach | Solid | EPA 6020A | 268107 |
| 180-85447-25 | MB HIGH | Leach | Solid | EPA 6020A | 268107 |
| MB 180-268107/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 268107 |
| LCS 180-268107/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 268107 |

## Metals (Continued)

### Prep Batch: 268340

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-4 | ABB pH 10.5 | Leach | Solid | 7470A | 268246 |
| 180-85447-8 | ABB pH 5.5 | Leach | Solid | 7470A | 268246 |
| 180-85447-9 | ABB pH 4.0 | Leach | Solid | 7470A | 268246 |
| 180-85447-19 | ASB pH 5.5 | Leach | Solid | 7470A | 268246 |
| 180-85447-23 | MB LOW | Leach | Solid | 7470A | 268246 |
| MB 180-268340/1-A | Method Blank | Total/NA | Solid | 7470A | |
| LCS 180-268340/2-A | Lab Control Sample | Total/NA | Solid | 7470A | |
| LCSD 180-268340/3-A | Lab Control Sample Dup | Total/NA | Solid | 7470A | |

### Analysis Batch: 268357

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-4 | ABB pH 10.5 | Leach | Solid | EPA 6020A | 268263 |
| 180-85447-8 | ABB pH 5.5 | Leach | Solid | EPA 6020A | 268263 |
| 180-85447-9 | ABB pH 4.0 | Leach | Solid | EPA 6020A | 268263 |
| 180-85447-19 | ASB pH 5.5 | Leach | Solid | EPA 6020A | 268263 |
| 180-85447-23 | MB LOW | Leach | Solid | EPA 6020A | 268263 |
| MB 180-268263/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 268263 |
| LCS 180-268263/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 268263 |
| 180-85447-23 MS | MB LOW | Leach | Solid | EPA 6020A | 268263 |
| 180-85447-23 MSD | MB LOW | Leach | Solid | EPA 6020A | 268263 |

### Analysis Batch: 268542

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-4 | ABB pH 10.5 | Leach | Solid | EPA 7470A | 268340 |
| 180-85447-8 | ABB pH 5.5 | Leach | Solid | EPA 7470A | 268340 |
| 180-85447-9 | ABB pH 4.0 | Leach | Solid | EPA 7470A | 268340 |
| 180-85447-19 | ASB pH 5.5 | Leach | Solid | EPA 7470A | 268340 |
| 180-85447-23 | MB LOW | Leach | Solid | EPA 7470A | 268340 |
| MB 180-268340/1-A | Method Blank | Total/NA | Solid | EPA 7470A | 268340 |
| LCS 180-268340/2-A | Lab Control Sample | Total/NA | Solid | EPA 7470A | 268340 |
| LCSD 180-268340/3-A | Lab Control Sample Dup | Total/NA | Solid | EPA 7470A | 268340 |

### Leach Batch: 268574

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-20 | ASB pH 4.0 | Leach | Solid | 1313 | |
| 180-85447-49 | MB LOW 1 | Leach | Solid | 1313 | |
| 180-85447-49 MS | MB LOW 1 | Leach | Solid | 1313 | |
| 180-85447-49 MSD | MB LOW 1 | Leach | Solid | 1313 | |

### Prep Batch: 268586

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-20 | ASB pH 4.0 | Leach | Solid | 3010A | 268574 |
| 180-85447-49 | MB LOW 1 | Leach | Solid | 3010A | 268574 |
| MB 180-268586/1-A | Method Blank | Total/NA | Solid | 3010A | |
| LCS 180-268586/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |
| 180-85447-49 MS | MB LOW 1 | Leach | Solid | 3010A | 268574 |
| 180-85447-49 MSD | MB LOW 1 | Leach | Solid | 3010A | 268574 |

### Analysis Batch: 268763

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-49 | MB LOW 1 | Leach | Solid | EPA 6020A | 268586 |

## Metals (Continued)

### Analysis Batch: 268763 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 180-268586/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 268586 |
| LCS 180-268586/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 268586 |
| 180-85447-49 MS | MB LOW 1 | Leach | Solid | EPA 6020A | 268586 |
| 180-85447-49 MSD | MB LOW 1 | Leach | Solid | EPA 6020A | 268586 |

### Analysis Batch: 268821

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-20 | ASB pH 4.0 | Leach | Solid | EPA 6020A | 268586 |
| 180-85447-49 | MB LOW 1 | Leach | Solid | EPA 6020A | 268586 |
| MB 180-268586/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 268586 |
| LCS 180-268586/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 268586 |
| 180-85447-49 MS | MB LOW 1 | Leach | Solid | EPA 6020A | 268586 |
| 180-85447-49 MSD | MB LOW 1 | Leach | Solid | EPA 6020A | 268586 |

### Prep Batch: 269197

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-20 | ASB pH 4.0 | Leach | Solid | 7470A | 268574 |
| 180-85447-49 | MB LOW 1 | Leach | Solid | 7470A | 268574 |
| MB 180-269197/1-A | Method Blank | Total/NA | Solid | 7470A | |
| LCS 180-269197/2-A | Lab Control Sample | Total/NA | Solid | 7470A | |

### Analysis Batch: 269298

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-20 | ASB pH 4.0 | Leach | Solid | EPA 7470A | 269197 |
| 180-85447-49 | MB LOW 1 | Leach | Solid | EPA 7470A | 269197 |
| MB 180-269197/1-A | Method Blank | Total/NA | Solid | EPA 7470A | 269197 |
| LCS 180-269197/2-A | Lab Control Sample | Total/NA | Solid | EPA 7470A | 269197 |

### Leach Batch: 269578

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | 1313 | |
| 180-85447-21 | ASB pH 2.0 | Leach | Solid | 1313 | |
| 180-85447-51 | MB LOW 2 | Leach | Solid | 1313 | |
| 180-85447-51 MS | MB LOW 2 | Leach | Solid | 1313 | |
| 180-85447-51 MSD | MB LOW 2 | Leach | Solid | 1313 | |

### Prep Batch: 269834

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | 7470A | 269578 |
| 180-85447-21 | ASB pH 2.0 | Leach | Solid | 7470A | 269578 |
| 180-85447-51 | MB LOW 2 | Leach | Solid | 7470A | 269578 |
| MB 180-269834/1-A | Method Blank | Total/NA | Solid | 7470A | |
| LCS 180-269834/2-A | Lab Control Sample | Total/NA | Solid | 7470A | |

### Prep Batch: 269867

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | 3010A | 269578 |
| 180-85447-21 | ASB pH 2.0 | Leach | Solid | 3010A | 269578 |
| 180-85447-51 | MB LOW 2 | Leach | Solid | 3010A | 269578 |
| MB 180-269867/1-A | Method Blank | Total/NA | Solid | 3010A | |
| LCS 180-269867/2-A | Lab Control Sample | Total/NA | Solid | 3010A | |

## Metals (Continued)

### Prep Batch: 269867 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-51 MS | MB LOW 2 | Leach | Solid | 3010A | 269578 |
| 180-85447-51 MSD | MB LOW 2 | Leach | Solid | 3010A | 269578 |

### Analysis Batch: 269950

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | EPA 7470A | 269834 |
| 180-85447-21 | ASB pH 2.0 | Leach | Solid | EPA 7470A | 269834 |
| 180-85447-51 | MB LOW 2 | Leach | Solid | EPA 7470A | 269834 |
| MB 180-269834/1-A | Method Blank | Total/NA | Solid | EPA 7470A | 269834 |
| LCS 180-269834/2-A | Lab Control Sample | Total/NA | Solid | EPA 7470A | 269834 |

### Analysis Batch: 269977

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-51 | MB LOW 2 | Leach | Solid | EPA 6020A | 269867 |
| MB 180-269867/1-A | Method Blank | Total/NA | Solid | EPA 6020A | 269867 |
| LCS 180-269867/2-A | Lab Control Sample | Total/NA | Solid | EPA 6020A | 269867 |
| 180-85447-51 MS | MB LOW 2 | Leach | Solid | EPA 6020A | 269867 |
| 180-85447-51 MSD | MB LOW 2 | Leach | Solid | EPA 6020A | 269867 |

### Analysis Batch: 270330

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | EPA 6020A | 269867 |
| 180-85447-21 | ASB pH 2.0 | Leach | Solid | EPA 6020A | 269867 |

## General Chemistry

### Analysis Batch: 267637

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-1 | ABB PRETEST | Total/NA | Solid | 2540G | |
| 180-85447-12 | ASB PRETEST | Total/NA | Solid | 2540G | |

### Leach Batch: 268040

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-1 | ABB PRETEST | Leach | Solid | 1313 | |
| 180-85447-1 | ABB PRETEST | Leach | Solid | 1313 | |
| 180-85447-1 | ABB PRETEST | Leach | Solid | 1313 | |
| 180-85447-2 | ABB pH 13.0 | Leach | Solid | 1313 | |
| 180-85447-3 | ABB pH 12.0 | Leach | Solid | 1313 | |
| 180-85447-6 | ABB pH 8.0 | Leach | Solid | 1313 | |
| 180-85447-7 | ABB pH 7.0 | Leach | Solid | 1313 | |
| 180-85447-11 | ABB pH NATURAL | Leach | Solid | 1313 | |
| 180-85447-12 | ASB PRETEST | Leach | Solid | 1313 | |
| 180-85447-12 | ASB PRETEST | Leach | Solid | 1313 | |
| 180-85447-13 | ASB pH 13.0 | Leach | Solid | 1313 | |
| 180-85447-14 | ASB pH 12.0 | Leach | Solid | 1313 | |
| 180-85447-15 | ASB pH 10.5 | Leach | Solid | 1313 | |
| 180-85447-17 | ASB pH 8.0 | Leach | Solid | 1313 | |
| 180-85447-18 | ASB pH 7.0 | Leach | Solid | 1313 | |
| 180-85447-22 | ASB pH NATURAL | Leach | Solid | 1313 | |
| 180-85447-24 | MB NATURAL | Leach | Solid | 1313 | |

## General Chemistry (Continued)

### Leach Batch: 268040 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-25 | MB HIGH | Leach | Solid | 1313 | |
| 180-85447-11 DU | ABB pH NATURAL | Leach | Solid | 1313 | |
| 180-85447-14 DU | ASB pH 12.0 | Leach | Solid | 1313 | |

### Analysis Batch: 268135

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-1 | ABB PRETEST | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-1 | ABB PRETEST | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-1 | ABB PRETEST | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-2 | ABB pH 13.0 | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-3 | ABB pH 12.0 | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-6 | ABB pH 8.0 | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-7 | ABB pH 7.0 | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-11 | ABB pH NATURAL | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-12 | ASB PRETEST | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-12 | ASB PRETEST | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-13 | ASB pH 13.0 | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-14 | ASB pH 12.0 | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-15 | ASB pH 10.5 | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-17 | ASB pH 8.0 | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-18 | ASB pH 7.0 | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-22 | ASB pH NATURAL | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-24 | MB NATURAL | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-25 | MB HIGH | Leach | Solid | EPA 9040C | 268040 |
| LCS 180-268135/1 | Lab Control Sample | Total/NA | Solid | EPA 9040C | |
| 180-85447-11 DU | ABB pH NATURAL | Leach | Solid | EPA 9040C | 268040 |
| 180-85447-14 DU | ASB pH 12.0 | Leach | Solid | EPA 9040C | 268040 |

### Analysis Batch: 268140

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-2 | ABB pH 13.0 | Leach | Solid | SM 2580B | 268040 |
| 180-85447-3 | ABB pH 12.0 | Leach | Solid | SM 2580B | 268040 |
| 180-85447-6 | ABB pH 8.0 | Leach | Solid | SM 2580B | 268040 |
| 180-85447-7 | ABB pH 7.0 | Leach | Solid | SM 2580B | 268040 |
| 180-85447-11 | ABB pH NATURAL | Leach | Solid | SM 2580B | 268040 |
| 180-85447-13 | ASB pH 13.0 | Leach | Solid | SM 2580B | 268040 |
| 180-85447-14 | ASB pH 12.0 | Leach | Solid | SM 2580B | 268040 |
| 180-85447-15 | ASB pH 10.5 | Leach | Solid | SM 2580B | 268040 |
| 180-85447-17 | ASB pH 8.0 | Leach | Solid | SM 2580B | 268040 |
| 180-85447-18 | ASB pH 7.0 | Leach | Solid | SM 2580B | 268040 |
| 180-85447-22 | ASB pH NATURAL | Leach | Solid | SM 2580B | 268040 |
| 180-85447-24 | MB NATURAL | Leach | Solid | SM 2580B | 268040 |
| 180-85447-25 | MB HIGH | Leach | Solid | SM 2580B | 268040 |
| LCS 180-268140/1 | Lab Control Sample | Total/NA | Solid | SM 2580B | |
| 180-85447-11 DU | ABB pH NATURAL | Leach | Solid | SM 2580B | 268040 |
| 180-85447-14 DU | ASB pH 12.0 | Leach | Solid | SM 2580B | 268040 |

### Analysis Batch: 268142

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-2 | ABB pH 13.0 | Leach | Solid | SM 2510B | 268040 |
| 180-85447-3 | ABB pH 12.0 | Leach | Solid | SM 2510B | 268040 |

## General Chemistry (Continued)

### Analysis Batch: 268142 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-6 | ABB pH 8.0 | Leach | Solid | SM 2510B | 268040 |
| 180-85447-7 | ABB pH 7.0 | Leach | Solid | SM 2510B | 268040 |
| 180-85447-11 | ABB pH NATURAL | Leach | Solid | SM 2510B | 268040 |
| 180-85447-13 | ASB pH 13.0 | Leach | Solid | SM 2510B | 268040 |
| 180-85447-14 | ASB pH 12.0 | Leach | Solid | SM 2510B | 268040 |
| 180-85447-15 | ASB pH 10.5 | Leach | Solid | SM 2510B | 268040 |
| 180-85447-17 | ASB pH 8.0 | Leach | Solid | SM 2510B | 268040 |
| 180-85447-18 | ASB pH 7.0 | Leach | Solid | SM 2510B | 268040 |
| 180-85447-22 | ASB pH NATURAL | Leach | Solid | SM 2510B | 268040 |
| 180-85447-24 | MB NATURAL | Leach | Solid | SM 2510B | 268040 |
| 180-85447-25 | MB HIGH | Leach | Solid | SM 2510B | 268040 |
| MB 180-268142/2 | Method Blank | Total/NA | Solid | SM 2510B | |
| LCS 180-268142/1 | Lab Control Sample | Total/NA | Solid | SM 2510B | |
| 180-85447-11 DU | ABB pH NATURAL | Leach | Solid | SM 2510B | 268040 |
| 180-85447-14 DU | ASB pH 12.0 | Leach | Solid | SM 2510B | 268040 |

### Leach Batch: 268246

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-4 | ABB pH 10.5 | Leach | Solid | 1313 | |
| 180-85447-8 | ABB pH 5.5 | Leach | Solid | 1313 | |
| 180-85447-9 | ABB pH 4.0 | Leach | Solid | 1313 | |
| 180-85447-19 | ASB pH 5.5 | Leach | Solid | 1313 | |
| 180-85447-23 | MB LOW | Leach | Solid | 1313 | |
| 180-85447-8 DU | ABB pH 5.5 | Leach | Solid | 1313 | |

### Analysis Batch: 268260

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-4 | ABB pH 10.5 | Leach | Solid | EPA 9040C | 268246 |
| 180-85447-8 | ABB pH 5.5 | Leach | Solid | EPA 9040C | 268246 |
| 180-85447-9 | ABB pH 4.0 | Leach | Solid | EPA 9040C | 268246 |
| 180-85447-19 | ASB pH 5.5 | Leach | Solid | EPA 9040C | 268246 |
| 180-85447-23 | MB LOW | Leach | Solid | EPA 9040C | 268246 |
| LCS 180-268260/1 | Lab Control Sample | Total/NA | Solid | EPA 9040C | |
| 180-85447-8 DU | ABB pH 5.5 | Leach | Solid | EPA 9040C | 268246 |

### Analysis Batch: 268261

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-4 | ABB pH 10.5 | Leach | Solid | SM 2580B | 268246 |
| 180-85447-8 | ABB pH 5.5 | Leach | Solid | SM 2580B | 268246 |
| 180-85447-9 | ABB pH 4.0 | Leach | Solid | SM 2580B | 268246 |
| 180-85447-19 | ASB pH 5.5 | Leach | Solid | SM 2580B | 268246 |
| 180-85447-23 | MB LOW | Leach | Solid | SM 2580B | 268246 |
| LCS 180-268261/1 | Lab Control Sample | Total/NA | Solid | SM 2580B | |
| 180-85447-8 DU | ABB pH 5.5 | Leach | Solid | SM 2580B | 268246 |

### Analysis Batch: 268262

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-4 | ABB pH 10.5 | Leach | Solid | SM 2510B | 268246 |
| 180-85447-8 | ABB pH 5.5 | Leach | Solid | SM 2510B | 268246 |
| 180-85447-9 | ABB pH 4.0 | Leach | Solid | SM 2510B | 268246 |
| 180-85447-19 | ASB pH 5.5 | Leach | Solid | SM 2510B | 268246 |

## General Chemistry (Continued)

### Analysis Batch: 268262 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-23 | MB LOW | Leach | Solid | SM 2510B | 268246 |
| MB 180-268262/2 | Method Blank | Total/NA | Solid | SM 2510B | |
| LCS 180-268262/1 | Lab Control Sample | Total/NA | Solid | SM 2510B | |
| 180-85447-8 DU | ABB pH 5.5 | Leach | Solid | SM 2510B | 268246 |

### Leach Batch: 268574

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-1 | ABB PRETEST | Leach | Solid | 1313 | |
| 180-85447-12 | ASB PRETEST | Leach | Solid | 1313 | |
| 180-85447-20 | ASB pH 4.0 | Leach | Solid | 1313 | |
| 180-85447-49 | MB LOW 1 | Leach | Solid | 1313 | |
| 180-85447-20 DU | ASB pH 4.0 | Leach | Solid | 1313 | |

### Analysis Batch: 268604

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-1 | ABB PRETEST | Leach | Solid | EPA 9040C | 268574 |
| 180-85447-12 | ASB PRETEST | Leach | Solid | EPA 9040C | 268574 |
| 180-85447-20 | ASB pH 4.0 | Leach | Solid | EPA 9040C | 268574 |
| 180-85447-49 | MB LOW 1 | Leach | Solid | EPA 9040C | 268574 |
| LCS 180-268604/1 | Lab Control Sample | Total/NA | Solid | EPA 9040C | |
| 180-85447-20 DU | ASB pH 4.0 | Leach | Solid | EPA 9040C | 268574 |

### Analysis Batch: 268608

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-20 | ASB pH 4.0 | Leach | Solid | SM 2580B | 268574 |
| 180-85447-49 | MB LOW 1 | Leach | Solid | SM 2580B | 268574 |
| LCS 180-268608/1 | Lab Control Sample | Total/NA | Solid | SM 2580B | |
| 180-85447-20 DU | ASB pH 4.0 | Leach | Solid | SM 2580B | 268574 |

### Analysis Batch: 268609

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-20 | ASB pH 4.0 | Leach | Solid | SM 2510B | 268574 |
| 180-85447-49 | MB LOW 1 | Leach | Solid | SM 2510B | 268574 |
| MB 180-268609/2 | Method Blank | Total/NA | Solid | SM 2510B | |
| LCS 180-268609/1 | Lab Control Sample | Total/NA | Solid | SM 2510B | |
| 180-85447-20 DU | ASB pH 4.0 | Leach | Solid | SM 2510B | 268574 |

### Leach Batch: 269578

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | 1313 | |
| 180-85447-21 | ASB pH 2.0 | Leach | Solid | 1313 | |
| 180-85447-51 | MB LOW 2 | Leach | Solid | 1313 | |
| 180-85447-10 DU | ABB pH 2.0 | Leach | Solid | 1313 | |

### Analysis Batch: 269862

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | EPA 9040C | 269578 |
| 180-85447-21 | ASB pH 2.0 | Leach | Solid | EPA 9040C | 269578 |
| 180-85447-51 | MB LOW 2 | Leach | Solid | EPA 9040C | 269578 |
| LCS 180-269862/1 | Lab Control Sample | Total/NA | Solid | EPA 9040C | |
| 180-85447-10 DU | ABB pH 2.0 | Leach | Solid | EPA 9040C | 269578 |

# QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-1

## Analysis Batch: 269865

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | SM 2580B | 269578 |
| 180-85447-21 | ASB pH 2.0 | Leach | Solid | SM 2580B | 269578 |
| 180-85447-51 | MB LOW 2 | Leach | Solid | SM 2580B | 269578 |
| LCS 180-269865/1 | Lab Control Sample | Total/NA | Solid | SM 2580B | |
| 180-85447-10 DU | ABB pH 2.0 | Leach | Solid | SM 2580B | 269578 |

## Analysis Batch: 269868

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | SM 2510B | 269578 |
| 180-85447-21 | ASB pH 2.0 | Leach | Solid | SM 2510B | 269578 |
| 180-85447-51 | MB LOW 2 | Leach | Solid | SM 2510B | 269578 |
| MB 180-269868/2 | Method Blank | Total/NA | Solid | SM 2510B | |
| LCS 180-269868/1 | Lab Control Sample | Total/NA | Solid | SM 2510B | |
| 180-85447-10 DU | ABB pH 2.0 | Leach | Solid | SM 2510B | 269578 |

# Chain of Custody Record

273171

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

| Client Contact | Project Manager: | Site Contact: | Date: | COC No: |
|---|---|---|---|---|
| Company Name: KPRG and Associates | Tel/Fax: | Lab Contact: | Carrier: | ____ of ____ COCs |
| Address: 14665 W. Lisbon Rd. Ste 1A | Analysis Turnaround Time | | | Sampler: |
| City/State/Zip: Brookfield / WI / 53005 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| Phone: 262-781-0475 | TAT if different from Below ____ | | | Walk-in Client: |
| Fax: | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: NRG | ☐ 1 week | | | |
| Site: Powerton | ☐ 2 days | | | Job / SDG No.: |
| PO# 23517.0 | ☐ 1 day | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS/MSD (Y/N) | LEAF Method 1313 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|
| ABB | 1-4-19 | 1110 | C | S | 2 | N | N | X | |
| ASB | 1-4-19 | 1145 | C | S | 2 | N | N | X | |

180-85447 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

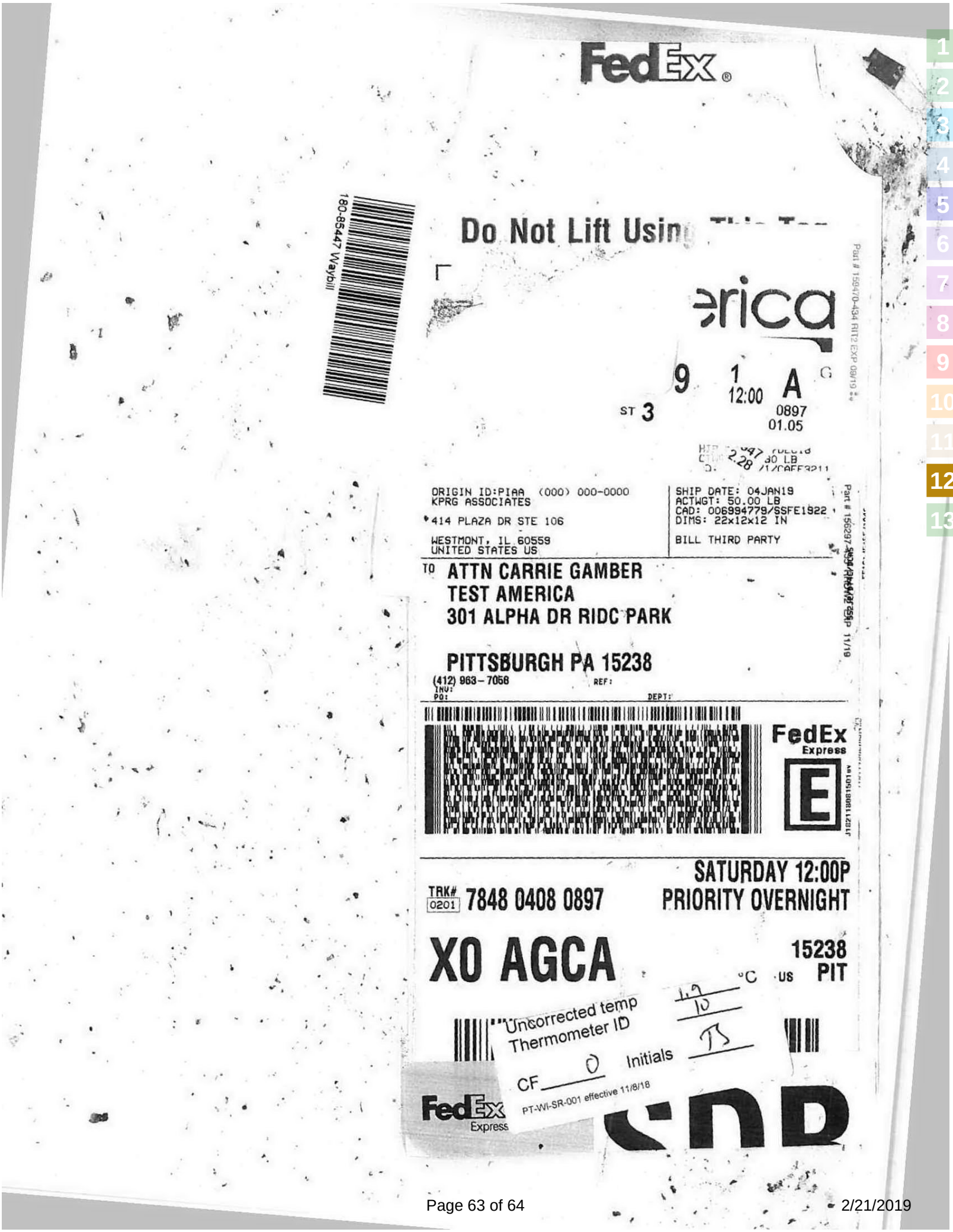
Special Instructions/QC Requirements & Comments:
CCR Appendix 4 compounds → As, Ba, Cd, Co, F, Pb, Li, Hg, Mo, Rad 226/228, Se, Tl / Sample Date is 1-4-19

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| Mitchel Dolan | KPRG | 1-4-19 / 1400 | FEDEX | | 1-4-19 / 1400 |
| | | | Julie Watson | TAPitt | 1-5-19 9:30 |
| | | | Received in Laboratory by: | | |

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2/21/2019


FedEx
180-85447 Waybill
Do Not Lift Usin
erica
9 1 A
12:00
ST 3
0897
01.05
2.28 30 LB
ORIGIN ID:PIAA (000) 000-0000
KPRG ASSOCIATES
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 04JAN19
ACTWGT: 50.00 LB
CAD: 006994779/SSFE1922
DIMS: 22x12x12 IN
BILL THIRD PARTY
TO ATTN CARRIE GAMBER
TEST AMERICA
301 ALPHA DR RIDC PARK
PITTSBURGH PA 15238
(412) 963-7058
REF:
INV:
PO:
DEPT:
FedEx Express
SATURDAY 12:00P
TRK# 0201 7848 0408 0897
PRIORITY OVERNIGHT
XO AGCA
15238
PIT
°C
US
Uncorrected temp
Thermometer ID
CF 0
Initials
FedEx Express
PT-WI-SR-001 effective 11/8/18

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 180-85447-1

**Login Number: 85447**
**List Number: 1**
**Creator: Watson, Debbie**

**List Source: TestAmerica Pittsburgh**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica
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# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-85447-2
Client Project/Site: Midwest Generation

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*3/22/2019 8:10:17 AM*

Carrie Gamber, Senior Project Manager
(412)963-2428
carrie.gamber@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

*PA Lab ID: 02-00416*

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## Job ID: 180-85447-2

**Laboratory: TestAmerica Pittsburgh**

**Narrative**

# CASE NARRATIVE

## Client: KPRG and Associates, Inc.

## Project: Midwest Generation

## Report Number: 180-85447-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

**RECEIPT**

The samples were received on 01/05/2019; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.9 C.

The Field Sampler was not listed on the Chain of Custody.

One out of two containers for the following sample did not match the information listed on the Chain-of-Custody (COC): ABB PRETEST (180-85447-1). The container label lists a sample collection time of 11:00, while the COC lists 11:10. The time on the COC was used.

**METALS**

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**GENERAL CHEMISTRY**

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**901.1**

Many isotopes requested for analysis do not have any gamma emissions, or the gamma emissions they do have are very poor. Often, such analytes are reported by gamma spectrometry assuming secular equilibrium with a longer-lived parent. The client should ensure that such inference is acceptable for their sample based upon process knowledge. The following assumptions were made for this report:

| Inferred from | Reported to Analyte |
|---|---|
| Th-234 | Pa-234 |
| Th-234 | U-238 |
| Pb-210 | Po-210 |
| Pb-210 | Bi-210 |
| Cs-137 | Ba-137m |
| Pb-212 | Po-216 |
| Xe-131m | Xe-131 |
| Sb-125 | Te-125m |
| Ag-108m | Ag-108 |
| Rh-106 | Ru-106 |
| Pb-212 | Th-228 |
| Pb-212 | Ra-224 |
| U-235 | Th-231 |
| Ac-228 | Th-232 |

## Job ID: 180-85447-2 (Continued)

### Laboratory: TestAmerica Pittsburgh (Continued)

| | |
|---|---|
| Ac-228 | Ra-228 |
| Th-227 | Ra-223 |
| Th-227 | Ac-227 |
| Th-227 | Bi-211 |
| Th-227 | Pb-211 |
| Bi-214 | Ra-226 |

ABB pH 2.0 (180-85447-34), (LCS 160-417071/2-A), (MB 160-417071/1-A), (490-168989-I-1-A) and (490-168989-I-1-B DU)

**903.0**

Several samples were prepared at a reduced aliquot due to limited volume or due to brown discoloration and heavy sediment. . All available containers were consumed.

The following sample boiled over while heating and a minimal amount was lost: ASB pH 4.0 (180-85447-43) and ASB pH 2.0 (180-85447-44). This will affect the barium carrier recoveries, possibly causing a slightly lower recovery. The sample created a crystallized precipitate that does not work with the chemistry of this method. Barium was not able to be carried through the process, so the sample was removed from this batch and canceled.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date: MB LOW 2 (180-85447-52), (LCS 160-414637/1-A), (MB 160-414637/18-A).

**904.0**

Several samples were prepared at a reduced aliquot due to limited volume due to brown discoloration and heavy sediment. All available containers were consumed.

The following samples boiled over while heating and a minimal amount was lost: ASB pH 4.0 (180-85447-43) and ASB pH 2.0 (180-85447-44). This will affect the barium carrier recoveries, possibly causing a slightly lower recovery. The sample created a crystallized precipitate that does not work with the chemistry of this method. Barium was not able to be carried through the process, so the sample was removed from this batch and canceled.

The following sample exhibited a negative result greater in magnitude than the 3 sigma TPU. This occurrence was evaluated and determined to be random in nature. Sporadic occurrences such as this are statistically expected. No further action is required. MB LOW 2 (180-85447-52)

The following samples did not meet the requested limit (RL) due to the reduced sample volume attributed to the presence of matrix interferences. The data have been reported with this narrative. ABB pH 10.5 (180-85447-28) and ASB pH 5.5 (180-85447-42)

The following samples did not meet the requested limit (RL) due to the reduced sample volume attributed to the presence of matrix interferences. The data have been reported with this narrative. ABB pH 13.0 (180-85447-26) and ABB pH 12.0 (180-85447-27)

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| G | The Sample MDC is greater than the requested RL. |
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-2

## Laboratory: TestAmerica Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200005 | 06-30-19 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| SM 2510B | | Solid | Specific Conductance |
| SM 2580B | | Solid | Oxidation Reduction Potential |

## Laboratory: TestAmerica St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Alaska | State Program | 10 | MO00054 | 06-30-19 |
| ANAB | DoD / DOE | | L2305 | 04-06-22 |
| Arizona | State Program | 9 | AZ0813 | 12-08-19 |
| California | State Program | 9 | 2886 | 06-30-19 |
| Connecticut | State Program | 1 | PH-0241 | 03-31-19 * |
| Florida | NELAP | 4 | E87689 | 06-30-19 |
| Hawaii | State Program | 9 | NA | 06-30-19 |
| Illinois | NELAP | 5 | 200023 | 11-30-19 |
| Iowa | State Program | 7 | 373 | 12-01-20 |
| Kansas | NELAP | 7 | E-10236 | 10-31-19 |
| Kentucky (DW) | State Program | 4 | KY90125 | 12-31-19 |
| Louisiana | NELAP | 6 | 04080 | 06-30-19 |
| Louisiana (DW) | NELAP | 6 | LA011 | 12-31-19 |
| Maryland | State Program | 3 | 310 | 09-30-19 |
| Michigan | State Program | 5 | 9005 | 06-30-19 |
| Missouri | State Program | 7 | 780 | 06-30-19 |
| Nevada | State Program | 9 | MO000542018-1 | 07-31-19 |
| New Jersey | NELAP | 2 | MO002 | 06-30-19 |
| New York | NELAP | 2 | 11616 | 03-31-19 * |
| North Dakota | State Program | 8 | R207 | 06-30-19 |
| NRC | NRC | | 24-24817-01 | 12-31-22 |
| Oklahoma | State Program | 6 | 9997 | 08-31-19 |
| Pennsylvania | NELAP | 3 | 68-00540 | 02-28-19 * |
| South Carolina | State Program | 4 | 85002001 | 06-30-19 |
| Texas | NELAP | 6 | T104704193-18-13 | 07-31-19 |
| US Fish & Wildlife | Federal | | 058448 | 07-31-19 |
| USDA | Federal | | P330-17-0028 | 02-02-20 |
| Utah | NELAP | 8 | MO000542018-10 | 07-31-19 |
| Virginia | NELAP | 3 | 460230 | 06-14-19 |
| Washington | State Program | 10 | C592 | 08-30-19 |
| West Virginia DEP | State Program | 3 | 381 | 08-31-19 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Solid | 01/04/19 11:10 | 01/05/19 09:30 |
| 180-85447-26 | ABB pH 13.0 | Water | 01/16/19 09:05 | 01/05/19 09:30 |
| 180-85447-27 | ABB pH 12.0 | Water | 01/16/19 09:05 | 01/05/19 09:30 |
| 180-85447-28 | ABB pH 10.5 | Water | 01/18/19 09:20 | 01/05/19 09:30 |
| 180-85447-30 | ABB pH 8.0 | Water | 01/16/19 09:05 | 01/05/19 09:30 |
| 180-85447-31 | ABB pH 7.0 | Water | 01/16/19 09:05 | 01/05/19 09:30 |
| 180-85447-32 | ABB pH 5.5 | Water | 01/18/19 09:20 | 01/05/19 09:30 |
| 180-85447-33 | ABB pH 4.0 | Water | 01/18/19 09:20 | 01/05/19 09:30 |
| 180-85447-34 | ABB pH 2.0 | Water | 02/07/19 07:30 | 01/05/19 09:30 |
| 180-85447-35 | ABB pH NATURAL | Water | 01/16/19 09:05 | 01/05/19 09:30 |
| 180-85447-36 | ASB pH 13.0 | Water | 01/16/19 09:05 | 01/05/19 09:30 |
| 180-85447-37 | ASB pH 12.0 | Water | 01/16/19 09:05 | 01/05/19 09:30 |
| 180-85447-38 | ASB pH 10.5 | Water | 01/16/19 09:05 | 01/05/19 09:30 |
| 180-85447-40 | ASB pH 8.0 | Water | 01/16/19 09:05 | 01/05/19 09:30 |
| 180-85447-41 | ASB pH 7.0 | Water | 01/16/19 09:05 | 01/05/19 09:30 |
| 180-85447-42 | ASB pH 5.5 | Water | 01/18/19 09:20 | 01/05/19 09:30 |
| 180-85447-45 | ASB pH NATURAL | Water | 01/16/19 09:05 | 01/05/19 09:30 |
| 180-85447-46 | MB LOW | Water | 01/18/19 09:20 | 01/05/19 09:30 |
| 180-85447-47 | MB NATURAL | Water | 01/16/19 09:05 | 01/05/19 09:30 |
| 180-85447-48 | MB HIGH | Water | 01/16/19 09:05 | 01/05/19 09:30 |
| 180-85447-50 | MB LOW 1 | Water | 01/23/19 07:40 | 01/05/19 09:30 |
| 180-85447-51 | MB LOW 2 | Solid | 01/31/19 00:00 | 01/05/19 09:30 |
| 180-85447-52 | MB LOW 2 | Water | 02/07/19 07:30 | 01/05/19 09:30 |

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| EPA 9040C | pH | SW846 | TAL PIT |
| SM 2510B | Conductivity, Specific Conductance | SM | TAL PIT |
| SM 2580B | Reduction-Oxidation (REDOX) Potential | SM | TAL PIT |
| 901.1 | Radium-226 & Other Gamma Emitters (GS) | EPA | TAL SL |
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| 1313 | Liquid-Solid Partitioning as a Function of pH via Parallel Batch | SW846 | TAL PIT |
| Fill_Geo-21 | Fill Geometry, 21-Day In-Growth | None | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

## Client Sample ID: ABB pH 2.0

**Date Collected: 01/04/19 11:10**
**Date Received: 01/05/19 09:30**

**Lab Sample ID: 180-85447-10**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 270898 | 02/18/19 09:15 | MTW | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 270930 | 02/20/19 09:15 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 270898 | 02/18/19 09:15 | MTW | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 270933 | 02/20/19 09:15 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 95 g | 935.4 mL | 270898 | 02/18/19 09:15 | MTW | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 270932 | 02/20/19 09:15 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: ABB pH 13.0

**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

**Lab Sample ID: 180-85447-26**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 249.96 mL | 1.0 g | 411366 | 01/21/19 08:18 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414506 | 02/12/19 05:41 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 249.96 mL | 1.0 g | 411374 | 01/21/19 09:34 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413455 | 02/04/19 16:14 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |

## Client Sample ID: ABB pH 12.0

**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

**Lab Sample ID: 180-85447-27**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 249.91 mL | 1.0 g | 411366 | 01/21/19 08:18 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414506 | 02/12/19 05:42 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 249.91 mL | 1.0 g | 411374 | 01/21/19 09:34 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413455 | 02/04/19 16:14 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |

## Client Sample ID: ABB pH 10.5

**Date Collected: 01/18/19 09:20**
**Date Received: 01/05/19 09:30**

**Lab Sample ID: 180-85447-28**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 292.54 mL | 1.0 g | 411711 | 01/22/19 13:04 | CLP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414693 | 02/13/19 05:51 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 292.54 mL | 1.0 g | 411716 | 01/22/19 14:01 | CLP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-2

## Client Sample ID: ABB pH 10.5

**Date Collected: 01/18/19 09:20**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-28

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 904.0 | | 1 | | | 413722 | 02/05/19 15:57 | CDR | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |

## Client Sample ID: ABB pH 8.0

**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-30

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 556.67 mL | 1.0 g | 411366 | 01/21/19 08:18 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414506 | 02/12/19 05:42 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 556.67 mL | 1.0 g | 411374 | 01/21/19 09:34 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413455 | 02/04/19 16:14 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |

## Client Sample ID: ABB pH 7.0

**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-31

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 550.54 mL | 1.0 g | 411366 | 01/21/19 08:18 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414506 | 02/12/19 05:42 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 550.54 mL | 1.0 g | 411374 | 01/21/19 09:34 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413455 | 02/04/19 16:15 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |

## Client Sample ID: ABB pH 5.5

**Date Collected: 01/18/19 09:20**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-32

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 582.99 mL | 1.0 g | 411711 | 01/22/19 13:04 | CLP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414693 | 02/13/19 05:51 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 582.99 mL | 1.0 g | 411716 | 01/22/19 14:01 | CLP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413722 | 02/05/19 15:57 | CDR | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-2

## Client Sample ID: ABB pH 4.0

**Date Collected: 01/18/19 09:20**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-33

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 587.67 mL | 1.0 g | 411711 | 01/22/19 13:04 | CLP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414693 | 02/13/19 05:51 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 587.67 mL | 1.0 g | 411716 | 01/22/19 14:01 | CLP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413722 | 02/05/19 15:57 | CDR | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |

## Client Sample ID: ABB pH 2.0

**Date Collected: 02/07/19 07:30**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-34

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | Fill_Geo-21 | | | 500 mL | 1.0 g | 417071 | 02/27/19 15:04 | KRS | TAL SL |
| Total/NA | Analysis | 901.1 | | 1 | | | 420133 | 03/20/19 10:34 | KLS | TAL SL |
| | Instrument ID: GAMMAVISION | | | | | | | | | |

## Client Sample ID: ABB pH NATURAL

**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-35

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 549.43 mL | 1.0 g | 411366 | 01/21/19 08:18 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414506 | 02/12/19 05:42 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 549.43 mL | 1.0 g | 411374 | 01/21/19 09:34 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413455 | 02/04/19 16:15 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |

## Client Sample ID: ASB pH 13.0

**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-36

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 563.20 mL | 1.0 g | 411366 | 01/21/19 08:18 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414506 | 02/12/19 05:42 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 563.20 mL | 1.0 g | 411374 | 01/21/19 09:34 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413455 | 02/04/19 16:15 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |

## Client Sample ID: ASB pH 12.0

**Lab Sample ID: 180-85447-37**

**Date Collected: 01/16/19 09:05**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 571.25 mL | 1.0 g | 411366 | 01/21/19 08:18 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414506 | 02/12/19 05:42 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 571.25 mL | 1.0 g | 411374 | 01/21/19 09:34 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413455 | 02/04/19 16:15 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |

## Client Sample ID: ASB pH 10.5

**Lab Sample ID: 180-85447-38**

**Date Collected: 01/16/19 09:05**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 547.60 mL | 1.0 g | 411366 | 01/21/19 08:18 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414506 | 02/12/19 05:42 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 547.60 mL | 1.0 g | 411374 | 01/21/19 09:34 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413455 | 02/04/19 16:15 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |

## Client Sample ID: ASB pH 8.0

**Lab Sample ID: 180-85447-40**

**Date Collected: 01/16/19 09:05**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 558.12 mL | 1.0 g | 411366 | 01/21/19 08:18 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414506 | 02/12/19 05:42 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 558.12 mL | 1.0 g | 411374 | 01/21/19 09:34 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413455 | 02/04/19 16:15 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |

## Client Sample ID: ASB pH 7.0

**Lab Sample ID: 180-85447-41**

**Date Collected: 01/16/19 09:05**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 565.90 mL | 1.0 g | 411366 | 01/21/19 08:18 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414507 | 02/12/19 05:44 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 565.90 mL | 1.0 g | 411374 | 01/21/19 09:34 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413455 | 02/04/19 16:15 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |

## Client Sample ID: ASB pH 5.5

**Lab Sample ID: 180-85447-42**

**Date Collected: 01/18/19 09:20**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 582.05 mL | 1.0 g | 411711 | 01/22/19 13:04 | CLP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414693 | 02/13/19 05:51 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 582.05 mL | 1.0 g | 411716 | 01/22/19 14:01 | CLP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413722 | 02/05/19 15:57 | CDR | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |

## Client Sample ID: ASB pH NATURAL

**Lab Sample ID: 180-85447-45**

**Date Collected: 01/16/19 09:05**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 548.67 mL | 1.0 g | 411366 | 01/21/19 08:18 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414507 | 02/12/19 05:44 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 548.67 mL | 1.0 g | 411374 | 01/21/19 09:34 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413455 | 02/04/19 16:15 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |

## Client Sample ID: MB LOW

**Lab Sample ID: 180-85447-46**

**Date Collected: 01/18/19 09:20**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 557.25 mL | 1.0 g | 411711 | 01/22/19 13:04 | CLP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414693 | 02/13/19 05:51 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 557.25 mL | 1.0 g | 411716 | 01/22/19 14:01 | CLP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413722 | 02/05/19 15:57 | CDR | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |

## Client Sample ID: MB NATURAL

**Lab Sample ID: 180-85447-47**

**Date Collected: 01/16/19 09:05**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 561.92 mL | 1.0 g | 411366 | 01/21/19 08:18 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414507 | 02/12/19 05:44 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 561.92 mL | 1.0 g | 411374 | 01/21/19 09:34 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413455 | 02/04/19 16:15 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-2

## Client Sample ID: MB HIGH

**Lab Sample ID: 180-85447-48**

**Date Collected: 01/16/19 09:05**
**Matrix: Water**
**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 569.08 mL | 1.0 g | 411366 | 01/21/19 08:18 | JLC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 414507 | 02/12/19 05:44 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 569.08 mL | 1.0 g | 411374 | 01/21/19 09:34 | JLC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413455 | 02/04/19 16:16 | KLS | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |

## Client Sample ID: MB LOW 1

**Lab Sample ID: 180-85447-50**

**Date Collected: 01/23/19 07:40**
**Matrix: Water**
**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 575.94 mL | 1.0 g | 412109 | 01/25/19 08:41 | HET | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 415289 | 02/18/19 06:02 | CDR | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 575.94 mL | 1.0 g | 412125 | 01/25/19 10:48 | HET | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | | | 413930 | 02/07/19 15:47 | CDR | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |

## Client Sample ID: MB LOW 2

**Lab Sample ID: 180-85447-51**

**Date Collected: 01/31/19 00:00**
**Matrix: Solid**
**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 270898 | 02/18/19 09:15 | MTW | TAL PIT |
| Leach | Analysis | EPA 9040C | | 1 | | | 270930 | 02/20/19 09:15 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 270898 | 02/18/19 09:15 | MTW | TAL PIT |
| Leach | Analysis | SM 2510B | | 1 | | | 270933 | 02/20/19 09:15 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |
| Leach | Leach | 1313 | | | 1.0 g | 950 mL | 270898 | 02/18/19 09:15 | MTW | TAL PIT |
| Leach | Analysis | SM 2580B | | 1 | | | 270932 | 02/20/19 09:15 | MTW | TAL PIT |
| | Instrument ID: NOEQUIP | | | | | | | | | |

## Client Sample ID: MB LOW 2

**Lab Sample ID: 180-85447-52**

**Date Collected: 02/07/19 07:30**
**Matrix: Water**
**Date Received: 01/05/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 606.25 mL | 1.0 g | 414637 | 02/12/19 15:24 | CLP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | | | 417879 | 03/06/19 05:43 | CDR | TAL SL |
| | Instrument ID: GFPCPURPLE | | | | | | | | | |
| Total/NA | Prep | PrecSep_0 | | | 606.25 mL | 1.0 g | 414649 | 02/12/19 16:59 | CLP | TAL SL |

## Client Sample ID: MB LOW 2

**Date Collected: 02/07/19 07:30**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-52

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 904.0 | | 1 | 1.0 mL | 1.0 mL | 415904 | 02/21/19 09:10 | KLS | TAL SL |
| | Instrument ID: GFPCORANGE | | | | | | | | | |

**Laboratory References:**

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

**Analyst References:**

Lab: TAL PIT

Batch Type: Leach

MTW = Michael Wesoloski

Batch Type: Analysis

MTW = Michael Wesoloski

Lab: TAL SL

Batch Type: Prep

CLP = Cassandra Park

HET = Hailey Thompson

JLC = Jessica Chapman

KRS = Kurt Slama

Batch Type: Analysis

CDR = Conrad Reuscher

KLS = Kody Saulters

## Client Sample ID: ABB pH 2.0

**Lab Sample ID: 180-85447-10**
**Matrix: Solid**
**Date Collected: 01/04/19 11:10**
**Date Received: 01/05/19 09:30**

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 2.2 | | 0.1 | 0.1 | SU | | | 02/20/19 09:15 | 1 |
| Specific Conductance | 78000 | | 1.0 | 1.0 | umhos/cm | | | 02/20/19 09:15 | 1 |
| Oxidation Reduction Potential | 580 | | 10 | 10 | millivolts | | | 02/20/19 09:15 | 1 |

## Client Sample ID: ABB pH 13.0

**Lab Sample ID: 180-85447-26**
**Matrix: Water**
**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0662 | U | 0.237 | 0.237 | 1.00 | 0.454 | pCi/L | 01/21/19 08:18 | 02/12/19 05:41 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.7* | | *40 - 110* | *01/21/19 08:18* | *02/12/19 05:41* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.874 | U G | 1.18 | 1.18 | 1.00 | 1.97 | pCi/L | 01/21/19 09:34 | 02/04/19 16:14 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.7* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:14* | *1* |
| *Y Carrier* | *65.8* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:14* | *1* |

## Client Sample ID: ABB pH 12.0

**Lab Sample ID: 180-85447-27**
**Matrix: Water**
**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0994 | U | 0.225 | 0.225 | 1.00 | 0.414 | pCi/L | 01/21/19 08:18 | 02/12/19 05:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.4* | | *40 - 110* | *01/21/19 08:18* | *02/12/19 05:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.785 | U G | 1.01 | 1.01 | 1.00 | 1.92 | pCi/L | 01/21/19 09:34 | 02/04/19 16:14 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.4* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:14* | *1* |
| *Y Carrier* | *78.9* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:14* | *1* |

## Client Sample ID: ABB pH 10.5

**Date Collected: 01/18/19 09:20**
**Date Received: 01/05/19 09:30**

**Lab Sample ID: 180-85447-28**
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.151 | U | 0.185 | 0.185 | 1.00 | 0.298 | pCi/L | 01/22/19 13:04 | 02/13/19 05:51 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.5* | | *40 - 110* | *01/22/19 13:04* | *02/13/19 05:51* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.664 | U G | 1.05 | 1.05 | 1.00 | 1.78 | pCi/L | 01/22/19 14:01 | 02/05/19 15:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.5* | | *40 - 110* | *01/22/19 14:01* | *02/05/19 15:57* | *1* |
| *Y Carrier* | *65.8* | | *40 - 110* | *01/22/19 14:01* | *02/05/19 15:57* | *1* |

## Client Sample ID: ABB pH 8.0

**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

**Lab Sample ID: 180-85447-30**
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.122 | U | 0.131 | 0.131 | 1.00 | 0.209 | pCi/L | 01/21/19 08:18 | 02/12/19 05:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.6* | | *40 - 110* | *01/21/19 08:18* | *02/12/19 05:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.208 | U | 0.408 | 0.409 | 1.00 | 0.697 | pCi/L | 01/21/19 09:34 | 02/04/19 16:14 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.6* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:14* | *1* |
| *Y Carrier* | *83.4* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:14* | *1* |

## Client Sample ID: ABB pH 7.0

**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

**Lab Sample ID: 180-85447-31**
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0835 | U | 0.104 | 0.104 | 1.00 | 0.171 | pCi/L | 01/21/19 08:18 | 02/12/19 05:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *01/21/19 08:18* | *02/12/19 05:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.255 | U | 0.409 | 0.410 | 1.00 | 0.689 | pCi/L | 01/21/19 09:34 | 02/04/19 16:15 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |

## Client Sample ID: ABB pH 5.5

**Lab Sample ID: 180-85447-32**
**Date Collected: 01/18/19 09:20**
**Matrix: Water**
**Date Received: 01/05/19 09:30**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.258** | | 0.149 | 0.150 | 1.00 | 0.189 | pCi/L | 01/22/19 13:04 | 02/13/19 05:51 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.3* | | *40 - 110* | *01/22/19 13:04* | *02/13/19 05:51* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.454 | U | 0.408 | 0.410 | 1.00 | 0.653 | pCi/L | 01/22/19 14:01 | 02/05/19 15:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.3* | | *40 - 110* | *01/22/19 14:01* | *02/05/19 15:57* | *1* |
| *Y Carrier* | *81.1* | | *40 - 110* | *01/22/19 14:01* | *02/05/19 15:57* | *1* |

## Client Sample ID: ABB pH 4.0

**Lab Sample ID: 180-85447-33**
**Date Collected: 01/18/19 09:20**
**Matrix: Water**
**Date Received: 01/05/19 09:30**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.909** | | 0.216 | 0.231 | 1.00 | 0.141 | pCi/L | 01/22/19 13:04 | 02/13/19 05:51 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *109* | | *40 - 110* | *01/22/19 13:04* | *02/13/19 05:51* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.919** | | 0.454 | 0.462 | 1.00 | 0.674 | pCi/L | 01/22/19 14:01 | 02/05/19 15:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *109* | | *40 - 110* | *01/22/19 14:01* | *02/05/19 15:57* | *1* |
| *Y Carrier* | *82.2* | | *40 - 110* | *01/22/19 14:01* | *02/05/19 15:57* | *1* |

## Client Sample ID: ABB pH 2.0

**Lab Sample ID: 180-85447-34**

**Date Collected: 02/07/19 07:30**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

### Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **82.1** | | 23.3 | 24.7 | 50.0 | 23.5 | pCi/L | 02/27/19 15:04 | 03/20/19 10:34 | 1 |
| **Radium-228** | **142** | | 27.0 | 30.2 | 50.0 | 31.0 | pCi/L | 02/27/19 15:04 | 03/20/19 10:34 | 1 |

## Client Sample ID: ABB pH NATURAL

**Lab Sample ID: 180-85447-35**

**Date Collected: 01/16/19 09:05**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.109 | U | 0.112 | 0.113 | 1.00 | 0.174 | pCi/L | 01/21/19 08:18 | 02/12/19 05:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.0* | | *40 - 110* | *01/21/19 08:18* | *02/12/19 05:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.453 | U | 0.454 | 0.456 | 1.00 | 0.737 | pCi/L | 01/21/19 09:34 | 02/04/19 16:15 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.0* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |
| *Y Carrier* | *82.6* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |

## Client Sample ID: ASB pH 13.0

**Lab Sample ID: 180-85447-36**

**Date Collected: 01/16/19 09:05**

**Matrix: Water**

**Date Received: 01/05/19 09:30**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0427 | U | 0.114 | 0.114 | 1.00 | 0.214 | pCi/L | 01/21/19 08:18 | 02/12/19 05:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.1* | | *40 - 110* | *01/21/19 08:18* | *02/12/19 05:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.836** | | 0.546 | 0.551 | 1.00 | 0.835 | pCi/L | 01/21/19 09:34 | 02/04/19 16:15 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.1* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |
| *Y Carrier* | *83.0* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |

## Client Sample ID: ASB pH 12.0

**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

**Lab Sample ID: 180-85447-37**
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.00931 | U | 0.0834 | 0.0834 | 1.00 | 0.172 | pCi/L | 01/21/19 08:18 | 02/12/19 05:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.2* | | *40 - 110* | *01/21/19 08:18* | *02/12/19 05:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.0375 | U | 0.408 | 0.408 | 1.00 | 0.741 | pCi/L | 01/21/19 09:34 | 02/04/19 16:15 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.2* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |
| *Y Carrier* | *83.4* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |

## Client Sample ID: ASB pH 10.5

**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

**Lab Sample ID: 180-85447-38**
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0538 | U | 0.106 | 0.106 | 1.00 | 0.191 | pCi/L | 01/21/19 08:18 | 02/12/19 05:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.2* | | *40 - 110* | *01/21/19 08:18* | *02/12/19 05:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.433 | U | 0.336 | 0.339 | 1.00 | 0.703 | pCi/L | 01/21/19 09:34 | 02/04/19 16:15 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.2* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |
| *Y Carrier* | *84.5* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |

## Client Sample ID: ASB pH 8.0

**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

**Lab Sample ID: 180-85447-40**
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0452 | U | 0.0940 | 0.0941 | 1.00 | 0.172 | pCi/L | 01/21/19 08:18 | 02/12/19 05:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.3* | | *40 - 110* | *01/21/19 08:18* | *02/12/19 05:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.312 | U | 0.371 | 0.372 | 1.00 | 0.612 | pCi/L | 01/21/19 09:34 | 02/04/19 16:15 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.3* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |
| *Y Carrier* | *85.2* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |

## Client Sample ID: ASB pH 7.0

**Lab Sample ID: 180-85447-41**
**Date Collected: 01/16/19 09:05**
**Matrix: Water**
**Date Received: 01/05/19 09:30**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.282** | | 0.136 | 0.138 | 1.00 | 0.158 | pCi/L | 01/21/19 08:18 | 02/12/19 05:44 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *106* | | *40 - 110* | *01/21/19 08:18* | *02/12/19 05:44* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.357 | U | 0.402 | 0.404 | 1.00 | 0.661 | pCi/L | 01/21/19 09:34 | 02/04/19 16:15 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *106* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |
| *Y Carrier* | *86.7* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |

## Client Sample ID: ASB pH 5.5

**Lab Sample ID: 180-85447-42**
**Date Collected: 01/18/19 09:20**
**Matrix: Water**
**Date Received: 01/05/19 09:30**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.274** | | 0.173 | 0.175 | 1.00 | 0.224 | pCi/L | 01/22/19 13:04 | 02/13/19 05:51 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *65.8* | | *40 - 110* | *01/22/19 13:04* | *02/13/19 05:51* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.477 | U G | 0.635 | 0.636 | 1.00 | 1.06 | pCi/L | 01/22/19 14:01 | 02/05/19 15:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *65.8* | | *40 - 110* | *01/22/19 14:01* | *02/05/19 15:57* | *1* |
| *Y Carrier* | *83.0* | | *40 - 110* | *01/22/19 14:01* | *02/05/19 15:57* | *1* |

## Client Sample ID: ASB pH NATURAL

**Lab Sample ID: 180-85447-45**
**Matrix: Water**
**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0153 | U | 0.0848 | 0.0848 | 1.00 | 0.185 | pCi/L | 01/21/19 08:18 | 02/12/19 05:44 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.1* | | *40 - 110* | *01/21/19 08:18* | *02/12/19 05:44* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.240 | U | 0.407 | 0.407 | 1.00 | 0.689 | pCi/L | 01/21/19 09:34 | 02/04/19 16:15 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *97.1* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |
| *Y Carrier* | *86.0* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |

## Client Sample ID: MB LOW

**Lab Sample ID: 180-85447-46**
**Matrix: Water**
**Date Collected: 01/18/19 09:20**
**Date Received: 01/05/19 09:30**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0321 | U | 0.0963 | 0.0963 | 1.00 | 0.223 | pCi/L | 01/22/19 13:04 | 02/13/19 05:51 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.5* | | *40 - 110* | *01/22/19 13:04* | *02/13/19 05:51* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.360 | U | 0.545 | 0.546 | 1.00 | 0.916 | pCi/L | 01/22/19 14:01 | 02/05/19 15:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.5* | | *40 - 110* | *01/22/19 14:01* | *02/05/19 15:57* | *1* |
| *Y Carrier* | *81.1* | | *40 - 110* | *01/22/19 14:01* | *02/05/19 15:57* | *1* |

## Client Sample ID: MB NATURAL

**Lab Sample ID: 180-85447-47**
**Matrix: Water**
**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.00488 | U | 0.0678 | 0.0678 | 1.00 | 0.151 | pCi/L | 01/21/19 08:18 | 02/12/19 05:44 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *01/21/19 08:18* | *02/12/19 05:44* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0316 | U | 0.340 | 0.340 | 1.00 | 0.613 | pCi/L | 01/21/19 09:34 | 02/04/19 16:15 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |
| *Y Carrier* | *85.2* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:15* | *1* |

## Client Sample ID: MB HIGH
**Date Collected: 01/16/19 09:05**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-48
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0528 | U | 0.0880 | 0.0882 | 1.00 | 0.155 | pCi/L | 01/21/19 08:18 | 02/12/19 05:44 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *01/21/19 08:18* | *02/12/19 05:44* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.288 | U | 0.382 | 0.383 | 1.00 | 0.636 | pCi/L | 01/21/19 09:34 | 02/04/19 16:16 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.0* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:16* | *1* |
| *Y Carrier* | *84.1* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:16* | *1* |

## Client Sample ID: MB LOW 1
**Date Collected: 01/23/19 07:40**
**Date Received: 01/05/19 09:30**

## Lab Sample ID: 180-85447-50
**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0480 | U | 0.0696 | 0.0697 | 1.00 | 0.119 | pCi/L | 01/25/19 08:41 | 02/18/19 06:02 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *01/25/19 08:41* | *02/18/19 06:02* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.107 | U | 0.415 | 0.415 | 1.00 | 0.725 | pCi/L | 01/25/19 10:48 | 02/07/19 15:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *101* | | *40 - 110* | *01/25/19 10:48* | *02/07/19 15:47* | *1* |
| *Y Carrier* | *77.8* | | *40 - 110* | *01/25/19 10:48* | *02/07/19 15:47* | *1* |

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-2

## Client Sample ID: MB LOW 2

**Lab Sample ID: 180-85447-51**
**Matrix: Solid**
**Date Collected: 01/31/19 00:00**
**Date Received: 01/05/19 09:30**

### General Chemistry - Leach

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| pH | 0.4 | | 0.1 | 0.1 | SU | | | 02/20/19 09:15 | 1 |
| Specific Conductance | 100000 | | 1.0 | 1.0 | umhos/cm | | | 02/20/19 09:15 | 1 |
| Oxidation Reduction Potential | 550 | | 10 | 10 | millivolts | | | 02/20/19 09:15 | 1 |

## Client Sample ID: MB LOW 2

**Lab Sample ID: 180-85447-52**
**Matrix: Water**
**Date Collected: 02/07/19 07:30**
**Date Received: 01/05/19 09:30**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.000 | U | 0.0644 | 0.0644 | 1.00 | 0.139 | pCi/L | 02/12/19 15:24 | 03/06/19 05:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.5* | | *40 - 110* | *02/12/19 15:24* | *03/06/19 05:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.545 | U | 0.313 | 0.317 | 1.00 | 0.666 | pCi/L | 02/12/19 16:59 | 02/21/19 09:10 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.5* | | *40 - 110* | *02/12/19 16:59* | *02/21/19 09:10* | *1* |
| *Y Carrier* | *91.2* | | *40 - 110* | *02/12/19 16:59* | *02/21/19 09:10* | *1* |

## Method: EPA 9040C - pH

**Lab Sample ID: LCS 180-270930/1**
**Matrix: Solid**
**Analysis Batch: 270930**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| pH | 7.00 | 7.0 | | SU | | 100 | 99 - 101 |

**Lab Sample ID: 180-85447-10 DU**
**Matrix: Solid**
**Analysis Batch: 270930**

**Client Sample ID: ABB pH 2.0**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| pH | 2.2 | | 2.2 | | SU | | 0.4 | 2 |

## Method: SM 2510B - Conductivity, Specific Conductance

**Lab Sample ID: MB 180-270933/2**
**Matrix: Solid**
**Analysis Batch: 270933**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | ND | | 1.0 | 1.0 | umhos/cm | | | 02/20/19 09:15 | 1 |

**Lab Sample ID: LCS 180-270933/1**
**Matrix: Solid**
**Analysis Batch: 270933**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Specific Conductance | 84.0 | 86.6 | | umhos/cm | | 103 | 90 - 110 |

**Lab Sample ID: 180-85447-10 DU**
**Matrix: Solid**
**Analysis Batch: 270933**

**Client Sample ID: ABB pH 2.0**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 78000 | | 78200 | | umhos/cm | | 0 | 20 |

## Method: SM 2580B - Reduction-Oxidation (REDOX) Potential

**Lab Sample ID: LCS 180-270932/1**
**Matrix: Solid**
**Analysis Batch: 270932**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 475 | 474 | | millivolts | | 100 | 90 - 110 |

**Lab Sample ID: 180-85447-10 DU**
**Matrix: Solid**
**Analysis Batch: 270932**

**Client Sample ID: ABB pH 2.0**
**Prep Type: Leach**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Oxidation Reduction Potential | 580 | | 581 | | millivolts | | 0.3 | 20 |

## Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

**Lab Sample ID: MB 160-417071/1-A**
**Matrix: Water**
**Analysis Batch: 420131**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 417071**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -5.956 | U | 19.8 | 19.8 | 50.0 | 33.9 | pCi/L | 02/27/19 15:04 | 03/20/19 08:19 | 1 |
| Radium-228 | 16.40 | U | 15.9 | 16.0 | 50.0 | 19.3 | pCi/L | 02/27/19 15:04 | 03/20/19 08:19 | 1 |

**Lab Sample ID: LCS 160-417071/2-A**
**Matrix: Water**
**Analysis Batch: 420132**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 417071**

| Analyte | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Americium-241 | 136000 | 130900 | | 15100 | | 370 | pCi/L | 96 | 90 - 111 |
| Cesium-137 | 44800 | 43740 | | 4380 | | 110 | pCi/L | 98 | 90 - 111 |
| Cobalt-60 | 30200 | 29540 | | 2920 | | 66.5 | pCi/L | 98 | 89 - 110 |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-411366/23-A**
**Matrix: Water**
**Analysis Batch: 414507**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 411366**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.08482 | U | 0.115 | 0.115 | 1.00 | 0.193 | pCi/L | 01/21/19 08:18 | 02/12/19 05:45 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *100* | | *40 - 110* | *01/21/19 08:18* | *02/12/19 05:45* | *1* |

**Lab Sample ID: LCS 160-411366/1-A**
**Matrix: Water**
**Analysis Batch: 414506**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 411366**

| Analyte | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 22.7 | 20.28 | | 2.13 | 1.00 | 0.178 | pCi/L | 89 | 68 - 137 |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *99.4* | | *40 - 110* |

**Lab Sample ID: MB 160-411711/22-A**
**Matrix: Water**
**Analysis Batch: 414688**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 411711**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.006351 | U | 0.0536 | 0.0536 | 1.00 | 0.112 | pCi/L | 01/22/19 13:04 | 02/13/19 05:55 | 1 |

## Method: 903.0 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: MB 160-411711/22-A**
**Matrix: Water**
**Analysis Batch: 414688**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 411711**

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 72.0 | | 40 - 110 | 01/22/19 13:04 | 02/13/19 05:55 | 1 |

**Lab Sample ID: LCS 160-411711/1-A**
**Matrix: Water**
**Analysis Batch: 414693**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 411711**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 10.82 | | 1.16 | 1.00 | 0.108 | pCi/L | 95 | 68 - 137 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 76.1 | | 40 - 110 |

**Lab Sample ID: MB 160-412109/18-A**
**Matrix: Water**
**Analysis Batch: 415289**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 412109**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.004897 | U | 0.0405 | 0.0405 | 1.00 | 0.0824 | pCi/L | 01/25/19 08:41 | 02/18/19 06:05 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 109 | | 40 - 110 | 01/25/19 08:41 | 02/18/19 06:05 | 1 |

**Lab Sample ID: LCS 160-412109/1-A**
**Matrix: Water**
**Analysis Batch: 415289**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 412109**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 11.37 | | 1.16 | 1.00 | 0.0749 | pCi/L | 100 | 68 - 137 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 107 | | 40 - 110 |

**Lab Sample ID: MB 160-414637/18-A**
**Matrix: Water**
**Analysis Batch: 417879**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 414637**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.009030 | U | 0.0456 | 0.0456 | 1.00 | 0.0882 | pCi/L | 02/12/19 15:24 | 03/06/19 05:44 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 99.7 | | 40 - 110 | 02/12/19 15:24 | 03/06/19 05:44 | 1 |

## Method: 903.0 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: LCS 160-414637/1-A**
**Matrix: Water**
**Analysis Batch: 417878**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 414637**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 8.870 | | 0.923 | 1.00 | 0.0740 | pCi/L | 78 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *106* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-411374/23-A**
**Matrix: Water**
**Analysis Batch: 413681**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 411374**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.6720 | U | 0.465 | 0.469 | 1.00 | 0.719 | pCi/L | 01/21/19 09:34 | 02/04/19 16:17 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *100* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:17* | *1* |
| *Y Carrier* | *86.7* | | *40 - 110* | *01/21/19 09:34* | *02/04/19 16:17* | *1* |

**Lab Sample ID: LCS 160-411374/1-A**
**Matrix: Water**
**Analysis Batch: 413455**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 411374**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 19.0 | 19.35 | | 2.34 | 1.00 | 0.976 | pCi/L | 102 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *99.4* | | *40 - 110* |
| *Y Carrier* | *70.3* | | *40 - 110* |

**Lab Sample ID: MB 160-411716/22-A**
**Matrix: Water**
**Analysis Batch: 413722**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 411716**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.3180 | U | 0.295 | 0.297 | 1.00 | 0.475 | pCi/L | 01/22/19 14:01 | 02/05/19 15:59 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *72.0* | | *40 - 110* | *01/22/19 14:01* | *02/05/19 15:59* | *1* |
| *Y Carrier* | *85.6* | | *40 - 110* | *01/22/19 14:01* | *02/05/19 15:59* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-411716/1-A**
**Matrix: Water**
**Analysis Batch: 413722**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 411716**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.51 | 9.667 | | 1.23 | 1.00 | 0.570 | pCi/L | 102 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *76.1* | | *40 - 110* |
| *Y Carrier* | *73.6* | | *40 - 110* |

**Lab Sample ID: MB 160-412125/18-A**
**Matrix: Water**
**Analysis Batch: 413930**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 412125**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.006120 | U | 0.174 | 0.174 | 1.00 | 0.316 | pCi/L | 01/25/19 10:48 | 02/07/19 15:49 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *109* | | *40 - 110* | *01/25/19 10:48* | *02/07/19 15:49* | *1* |
| *Y Carrier* | *85.2* | | *40 - 110* | *01/25/19 10:48* | *02/07/19 15:49* | *1* |

**Lab Sample ID: LCS 160-412125/1-A**
**Matrix: Water**
**Analysis Batch: 413930**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 412125**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.51 | 9.530 | | 1.12 | 1.00 | 0.425 | pCi/L | 100 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *107* | | *40 - 110* |
| *Y Carrier* | *74.0* | | *40 - 110* |

**Lab Sample ID: MB 160-414649/18-A**
**Matrix: Water**
**Analysis Batch: 415904**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 414649**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.1381 | U | 0.237 | 0.237 | 1.00 | 0.400 | pCi/L | 02/12/19 16:59 | 02/21/19 09:10 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.7* | | *40 - 110* | *02/12/19 16:59* | *02/21/19 09:10* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *02/12/19 16:59* | *02/21/19 09:10* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-414649/1-A**
**Matrix: Water**
**Analysis Batch: 415904**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 414649**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.46 | 7.096 | | 0.860 | 1.00 | 0.349 | pCi/L | 75 | 56 - 140 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *106* | | *40 - 110* |
| *Y Carrier* | *85.2* | | *40 - 110* |

## General Chemistry

### Leach Batch: 270898

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | 1313 | |
| 180-85447-51 | MB LOW 2 | Leach | Solid | 1313 | |
| 180-85447-10 DU | ABB pH 2.0 | Leach | Solid | 1313 | |

### Analysis Batch: 270930

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | EPA 9040C | 270898 |
| 180-85447-51 | MB LOW 2 | Leach | Solid | EPA 9040C | 270898 |
| LCS 180-270930/1 | Lab Control Sample | Total/NA | Solid | EPA 9040C | |
| 180-85447-10 DU | ABB pH 2.0 | Leach | Solid | EPA 9040C | 270898 |

### Analysis Batch: 270932

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | SM 2580B | 270898 |
| 180-85447-51 | MB LOW 2 | Leach | Solid | SM 2580B | 270898 |
| LCS 180-270932/1 | Lab Control Sample | Total/NA | Solid | SM 2580B | |
| 180-85447-10 DU | ABB pH 2.0 | Leach | Solid | SM 2580B | 270898 |

### Analysis Batch: 270933

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-10 | ABB pH 2.0 | Leach | Solid | SM 2510B | 270898 |
| 180-85447-51 | MB LOW 2 | Leach | Solid | SM 2510B | 270898 |
| MB 180-270933/2 | Method Blank | Total/NA | Solid | SM 2510B | |
| LCS 180-270933/1 | Lab Control Sample | Total/NA | Solid | SM 2510B | |
| 180-85447-10 DU | ABB pH 2.0 | Leach | Solid | SM 2510B | 270898 |

## Rad

### Prep Batch: 411366

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-26 | ABB pH 13.0 | Total/NA | Water | PrecSep-21 | |
| 180-85447-27 | ABB pH 12.0 | Total/NA | Water | PrecSep-21 | |
| 180-85447-30 | ABB pH 8.0 | Total/NA | Water | PrecSep-21 | |
| 180-85447-31 | ABB pH 7.0 | Total/NA | Water | PrecSep-21 | |
| 180-85447-35 | ABB pH NATURAL | Total/NA | Water | PrecSep-21 | |
| 180-85447-36 | ASB pH 13.0 | Total/NA | Water | PrecSep-21 | |
| 180-85447-37 | ASB pH 12.0 | Total/NA | Water | PrecSep-21 | |
| 180-85447-38 | ASB pH 10.5 | Total/NA | Water | PrecSep-21 | |
| 180-85447-40 | ASB pH 8.0 | Total/NA | Water | PrecSep-21 | |
| 180-85447-41 | ASB pH 7.0 | Total/NA | Water | PrecSep-21 | |
| 180-85447-45 | ASB pH NATURAL | Total/NA | Water | PrecSep-21 | |
| 180-85447-47 | MB NATURAL | Total/NA | Water | PrecSep-21 | |
| 180-85447-48 | MB HIGH | Total/NA | Water | PrecSep-21 | |
| MB 160-411366/23-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-411366/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 411374

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-26 | ABB pH 13.0 | Total/NA | Water | PrecSep_0 | |
| 180-85447-27 | ABB pH 12.0 | Total/NA | Water | PrecSep_0 | |

## Rad (Continued)

### Prep Batch: 411374 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-30 | ABB pH 8.0 | Total/NA | Water | PrecSep_0 | |
| 180-85447-31 | ABB pH 7.0 | Total/NA | Water | PrecSep_0 | |
| 180-85447-35 | ABB pH NATURAL | Total/NA | Water | PrecSep_0 | |
| 180-85447-36 | ASB pH 13.0 | Total/NA | Water | PrecSep_0 | |
| 180-85447-37 | ASB pH 12.0 | Total/NA | Water | PrecSep_0 | |
| 180-85447-38 | ASB pH 10.5 | Total/NA | Water | PrecSep_0 | |
| 180-85447-40 | ASB pH 8.0 | Total/NA | Water | PrecSep_0 | |
| 180-85447-41 | ASB pH 7.0 | Total/NA | Water | PrecSep_0 | |
| 180-85447-45 | ASB pH NATURAL | Total/NA | Water | PrecSep_0 | |
| 180-85447-47 | MB NATURAL | Total/NA | Water | PrecSep_0 | |
| 180-85447-48 | MB HIGH | Total/NA | Water | PrecSep_0 | |
| MB 160-411374/23-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-411374/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |

### Prep Batch: 411711

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-28 | ABB pH 10.5 | Total/NA | Water | PrecSep-21 | |
| 180-85447-32 | ABB pH 5.5 | Total/NA | Water | PrecSep-21 | |
| 180-85447-33 | ABB pH 4.0 | Total/NA | Water | PrecSep-21 | |
| 180-85447-42 | ASB pH 5.5 | Total/NA | Water | PrecSep-21 | |
| 180-85447-46 | MB LOW | Total/NA | Water | PrecSep-21 | |
| MB 160-411711/22-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-411711/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 411716

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-28 | ABB pH 10.5 | Total/NA | Water | PrecSep_0 | |
| 180-85447-32 | ABB pH 5.5 | Total/NA | Water | PrecSep_0 | |
| 180-85447-33 | ABB pH 4.0 | Total/NA | Water | PrecSep_0 | |
| 180-85447-42 | ASB pH 5.5 | Total/NA | Water | PrecSep_0 | |
| 180-85447-46 | MB LOW | Total/NA | Water | PrecSep_0 | |
| MB 160-411716/22-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-411716/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |

### Prep Batch: 412109

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-50 | MB LOW 1 | Total/NA | Water | PrecSep-21 | |
| MB 160-412109/18-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-412109/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 412125

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-50 | MB LOW 1 | Total/NA | Water | PrecSep_0 | |
| MB 160-412125/18-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-412125/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |

### Prep Batch: 414637

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-52 | MB LOW 2 | Total/NA | Water | PrecSep-21 | |
| MB 160-414637/18-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-414637/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

# QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Midwest Generation

TestAmerica Job ID: 180-85447-2

## Prep Batch: 414649

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-52 | MB LOW 2 | Total/NA | Water | PrecSep_0 | |
| MB 160-414649/18-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-414649/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |

## Prep Batch: 417071

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 180-85447-34 | ABB pH 2.0 | Total/NA | Water | Fill_Geo-21 | |
| MB 160-417071/1-A | Method Blank | Total/NA | Water | Fill_Geo-21 | |
| LCS 160-417071/2-A | Lab Control Sample | Total/NA | Water | Fill_Geo-21 | |

# Chain of Custody Record

273171

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

| Client Contact | Project Manager: | Site Contact: | Date: | COC No: |
|---|---|---|---|---|
| Company Name: KPRG and Associates | Tel/Fax: | Lab Contact: | Carrier: | ____ of ____ COCs |
| Address: 14665 W. Lisbon Rd. Ste 1A | Analysis Turnaround Time | | | Sampler: |
| City/State/Zip: Brookfield / WI / 53005 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| Phone: 262-781-0475 | TAT if different from Below ____ | | | Walk-in Client: |
| Fax: | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: NRG | ☐ 1 week | | | |
| Site: Powerton | ☐ 2 days | | | Job / SDG No.: |
| PO# 23517.0 | ☐ 1 day | | | |

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS/MSD (Y/N) | LEAF Method 1313 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|
| ABB | 1-4-19 | 1110 | C | S | 2 | N | N | X | |
| ASB | 1-4-19 | 1145 | C | S | 2 | N | N | X | |

180-85447 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

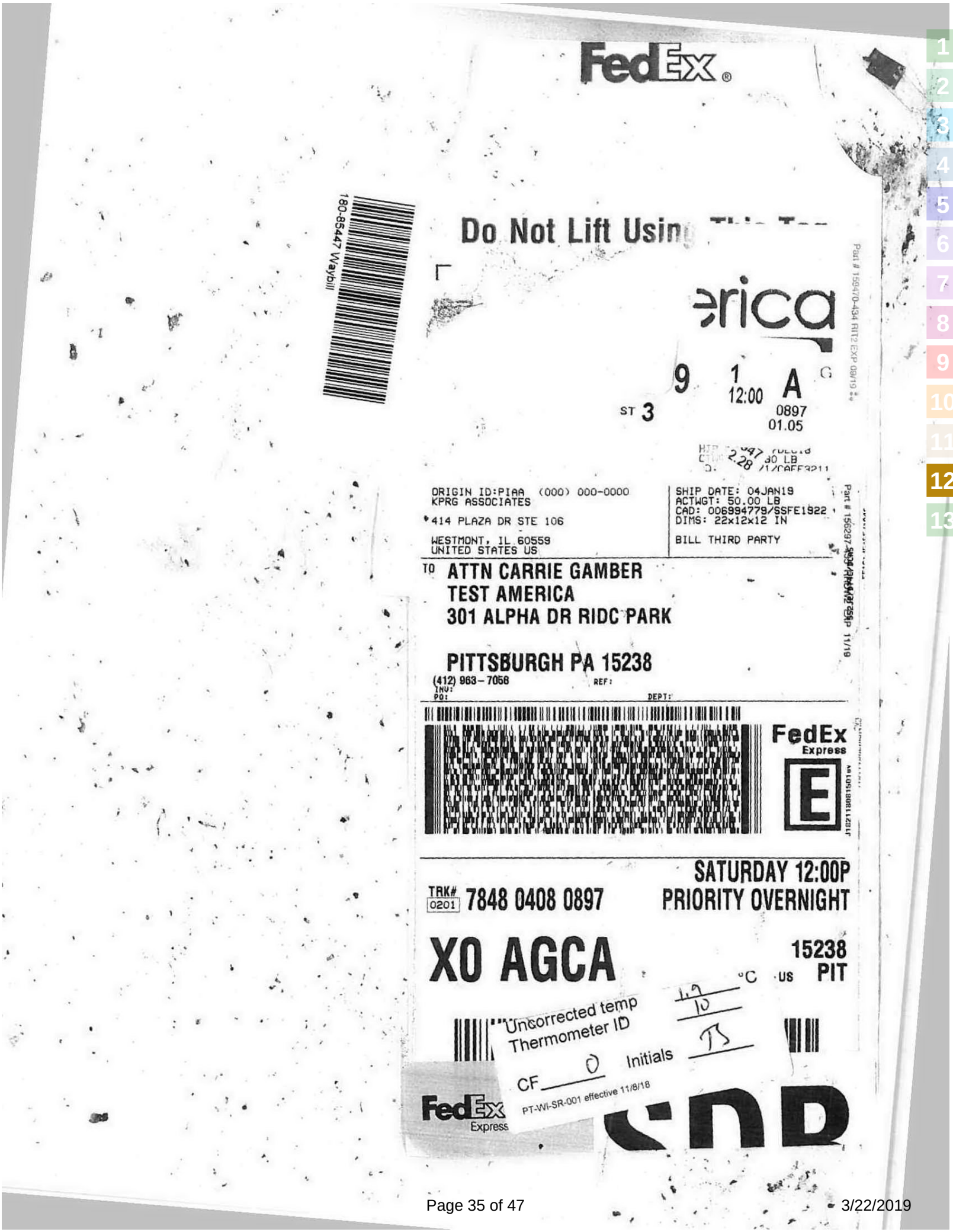
Special Instructions/QC Requirements & Comments:
CCR Appendix 4 compounds → As, Ba, Cd, Co, F, Pb, Li, Hg, Mo, Rad 226/228, Se, Tl / Sample Date is 1-4-19

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| Mitchel Dolan | KPRG | 1-4-19 / 1400 | FEDEX | | 1-4-19 / 1400 |
| Relinquished by: | Company: | Date/Time: | Received by: Julie Watson | Company: TAP++ | Date/Time: 1-5-19 9:30 |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |



3/22/2019


FedEx
180-85447 Waybill
Do Not Lift Usin
erica
9 1 A
12:00
ST 3
0897
01.05
2.28 30 LB
ORIGIN ID:PIAA (000) 000-0000
KPRG ASSOCIATES
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 04JAN19
ACTWGT: 50.00 LB
CAD: 006994779/SSFE1922
DIMS: 22x12x12 IN
BILL THIRD PARTY
TO ATTN CARRIE GAMBER
TEST AMERICA
301 ALPHA DR RIDC PARK
PITTSBURGH PA 15238
(412) 963-7058
INV:
PO:
REF:
DEPT:
FedEx Express
TRK# 0201 7848 0408 0897
SATURDAY 12:00P
PRIORITY OVERNIGHT
XO AGCA
15238
PIT
°C
US
Uncorrected temp
Thermometer ID
CF 0
Initials
FedEx Express
PT-WI-SR-001 effective 11/8/18

**TestAmerica Pittsburgh**
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Gamber, Carrier L | Carrier Tracking No(s): | COC No: 180-352603.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: carrie.gamber@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 180-85447-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 1/17/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Midwest Generation | Project #: 18018377 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|
| Preservation Code: | | | | | | | | | | |
| ABB pH 13.0 (180-85447-26) | 1/16/19 | 09:05 Central | | Water | | | X | X | 2 | |
| ABB pH 12.0 (180-85447-27) | 1/16/19 | 09:05 Central | | Water | | | X | X | 2 | |
| ABB pH 8.0 (180-85447-30) | 1/16/19 | 09:05 Central | | Water | | | X | X | 2 | |
| ABB pH 7.0 (180-85447-31) | 1/16/19 | 09:05 Central | | Water | | | X | X | 2 | |
| ABB pH NATURAL (180-85447-35) | 1/16/19 | 09:05 Central | | Water | | | X | X | 2 | |
| ASB pH 13.0 (180-85447-36) | 1/16/19 | 09:05 Central | | Water | | | X | X | 2 | |
| ASB pH 12.0 (180-85447-37) | 1/16/19 | 09:05 Central | | Water | | | X | X | 2 | |
| ASB pH 10.5 (180-85447-38) | 1/16/19 | 09:05 Central | | Water | | | X | X | 2 | |
| ASB pH 8.0 (180-85447-40) | 1/16/19 | 09:05 Central | | Water | | | X | X | 2 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
|---|---|
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: 1/16/19 1700 | Company DAPM | Received by: Michael Heem | Date/Time: 1-17-19 0915 | Company TA STL |
|---|---|---|---|---|---|
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016

**TestAmerica Pittsburgh**
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Gamber, Carrie L | Carrier Tracking No(s): | COC No: 180-352603.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: carrie.gamber@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 180-85447-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 1/17/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Midwest Generation | Project #: 18018377 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | |
| ASB pH 7.0 (180-85447-41) | 1/16/19 | 09:05 Central | | Water | | | X | X | 2 | |
| ASB pH NATURAL (180-85447-45) | 1/16/19 | 09:05 Central | | Water | | | X | X | 2 | |
| MB NATURAL (180-85447-47) | 1/16/19 | 09:05 Central | | Water | | | X | X | 2 | |
| MB HIGH (180-85447-48) | 1/16/19 | 09:05 Central | | Water | | | X | X | 2 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | | 1/16/19 1700 | TAPIT | Michael Fleem | 1-17-19 0915 | TA SLC |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016

**TestAmerica Pittsburgh**
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| | | | | |
|---|---|---|---|---|
| **Client Information (Sub Contract Lab)** | Sampler: | Lab PM: Gamber, Carrie L | Carrier Tracking No(s): | COC No: 180-352757.1 |
| Client Contact: Shipping/Receiving | Phone: | E-Mail: carrie.gamber@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 180-85447-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 1/17/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Midwest Generation | Project #: 18018377 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | |
| ABB pH 10.5 (180-85447-28) | 1/18/19 | 09:20 Central | | Water | | | X | X | 2 | |
| ABB pH 5.5 (180-85447-32) | 1/18/19 | 09:20 Central | | Water | | | X | X | 2 | |
| ABB pH 4.0 (180-85447-33) | 1/18/19 | 09:20 Central | | Water | | | X | X | 2 | |
| ASB pH 5.5 (180-85447-42) | 1/18/19 | 09:20 Central | | Water | | | X | X | 2 | |
| MB LOW (180-85447-46) | 1/18/19 | 09:20 Central | | Water | | | X | X | 2 | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| | |
|---|---|
| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |
| Empty Kit Relinquished by: Date: | Time: Method of Shipment: |
| Relinquished by: Date/Time: 1/18/19 1700 Company | Received by: Date/Time: 1-19-19 0840 Company TASR |
| Relinquished by: Date/Time: Company | Received by: Date/Time: Company |
| Relinquished by: Date/Time: Company | Received by: Date/Time: Company |
| Custody Seals Intact: Δ Yes Δ No Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |

Ver: 09/20/2016

**TestAmerica Pittsburgh**
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| | | | | |
|---|---|---|---|---|
| **Client Information (Sub Contract Lab)** | Sampler: | Lab PM: Gamber, Carrie L | Carrier Tracking No(s): | COC No: 180-353110.1 |
| Client Contact: Shipping/Receiving | Phone: | E-Mail: carrie.gamber@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 180-85447-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 1/17/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Midwest Generation | Project #: 18018377 | | | |
| Site: | SSOW#: | | | |

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

**Analysis Requested**

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|
| Preservation Code: | | | | | | | | | | |
| ASB pH 4.0 (180-85447-43) | 1/23/19 | 07:40 Central | | Water | | | X | X | 2 | |
| MB LOW 1 (180-85447-50) | 1/23/19 | 07:40 Central | | Water | | | X | X | 2 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| | |
|---|---|
| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| | | | |
|---|---|---|---|
| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
| Relinquished by: | Date/Time: 1/23/19 1700 | Company TAPIT | Received by: Michael Hearn Date/Time: 1-24-19 0900 Company TAPIT |
| Relinquished by: | Date/Time: | Company | Received by: Date/Time: Company |
| Relinquished by: | Date/Time: | Company | Received by: Date/Time: Company |

| | |
|---|---|
| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: |
| Cooler Temperature(s) °C and Other Remarks: | |

Ver: 09/20/2016

**TestAmerica Pittsburgh**
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Gamber, Carrier Lee | Carrier Tracking No(s): | COC No: 180-354349.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: carrie.gamber@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 180-85447-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 2/14/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Midwest Generation | Project #: 18018377 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | |
| ABB pH 2.0 (180-85447-34) | 2/7/19 | 07:30 Central | | Water | | | X | X | 2 | |
| ASB pH 2.0 (180-85447-44) | 2/7/19 | 07:30 Central | | Water | | | X | X | 2 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
|---|---|
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 2/7/19 1700 | TAL PIT | [signature] | 2-8-19/ 0800 | TAL PIT |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016

**TestAmerica Pittsburgh**
301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone (412) 963-7058 Fax (412) 963-2468

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Gamber, Carrie L | Carrier Tracking No(s): | COC No: 180-354349.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: carrie.gamber@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 180-85447-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 2/11/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Midwest Generation | Project #: 18018377 | | | |
| Site: | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | |
| MB LOW 2 (180-85447-52) | 2/7/19 | 07:30 Central | | Water | | | X | X | 2 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 2/7/19 1706 | TAL Pit | Melinda Greer | 2-8-19/0800 | TAL STL |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 09/20/2016

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 180-85447-2

**Login Number: 85447**
**List Number: 1**
**Creator: Watson, Debbie**

**List Source: TestAmerica Pittsburgh**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 180-85447-2

**Login Number: 85447**
**List Number: 2**
**Creator: Hellm, Michael**

**List Source: TestAmerica St. Louis**
**List Creation: 01/17/19 02:44 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.7, 0.8, 0.9, 2.6, 3.0, 3.2, 18.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | N/A | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 180-85447-2

**Login Number: 85447**
**List Number: 3**
**Creator: Hellm, Michael**

**List Source: TestAmerica St. Louis**
**List Creation: 01/19/19 01:36 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 19.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 180-85447-2

**Login Number: 85447**
**List Number: 4**
**Creator: Hellm, Michael**

**List Source: TestAmerica St. Louis**
**List Creation: 01/24/19 11:38 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | False | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 17.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 180-85447-2

**Login Number: 85447**
**List Number: 5**
**Creator: Press, Nicholas B**

**List Source: TestAmerica St. Louis**
**List Creation: 02/08/19 08:27 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 180-85447-2

**Login Number: 85447**
**List Number: 6**
**Creator: Press, Nicholas B**

**List Source: TestAmerica St. Louis**
**List Creation: 02/08/19 08:28 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-159262-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*3/7/2019 11:26:45 AM*
Richard Wright, Senior Project Manager
richard.wright@testamericainc.com

Designee for

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

## Job ID: 500-159262-1

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-159262-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 2/27/2019 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.4º C and 3.5º C.

**Metals**
Method(s) 6020A: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample: MW-10 (500-159262-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
Method(s) 9038, SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-04 (500-159262-3) and MW-10 (500-159262-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

## Client Sample ID: MW-02 — Lab Sample ID: 500-159262-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0026 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.041 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.073 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 69 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0013 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 400 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 49 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.16 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 23 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-159262-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.054 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.056 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 74 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00072 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 410 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 56 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.24 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 25 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-159262-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.033 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.38 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 79 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0012 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0012 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 490 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 55 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.25 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 52 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-159262-4

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

## Client Sample ID: MW-10 (Continued)

## Lab Sample ID: 500-159262-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.032 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.022 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.59 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.39 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Cadmium | 0.0015 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 150 | | 1.0 | | mg/L | 5 | | 6020A | Total Recoverable |
| Chromium | 0.063 | | 0.025 | | mg/L | 5 | | 6020A | Total Recoverable |
| Cobalt | 0.081 | | 0.0050 | | mg/L | 5 | | 6020A | Total Recoverable |
| Lead | 0.036 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0066 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0041 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 540 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 48 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.21 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 36 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL PEN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-159262-1 | MW-02 | Water | 02/26/19 09:20 | 02/27/19 10:20 |
| 500-159262-2 | MW-03 | Water | 02/26/19 10:55 | 02/27/19 10:20 |
| 500-159262-3 | MW-04 | Water | 02/26/19 12:25 | 02/27/19 10:20 |
| 500-159262-4 | MW-10 | Water | 02/26/19 14:45 | 02/27/19 10:20 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

## Client Sample ID: MW-02

**Date Collected: 02/26/19 09:20**
**Date Received: 02/27/19 10:20**

## Lab Sample ID: 500-159262-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/28/19 16:21 | 03/06/19 23:01 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| **Arsenic** | **0.0026** | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| **Barium** | **0.041** | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| **Boron** | **0.073** | | 0.050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| **Calcium** | **69** | | 0.20 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| **Lead** | **0.0013** | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:15 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/04/19 10:25 | 03/05/19 08:18 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **400** | | 10 | | mg/L | | | 02/28/19 10:48 | 1 |
| **Chloride** | **49** | | 2.0 | | mg/L | | | 03/02/19 16:33 | 1 |
| **Fluoride** | **0.16** | | 0.10 | | mg/L | | | 03/01/19 21:36 | 1 |
| **Sulfate** | **23** | | 5.0 | | mg/L | | | 03/06/19 10:46 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

**Client Sample ID: MW-03**
**Date Collected: 02/26/19 10:55**
**Date Received: 02/27/19 10:20**

**Lab Sample ID: 500-159262-2**
**Matrix: Water**

## Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/28/19 16:21 | 03/06/19 23:30 | 1 |

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| **Barium** | **0.054** | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| **Boron** | **0.056** | | 0.050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| **Calcium** | **74** | | 0.20 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| **Lead** | **0.00072** | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:34 | 1 |

## Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/04/19 10:25 | 03/05/19 08:20 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **410** | | 10 | | mg/L | | | 02/28/19 10:50 | 1 |
| **Chloride** | **56** | | 2.0 | | mg/L | | | 03/04/19 13:43 | 1 |
| **Fluoride** | **0.24** | | 0.10 | | mg/L | | | 03/01/19 21:39 | 1 |
| **Sulfate** | **25** | | 5.0 | | mg/L | | | 03/06/19 10:46 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

**Client Sample ID: MW-04**
**Date Collected: 02/26/19 12:25**
**Date Received: 02/27/19 10:20**

**Lab Sample ID: 500-159262-3**
**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/28/19 16:21 | 03/06/19 23:34 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| **Barium** | **0.033** | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| **Boron** | **0.38** | | 0.050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| **Calcium** | **79** | | 0.20 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| **Cobalt** | **0.0012** | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| **Lead** | **0.0012** | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:38 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/04/19 10:25 | 03/05/19 08:30 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **490** | | 10 | | mg/L | | | 02/28/19 10:51 | 1 |
| **Chloride** | **55** | | 2.0 | | mg/L | | | 03/04/19 13:43 | 1 |
| **Fluoride** | **0.25** | | 0.10 | | mg/L | | | 03/01/19 21:42 | 1 |
| **Sulfate** | **52** | | 10 | | mg/L | | | 03/06/19 10:55 | 2 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

**Client Sample ID: MW-10**
**Date Collected: 02/26/19 14:45**
**Date Received: 02/27/19 10:20**

**Lab Sample ID: 500-159262-4**
**Matrix: Water**

## Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.032** | | 0.010 | | mg/L | | 02/28/19 16:21 | 03/06/19 23:38 | 1 |

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |
| **Arsenic** | **0.022** | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |
| **Barium** | **0.59** | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |
| Beryllium | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 11:30 | 5 |
| **Boron** | **0.39** | | 0.25 | | mg/L | | 02/28/19 16:21 | 03/01/19 11:30 | 5 |
| **Cadmium** | **0.0015** | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |
| **Calcium** | **150** | | 1.0 | | mg/L | | 02/28/19 16:21 | 03/01/19 11:30 | 5 |
| **Chromium** | **0.063** | | 0.025 | | mg/L | | 02/28/19 16:21 | 03/01/19 11:30 | 5 |
| **Cobalt** | **0.081** | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 11:30 | 5 |
| **Lead** | **0.036** | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |
| **Molybdenum** | **0.0066** | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |
| **Selenium** | **0.0041** | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:42 | 1 |

## Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/04/19 10:25 | 03/05/19 08:32 | 1 |

## General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **540** | | 10 | | mg/L | | | 02/28/19 10:53 | 1 |
| **Chloride** | **48** | | 2.0 | | mg/L | | | 03/04/19 13:44 | 1 |
| **Fluoride** | **0.21** | | 0.10 | | mg/L | | | 03/01/19 21:45 | 1 |
| **Sulfate** | **36** | | 10 | | mg/L | | | 03/06/19 11:11 | 2 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 474292

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-159262-2 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-159262-3 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-159262-4 | MW-10 | Total Recoverable | Water | 3005A | |
| MB 500-474292/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-474292/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-159262-1 MS | MW-02 | Total Recoverable | Water | 3005A | |
| 500-159262-1 MSD | MW-02 | Total Recoverable | Water | 3005A | |
| 500-159262-1 DU | MW-02 | Total Recoverable | Water | 3005A | |

### Analysis Batch: 474590

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total Recoverable | Water | 6020A | 474292 |
| 500-159262-2 | MW-03 | Total Recoverable | Water | 6020A | 474292 |
| 500-159262-3 | MW-04 | Total Recoverable | Water | 6020A | 474292 |
| 500-159262-4 | MW-10 | Total Recoverable | Water | 6020A | 474292 |
| 500-159262-4 | MW-10 | Total Recoverable | Water | 6020A | 474292 |
| MB 500-474292/1-A | Method Blank | Total Recoverable | Water | 6020A | 474292 |
| LCS 500-474292/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 474292 |
| 500-159262-1 MS | MW-02 | Total Recoverable | Water | 6020A | 474292 |
| 500-159262-1 MSD | MW-02 | Total Recoverable | Water | 6020A | 474292 |
| 500-159262-1 DU | MW-02 | Total Recoverable | Water | 6020A | 474292 |

### Prep Batch: 474601

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total/NA | Water | 7470A | |
| 500-159262-2 | MW-03 | Total/NA | Water | 7470A | |
| 500-159262-3 | MW-04 | Total/NA | Water | 7470A | |
| 500-159262-4 | MW-10 | Total/NA | Water | 7470A | |
| MB 500-474601/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-474601/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-159262-2 MS | MW-03 | Total/NA | Water | 7470A | |
| 500-159262-2 MSD | MW-03 | Total/NA | Water | 7470A | |
| 500-159262-2 DU | MW-03 | Total/NA | Water | 7470A | |

### Analysis Batch: 474768

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total/NA | Water | 7470A | 474601 |
| 500-159262-2 | MW-03 | Total/NA | Water | 7470A | 474601 |
| 500-159262-3 | MW-04 | Total/NA | Water | 7470A | 474601 |
| 500-159262-4 | MW-10 | Total/NA | Water | 7470A | 474601 |
| MB 500-474601/12-A | Method Blank | Total/NA | Water | 7470A | 474601 |
| LCS 500-474601/13-A | Lab Control Sample | Total/NA | Water | 7470A | 474601 |
| 500-159262-2 MS | MW-03 | Total/NA | Water | 7470A | 474601 |
| 500-159262-2 MSD | MW-03 | Total/NA | Water | 7470A | 474601 |
| 500-159262-2 DU | MW-03 | Total/NA | Water | 7470A | 474601 |

### Analysis Batch: 475099

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total Recoverable | Water | 6010C | 474292 |
| 500-159262-2 | MW-03 | Total Recoverable | Water | 6010C | 474292 |

## Metals (Continued)

### Analysis Batch: 475099 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-3 | MW-04 | Total Recoverable | Water | 6010C | 474292 |
| 500-159262-4 | MW-10 | Total Recoverable | Water | 6010C | 474292 |
| MB 500-474292/1-A | Method Blank | Total Recoverable | Water | 6010C | 474292 |
| LCS 500-474292/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 474292 |
| 500-159262-1 MS | MW-02 | Total Recoverable | Water | 6010C | 474292 |
| 500-159262-1 MSD | MW-02 | Total Recoverable | Water | 6010C | 474292 |
| 500-159262-1 DU | MW-02 | Total Recoverable | Water | 6010C | 474292 |

## General Chemistry

### Analysis Batch: 432314

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-159262-2 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-159262-3 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-159262-4 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-432314/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-432314/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-432314/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 474186

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-159262-2 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-159262-3 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-159262-4 | MW-10 | Total/NA | Water | SM 2540C | |
| MB 500-474186/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-474186/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 474484

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-159262-2 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-159262-3 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-159262-4 | MW-10 | Total/NA | Water | SM 4500 F C | |
| MB 500-474484/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-474484/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 474498

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-474498/50 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-474498/51 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 474641

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-2 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-159262-3 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-159262-4 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-474641/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |

## General Chemistry (Continued)

### Analysis Batch: 474641 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-474641/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-474292/1-A**
**Matrix: Water**
**Analysis Batch: 475099**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/28/19 16:21 | 03/06/19 22:53 | 1 |

**Lab Sample ID: LCS 500-474292/2-A**
**Matrix: Water**
**Analysis Batch: 475099**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.504 | | mg/L | | 101 | 80 - 120 |

**Lab Sample ID: 500-159262-1 MS**
**Matrix: Water**
**Analysis Batch: 475099**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.538 | | mg/L | | 108 | 75 - 125 |

**Lab Sample ID: 500-159262-1 MSD**
**Matrix: Water**
**Analysis Batch: 475099**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.526 | | mg/L | | 105 | 75 - 125 | 2 | 20 |

**Lab Sample ID: 500-159262-1 DU**
**Matrix: Water**
**Analysis Batch: 475099**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | <0.010 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-474292/1-A**
**Matrix: Water**
**Analysis Batch: 474590**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Boron | <0.050 | | 0.050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-474292/1-A**
**Matrix: Water**
**Analysis Batch: 474590**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/28/19 16:21 | 03/01/19 10:07 | 1 |

**Lab Sample ID: LCS 500-474292/2-A**
**Matrix: Water**
**Analysis Batch: 474590**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.476 | | mg/L | | 95 | 80 - 120 |
| Arsenic | 0.100 | 0.0952 | | mg/L | | 95 | 80 - 120 |
| Barium | 2.00 | 1.90 | | mg/L | | 95 | 80 - 120 |
| Beryllium | 0.0500 | 0.0448 | | mg/L | | 90 | 80 - 120 |
| Boron | 1.00 | 0.926 | | mg/L | | 93 | 80 - 120 |
| Cadmium | 0.0500 | 0.0475 | | mg/L | | 95 | 80 - 120 |
| Calcium | 10.0 | 9.25 | | mg/L | | 92 | 80 - 120 |
| Chromium | 0.200 | 0.189 | | mg/L | | 94 | 80 - 120 |
| Cobalt | 0.500 | 0.478 | | mg/L | | 96 | 80 - 120 |
| Lead | 0.100 | 0.102 | | mg/L | | 102 | 80 - 120 |
| Molybdenum | 1.00 | 0.906 | | mg/L | | 91 | 80 - 120 |
| Selenium | 0.100 | 0.0861 | | mg/L | | 86 | 80 - 120 |
| Thallium | 0.100 | 0.0900 | | mg/L | | 90 | 80 - 120 |

**Lab Sample ID: 500-159262-1 MS**
**Matrix: Water**
**Analysis Batch: 474590**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.486 | | mg/L | | 97 | 75 - 125 |
| Arsenic | 0.0026 | | 0.100 | 0.101 | | mg/L | | 98 | 75 - 125 |
| Barium | 0.041 | | 2.00 | 1.92 | | mg/L | | 94 | 75 - 125 |
| Beryllium | <0.0010 | | 0.0500 | 0.0436 | | mg/L | | 87 | 75 - 125 |
| Boron | 0.073 | | 1.00 | 0.958 | | mg/L | | 89 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0481 | | mg/L | | 96 | 75 - 125 |
| Calcium | 69 | | 10.0 | 75.2 | 4 | mg/L | | 59 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.180 | | mg/L | | 89 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.446 | | mg/L | | 89 | 75 - 125 |
| Lead | 0.0013 | | 0.100 | 0.101 | | mg/L | | 100 | 75 - 125 |
| Molybdenum | <0.0050 | | 1.00 | 0.936 | | mg/L | | 93 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.0891 | | mg/L | | 89 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.0879 | | mg/L | | 88 | 75 - 125 |

**Lab Sample ID: 500-159262-1 MSD**
**Matrix: Water**
**Analysis Batch: 474590**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.482 | | mg/L | | 96 | 75 - 125 | 1 | 20 |
| Arsenic | 0.0026 | | 0.100 | 0.100 | | mg/L | | 98 | 75 - 125 | 0 | 20 |
| Barium | 0.041 | | 2.00 | 1.89 | | mg/L | | 92 | 75 - 125 | 2 | 20 |
| Beryllium | <0.0010 | | 0.0500 | 0.0420 | | mg/L | | 84 | 75 - 125 | 4 | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-159262-1 MSD**
**Matrix: Water**
**Analysis Batch: 474590**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.073 | | 1.00 | 0.956 | | mg/L | | 88 | 75 - 125 | 0 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0482 | | mg/L | | 96 | 75 - 125 | 0 | 20 |
| Calcium | 69 | | 10.0 | 74.7 | 4 | mg/L | | 54 | 75 - 125 | 1 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.177 | | mg/L | | 88 | 75 - 125 | 2 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.439 | | mg/L | | 88 | 75 - 125 | 2 | 20 |
| Lead | 0.0013 | | 0.100 | 0.0999 | | mg/L | | 99 | 75 - 125 | 1 | 20 |
| Molybdenum | <0.0050 | | 1.00 | 0.935 | | mg/L | | 93 | 75 - 125 | 0 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.0886 | | mg/L | | 89 | 75 - 125 | 1 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.0874 | | mg/L | | 87 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-159262-1 DU**
**Matrix: Water**
**Analysis Batch: 474590**

**Client Sample ID: MW-02**
**Prep Type: Total Recoverable**
**Prep Batch: 474292**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | <0.0030 | | mg/L | | | | NC | 20 |
| Arsenic | 0.0026 | | 0.00272 | | mg/L | | | | 3 | 20 |
| Barium | 0.041 | | 0.0412 | | mg/L | | | | 0.8 | 20 |
| Beryllium | <0.0010 | | <0.0010 | | mg/L | | | | NC | 20 |
| Boron | 0.073 | | 0.0651 | | mg/L | | | | 11 | 20 |
| Cadmium | <0.00050 | | <0.00050 | | mg/L | | | | NC | 20 |
| Calcium | 69 | | 68.3 | | mg/L | | | | 1 | 20 |
| Chromium | <0.0050 | | <0.0050 | | mg/L | | | | NC | 20 |
| Cobalt | <0.0010 | | <0.0010 | | mg/L | | | | NC | 20 |
| Lead | 0.0013 | | 0.00124 | | mg/L | | | | 2 | 20 |
| Molybdenum | <0.0050 | | <0.0050 | | mg/L | | | | NC | 20 |
| Selenium | <0.0025 | | <0.0025 | | mg/L | | | | NC | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | | | NC | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-474601/12-A**
**Matrix: Water**
**Analysis Batch: 474768**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 474601**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/04/19 10:25 | 03/05/19 07:59 | 1 |

**Lab Sample ID: LCS 500-474601/13-A**
**Matrix: Water**
**Analysis Batch: 474768**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 474601**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | | | 0.00200 | 0.00195 | | mg/L | | 98 | 80 - 120 | | |

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: 500-159262-2 MS**
**Matrix: Water**
**Analysis Batch: 474768**

**Client Sample ID: MW-03**
**Prep Type: Total/NA**
**Prep Batch: 474601**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000982 | | mg/L | | 98 | 75 - 125 |

**Lab Sample ID: 500-159262-2 MSD**
**Matrix: Water**
**Analysis Batch: 474768**

**Client Sample ID: MW-03**
**Prep Type: Total/NA**
**Prep Batch: 474601**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000934 | | mg/L | | 93 | 75 - 125 | 5 | 20 |

**Lab Sample ID: 500-159262-2 DU**
**Matrix: Water**
**Analysis Batch: 474768**

**Client Sample ID: MW-03**
**Prep Type: Total/NA**
**Prep Batch: 474601**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-474186/1**
**Matrix: Water**
**Analysis Batch: 474186**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 02/28/19 10:20 | 1 |

**Lab Sample ID: LCS 500-474186/2**
**Matrix: Water**
**Analysis Batch: 474186**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 286 | | mg/L | | 114 | 80 - 120 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-474498/50**
**Matrix: Water**
**Analysis Batch: 474498**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 03/02/19 16:11 | 1 |

**Lab Sample ID: LCS 500-474498/51**
**Matrix: Water**
**Analysis Batch: 474498**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 53.0 | | mg/L | | 106 | 85 - 115 |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: MB 500-474641/12**
**Matrix: Water**
**Analysis Batch: 474641**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 03/04/19 13:21 | 1 |

**Lab Sample ID: LCS 500-474641/13**
**Matrix: Water**
**Analysis Batch: 474641**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 52.8 | | mg/L | | 106 | 85 - 115 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-474484/3**
**Matrix: Water**
**Analysis Batch: 474484**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 03/01/19 20:39 | 1 |

**Lab Sample ID: LCS 500-474484/4**
**Matrix: Water**
**Analysis Batch: 474484**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.2 | | mg/L | | 102 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-432314/6**
**Matrix: Water**
**Analysis Batch: 432314**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 03/06/19 10:18 | 1 |

**Lab Sample ID: LCS 400-432314/7**
**Matrix: Water**
**Analysis Batch: 432314**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 15.0 | 13.9 | | mg/L | | 92 | 90 - 110 |

**Lab Sample ID: MRL 400-432314/3**
**Matrix: Water**
**Analysis Batch: 432314**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 5.00 | <5.0 | | mg/L | | 79 | 50 - 150 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

## Client Sample ID: MW-02

**Lab Sample ID: 500-159262-1**

**Date Collected: 02/26/19 09:20**

**Matrix: Water**

**Date Received: 02/27/19 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 475099 | 03/06/19 23:01 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 474590 | 03/01/19 10:15 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 474601 | 03/04/19 10:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 474768 | 03/05/19 08:18 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 474186 | 02/28/19 10:48 | MTB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 474498 | 03/02/19 16:33 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 474484 | 03/01/19 21:36 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 432314 | 03/06/19 10:46 | RRC | TAL PEN |

## Client Sample ID: MW-03

**Lab Sample ID: 500-159262-2**

**Date Collected: 02/26/19 10:55**

**Matrix: Water**

**Date Received: 02/27/19 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 475099 | 03/06/19 23:30 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 474590 | 03/01/19 10:34 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 474601 | 03/04/19 10:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 474768 | 03/05/19 08:20 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 474186 | 02/28/19 10:50 | MTB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 474641 | 03/04/19 13:43 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 474484 | 03/01/19 21:39 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 432314 | 03/06/19 10:46 | RRC | TAL PEN |

## Client Sample ID: MW-04

**Lab Sample ID: 500-159262-3**

**Date Collected: 02/26/19 12:25**

**Matrix: Water**

**Date Received: 02/27/19 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 475099 | 03/06/19 23:34 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 474590 | 03/01/19 10:38 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 474601 | 03/04/19 10:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 474768 | 03/05/19 08:30 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 474186 | 02/28/19 10:51 | MTB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 474641 | 03/04/19 13:43 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 474484 | 03/01/19 21:42 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 432314 | 03/06/19 10:55 | RRC | TAL PEN |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

## Client Sample ID: MW-10

**Date Collected: 02/26/19 14:45**
**Date Received: 02/27/19 10:20**

## Lab Sample ID: 500-159262-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 475099 | 03/06/19 23:38 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 474590 | 03/01/19 10:42 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 474292 | 02/28/19 16:21 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 474590 | 03/01/19 11:30 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 474601 | 03/04/19 10:25 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 474768 | 03/05/19 08:32 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 474186 | 02/28/19 10:53 | MTB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 474641 | 03/04/19 13:44 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 474484 | 03/01/19 21:45 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 432314 | 03/06/19 11:11 | RRC | TAL PEN |

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-1

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

## Laboratory: TestAmerica Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Alabama | State Program | 4 | 40150 | 06-30-19 |
| ANAB | ISO/IEC 17025 | | L2471 | 02-22-20 |
| Arizona | State Program | 9 | AZ0710 | 01-12-20 |
| Arkansas DEQ | State Program | 6 | 88-0689 | 09-01-19 |
| California | State Program | 9 | 2510 | 06-30-19 |
| Florida | NELAP | 4 | E81010 | 06-30-19 |
| Georgia | State Program | 4 | E81010 (FL) | 06-30-19 |
| Illinois | NELAP | 5 | 200041 | 10-09-19 |
| Iowa | State Program | 7 | 367 | 08-01-20 |
| Kansas | NELAP | 7 | E-10253 | 10-31-19 |
| Kentucky (UST) | State Program | 4 | 53 | 06-30-19 |
| Kentucky (WW) | State Program | 4 | 98030 | 12-31-19 |
| Louisiana | NELAP | 6 | 30976 | 06-30-19 |
| Louisiana (DW) | NELAP | 6 | LA017 | 12-31-19 |
| Maryland | State Program | 3 | 233 | 09-30-19 |
| Massachusetts | State Program | 1 | M-FL094 | 06-30-19 |
| Michigan | State Program | 5 | 9912 | 06-30-19 |
| New Jersey | NELAP | 2 | FL006 | 06-30-19 |
| North Carolina (WW/SW) | State Program | 4 | 314 | 12-31-19 |
| Oklahoma | State Program | 6 | 9810 | 08-31-19 |
| Pennsylvania | NELAP | 3 | 68-00467 | 01-31-20 |
| Rhode Island | State Program | 1 | LAO00307 | 12-30-19 |
| South Carolina | State Program | 4 | 96026 | 06-30-19 |
| Tennessee | State Program | 4 | TN02907 | 06-30-19 |
| Texas | NELAP | 6 | T104704286-18-15 | 09-30-19 |
| US Fish & Wildlife | Federal | | LE058448-0 | 07-31-19 |
| USDA | Federal | | P330-18-00148 | 05-17-21 |
| Virginia | NELAP | 3 | 460166 | 06-14-19 |
| Washington | State Program | 10 | C915 | 05-15-19 |
| West Virginia DEP | State Program | 3 | 136 | 07-31-19 |

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 2-26-19 | COC No: 1 |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Eric Lang | Carrier: FedEx | 1 of 1 COCs |
| 14665 West Lisbon Road, Suite 1A | Analysis Turnaround Time | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| (262) 781-0475 Phone | TAT if different from Below _____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR | ☐ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: 500-159262 |
| P O # 12313.1 | ☐ 1 day | | | |

| | Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y / N) | Perform MS / MSD (Y / N) | Total Metals | Cl, Fl, SO4, TDS | Radium 226/228 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-02 | 2-26-19 | 0920 | G | W | 5 | N | N | x | x | x | |
| 2 | MW-03 | 2-26-19 | 1055 | G | W | 5 | N | N | x | x | x | |
| 3 | MW-04 | 2-26-19 | 1225 | G | W | 5 | N | N | x | x | x | |
| 4 | MW-10 | 2-26-19 | 1445 | G | W | 5 | N | N | x | x | x | |
| | | | | | | | | | 4 | 1 | 4 | |

500-159262 COC

**Preservation Used:** 1=Ice, 2=HCl; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Other _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:**

AS 02/27/19
~~3.5~~ 3.5, 3.4

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | | Therm ID No.: _____ |
|---|---|---|---|---|---|
| Relinquished by: Mitchel Dolan | Company: KPRG | Date/Time: 2-26-19/1600 | Received by: FEDEX | Company: | Date/Time: 2-26-19 / 1600 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: TALHE | Date/Time: 02/27/19 1020 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018


ORIGIN ID:PIAA (000) 000-0000
TEST AMERICA
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 26FEB19
ACTWGT: 47.00 LB
CAD: 006994779/SSFE1922
DIMS: 24x18x12 IN
BILL THIRD PARTY
TO ERIC LANG
TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(708) 534-5200
REF:
DEPT:
FedEx
Express
1 of 3
TRK# 0201 7857 1738 3280
## MASTER ##
XH JOTA
WED - 27 FEB 10:30A
PRIORITY OVERNIGHT
60484
IL-US ORD
ORIGIN ID:PIAA (000) 000-0000
AMERICA
SHIP DATE: 26FEB19
ACTWGT: 24.00 LB
CAD: 006994779/SSFE1922
DIMS: 18x15x10 IN
2 of 3
MPS# 0263 7857 1738 3291
Mstr# 7857 1738 3280
XH JOTA
0201
WED - 27 FEB 10:30A
PRIORITY OVERNIGHT
60484
IL-US ORD
3 of 3
MPS# 0263 7857 1738 3306
Mstr# 7857 1738 3280
XH JOTA
0201
WED - 27 FEB 10:30A
PRIORITY OVERNIGHT
60484
IL-US ORD
500-159262 Wayf

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-118390.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-159262-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 3/11/2019 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-02 (500-159262-1) | 2/26/19 | 09:20 Central | | Water | | | X | 1 | |
| MW-03 (500-159262-2) | 2/26/19 | 10:55 Central | | Water | | | X | 1 | |
| MW-04 (500-159262-3) | 2/26/19 | 12:25 Central | | Water | | | X | 1 | |
| MW-10 (500-159262-4) | 2/26/19 | 14:45 Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Paula Buckley | 2/27/19 1600 | TA CHI | | 2/28/19 931 | TA Pen |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 2.6°C IR 8 |
|---|---|---|

Ver: 01/16/2019

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3/7/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-159262-1

**Login Number: 159262**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.4, 3.5 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-159262-1

**Login Number: 159262**
**List Number: 3**
**Creator: Perez, Trina M**

**List Source: TestAmerica Pensacola**
**List Creation: 02/28/19 05:18 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.6°C IR-8 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING



# ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

TestAmerica Job ID: 500-159262-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*4/2/2019 2:17:40 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-2

## Job ID: 500-159262-2

### Laboratory: TestAmerica Chicago

**Narrative**

**Job Narrative**
**500-159262-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 2/27/2019 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.4º C and 3.5º C.

**RAD**
Method(s) PrecSep_0: Radium 228 Prep Batch 160-418075:

The following sample was prepared at a reduced volume do to sediment:MW-10 (500-159262-4)

Method(s) PrecSep-21: Radium Prep Batch 160-418074:

The following sample was prepared at a reduced volume do to sediment. MW-10 (500-159262-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 500-159262-1 | MW-02 | Water | 02/26/19 09:20 | 02/27/19 10:20 |
| 500-159262-2 | MW-03 | Water | 02/26/19 10:55 | 02/27/19 10:20 |
| 500-159262-3 | MW-04 | Water | 02/26/19 12:25 | 02/27/19 10:20 |
| 500-159262-4 | MW-10 | Water | 02/26/19 14:45 | 02/27/19 10:20 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-2

## Client Sample ID: MW-02

**Date Collected: 02/26/19 09:20**
**Date Received: 02/27/19 10:20**

## Lab Sample ID: 500-159262-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.144** | | 0.0857 | 0.0867 | 1.00 | 0.105 | pCi/L | 03/06/19 09:41 | 03/28/19 07:27 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.3* | | *40 - 110* | *03/06/19 09:41* | *03/28/19 07:27* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.102 | U | 0.225 | 0.226 | 1.00 | 0.425 | pCi/L | 03/06/19 10:16 | 03/22/19 08:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.3* | | *40 - 110* | *03/06/19 10:16* | *03/22/19 08:43* | *1* |
| *Y Carrier* | *80.7* | | *40 - 110* | *03/06/19 10:16* | *03/22/19 08:43* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.0422 | U | 0.241 | 0.242 | 5.00 | 0.425 | pCi/L | | 04/02/19 12:53 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-2

**Client Sample ID: MW-03**
**Date Collected: 02/26/19 10:55**
**Date Received: 02/27/19 10:20**

**Lab Sample ID: 500-159262-2**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.00820 | U | 0.0489 | 0.0489 | 1.00 | 0.109 | pCi/L | 03/07/19 10:46 | 03/29/19 07:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.5* | | *40 - 110* | *03/07/19 10:46* | *03/29/19 07:12* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.218 | U | 0.243 | 0.244 | 1.00 | 0.399 | pCi/L | 03/07/19 11:01 | 03/21/19 15:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *93.5* | | *40 - 110* | *03/07/19 11:01* | *03/21/19 15:35* | *1* |
| *Y Carrier* | *84.1* | | *40 - 110* | *03/07/19 11:01* | *03/21/19 15:35* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.210 | U | 0.248 | 0.249 | 5.00 | 0.399 | pCi/L | | 04/02/19 12:53 | 1 |

## Client Sample ID: MW-04

**Date Collected: 02/26/19 12:25**
**Date Received: 02/27/19 10:20**

## Lab Sample ID: 500-159262-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.0873** | | 0.0638 | 0.0643 | 1.00 | 0.0857 | pCi/L | 03/07/19 10:46 | 03/29/19 07:13 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.9* | | *40 - 110* | *03/07/19 10:46* | *03/29/19 07:13* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.279 | U | 0.219 | 0.221 | 1.00 | 0.344 | pCi/L | 03/07/19 11:01 | 03/21/19 15:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *95.9* | | *40 - 110* | *03/07/19 11:01* | *03/21/19 15:35* | *1* |
| *Y Carrier* | *81.5* | | *40 - 110* | *03/07/19 11:01* | *03/21/19 15:35* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.366** | | 0.228 | 0.230 | 5.00 | 0.344 | pCi/L | | 04/02/19 12:53 | 1 |

## Client Sample ID: MW-10

**Date Collected: 02/26/19 14:45**
**Date Received: 02/27/19 10:20**

## Lab Sample ID: 500-159262-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 1.56 | | 0.309 | 0.340 | 1.00 | 0.196 | pCi/L | 03/07/19 10:46 | 03/29/19 07:13 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *03/07/19 10:46* | *03/29/19 07:13* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 2.57 | | 0.566 | 0.614 | 1.00 | 0.631 | pCi/L | 03/07/19 11:01 | 03/21/19 15:33 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *03/07/19 11:01* | *03/21/19 15:33* | *1* |
| *Y Carrier* | *85.2* | | *40 - 110* | *03/07/19 11:01* | *03/21/19 15:33* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 4.13 | | 0.645 | 0.702 | 5.00 | 0.631 | pCi/L | | 04/02/19 12:53 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-2

## Rad

### Prep Batch: 417892

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total/NA | Water | PrecSep-21 | |
| MB 160-417892/23-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-417892/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-159262-1 DU | MW-02 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 417898

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-1 | MW-02 | Total/NA | Water | PrecSep_0 | |
| MB 160-417898/23-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-417898/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-159262-1 DU | MW-02 | Total/NA | Water | PrecSep_0 | |

### Prep Batch: 418074

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-2 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-159262-3 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-159262-4 | MW-10 | Total/NA | Water | PrecSep-21 | |
| MB 160-418074/10-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-418074/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-159262-2 DU | MW-03 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 418075

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-159262-2 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-159262-3 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-159262-4 | MW-10 | Total/NA | Water | PrecSep_0 | |
| MB 160-418075/10-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-418075/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-159262-2 DU | MW-03 | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-417892/23-A**
**Matrix: Water**
**Analysis Batch: 421605**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 417892**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.07501 | U | 0.0650 | 0.0654 | 1.00 | 0.0957 | pCi/L | 03/06/19 09:41 | 03/28/19 07:27 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *98.2* | | *40 - 110* | *03/06/19 09:41* | *03/28/19 07:27* | *1* |

**Lab Sample ID: LCS 160-417892/1-A**
**Matrix: Water**
**Analysis Batch: 421604**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 417892**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 9.220 | | 0.994 | 1.00 | 0.0779 | pCi/L | 81 | 68 - 137 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *104* | | *40 - 110* |

**Lab Sample ID: 500-159262-1 DU**
**Matrix: Water**
**Analysis Batch: 421605**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**
**Prep Batch: 417892**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.144 | | | 0.07833 | U | 0.0672 | 1.00 | 0.0932 | pCi/L | | | 0.43 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *92.9* | | *40 - 110* |

**Lab Sample ID: MB 160-418074/10-A**
**Matrix: Water**
**Analysis Batch: 421795**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 418074**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.03039 | U | 0.0559 | 0.0560 | 1.00 | 0.0993 | pCi/L | 03/07/19 10:46 | 03/29/19 07:14 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *107* | | *40 - 110* | *03/07/19 10:46* | *03/29/19 07:14* | *1* |

**Lab Sample ID: LCS 160-418074/1-A**
**Matrix: Water**
**Analysis Batch: 421795**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 418074**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 9.222 | | 0.976 | 1.00 | 0.0686 | pCi/L | 81 | 68 - 137 | | |

## Method: 903.0 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: LCS 160-418074/1-A**
**Matrix: Water**
**Analysis Batch: 421795**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 418074**

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 110 | | 40 - 110 |

**Lab Sample ID: 500-159262-2 DU**
**Matrix: Water**
**Analysis Batch: 421795**

**Client Sample ID: MW-03**
**Prep Type: Total/NA**
**Prep Batch: 418074**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.00820 | U | | 0.04205 | U | 0.0613 | 1.00 | 0.105 | pCi/L | | | 0.46 | 1 |

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 98.8 | | 40 - 110 |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-417898/23-A**
**Matrix: Water**
**Analysis Batch: 420713**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 417898**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.03310 | U | 0.173 | 0.173 | 1.00 | 0.318 | pCi/L | 03/06/19 10:16 | 03/22/19 08:43 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 98.2 | | 40 - 110 | 03/06/19 10:16 | 03/22/19 08:43 | 1 |
| Y Carrier | 92.3 | | 40 - 110 | 03/06/19 10:16 | 03/22/19 08:43 | 1 |

**Lab Sample ID: LCS 160-417898/1-A**
**Matrix: Water**
**Analysis Batch: 420716**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 417898**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.37 | 9.437 | | 1.06 | 1.00 | 0.301 | pCi/L | 101 | 56 - 140 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 104 | | 40 - 110 |
| Y Carrier | 87.1 | | 40 - 110 |

**Lab Sample ID: 500-159262-1 DU**
**Matrix: Water**
**Analysis Batch: 420713**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**
**Prep Batch: 417898**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.102 | U | | 0.4066 | U | 0.283 | 1.00 | 0.436 | pCi/L | | | 1.00 | 1 |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: 500-159262-1 DU**
**Matrix: Water**
**Analysis Batch: 420713**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**
**Prep Batch: 417898**

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 92.9 | | 40 - 110 |
| Y Carrier | 81.5 | | 40 - 110 |

**Lab Sample ID: MB 160-418075/10-A**
**Matrix: Water**
**Analysis Batch: 420407**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 418075**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.1707 | U | 0.216 | 0.217 | 1.00 | 0.359 | pCi/L | 03/07/19 11:01 | 03/21/19 15:34 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 107 | | 40 - 110 | 03/07/19 11:01 | 03/21/19 15:34 | 1 |
| Y Carrier | 74.0 | | 40 - 110 | 03/07/19 11:01 | 03/21/19 15:34 | 1 |

**Lab Sample ID: LCS 160-418075/1-A**
**Matrix: Water**
**Analysis Batch: 420408**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 418075**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.38 | 8.623 | | 1.00 | 1.00 | 0.344 | pCi/L | 92 | 56 - 140 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 110 | | 40 - 110 |
| Y Carrier | 78.5 | | 40 - 110 |

**Lab Sample ID: 500-159262-2 DU**
**Matrix: Water**
**Analysis Batch: 420408**

**Client Sample ID: MW-03**
**Prep Type: Total/NA**
**Prep Batch: 418075**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.218 | U | | 0.2260 | U | 0.232 | 1.00 | 0.375 | pCi/L | | | 0.02 | 1 |

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 98.8 | | 40 - 110 |
| Y Carrier | 83.0 | | 40 - 110 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-2

## Client Sample ID: MW-02
**Date Collected: 02/26/19 09:20**
**Date Received: 02/27/19 10:20**

## Lab Sample ID: 500-159262-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 417892 | 03/06/19 09:41 | LTC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 421605 | 03/28/19 07:27 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 417898 | 03/06/19 10:16 | LTC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 420713 | 03/22/19 08:43 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 422405 | 04/02/19 12:53 | ALS | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 02/26/19 10:55**
**Date Received: 02/27/19 10:20**

## Lab Sample ID: 500-159262-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 418074 | 03/07/19 10:46 | LTC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 421795 | 03/29/19 07:12 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 418075 | 03/07/19 11:01 | LTC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 420408 | 03/21/19 15:35 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 422405 | 04/02/19 12:53 | ALS | TAL SL |

## Client Sample ID: MW-04
**Date Collected: 02/26/19 12:25**
**Date Received: 02/27/19 10:20**

## Lab Sample ID: 500-159262-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 418074 | 03/07/19 10:46 | LTC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 421795 | 03/29/19 07:13 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 418075 | 03/07/19 11:01 | LTC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 420408 | 03/21/19 15:35 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 422405 | 04/02/19 12:53 | ALS | TAL SL |

## Client Sample ID: MW-10
**Date Collected: 02/26/19 14:45**
**Date Received: 02/27/19 10:20**

## Lab Sample ID: 500-159262-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 418074 | 03/07/19 10:46 | LTC | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 421795 | 03/29/19 07:13 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 418075 | 03/07/19 11:01 | LTC | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 420407 | 03/21/19 15:33 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 422405 | 04/02/19 12:53 | ALS | TAL SL |

**Laboratory References:**

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc. TestAmerica Job ID: 500-159262-2
Project/Site: Powerton CCR

## Laboratory: TestAmerica Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-19 |

## Laboratory: TestAmerica St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200023 | 11-30-19 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 2-26-19 | COC No: 1 |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Eric Lang | Carrier: FedEx | 1 of 1 COCs |
| 14665 West Lisbon Road, Suite 1A | Analysis Turnaround Time | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| (262) 781-0475 Phone | TAT if different from Below _____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR | ☐ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: 500-159262 |
| P O # 12313.1 | ☐ 1 day | | | |

| | Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y / N) | Perform MS / MSD (Y / N) | Total Metals | Cl, Fl, SO4, TDS | Radium 226/228 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-02 | 2-26-19 | 0920 | G | W | 5 | N | N | x | x | x | |
| 2 | MW-03 | 2-26-19 | 1055 | G | W | 5 | N | N | x | x | x | |
| 3 | MW-04 | 2-26-19 | 1225 | G | W | 5 | N | N | x | x | x | |
| 4 | MW-10 | 2-26-19 | 1445 | G | W | 5 | N | N | x | x | x | |
| | | | | | | | | | 4 | 1 | 4 | |

500-159262 COC

**Preservation Used:** 1=Ice, 2=HCl; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Other _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:**

AS 02/27/19
~~3.5~~ 3.5, 3.4

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | | Therm ID No.: _____ |
|---|---|---|---|---|---|
| Relinquished by: Mitchel Dolan | Company: KPRG | Date/Time: 2-26-19/1600 | Received by: FEDEX | Company: | Date/Time: 2-26-19 / 1600 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: TALHE | Date/Time: 02/27/19 1020 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018


ORIGIN ID:PIAA (000) 000-0000
TEST AMERICA
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 26FEB19
ACTWGT: 47.00 LB
CAD: 006994779/SSFE1922
DIMS: 24x18x12 IN
BILL THIRD PARTY
TO ERIC LANG
TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(708) 534-5200
REF:
DEPT:
FedEx
Express
1 of 3
TRK# 0201 7857 1738 3280
## MASTER ##
XH JOTA
WED - 27 FEB 10:30A
PRIORITY OVERNIGHT
60484
IL-US ORD
ORIGIN ID:PIAA (000) 000-0000
AMERICA
SHIP DATE: 26FEB19
ACTWGT: 24.00 LB
CAD: 006994779/SSFE1922
DIMS: 18x15x10 IN
2 of 3
MPS# 0263 7857 1738 3291
Mstr# 7857 1738 3280
XH JOTA
0201
WED - 27 FEB 10:30A
PRIORITY OVERNIGHT
60484
IL-US ORD
3 of 3
MPS# 0263 7857 1738 3306
Mstr# 7857 1738 3280
XH JOTA
0201
WED - 27 FEB 10:30A
PRIORITY OVERNIGHT
60484
IL-US ORD
500-159262 Wayf

**TestAmerica Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-118381.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-159262-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 3/28/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-02 (500-159262-1) | 2/26/19 | 09:20 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-159262-2) | 2/26/19 | 10:55 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-159262-3) | 2/26/19 | 12:25 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-159262-4) | 2/26/19 | 14:45 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 2/27/19 1600 | TA | [signature] | 2-28-19 0920 | TA SR |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-159262-2

**Login Number: 159262**
**List Number: 1**
**Creator: Sanchez, Ariel M**

**List Source: TestAmerica Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.4, 3.5 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-159262-2

**Login Number: 159262**
**List Number: 2**
**Creator: Hellm, Michael**

**List Source: TestAmerica St. Louis**
**List Creation: 02/28/19 04:29 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 16.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

TestAmerica Job ID: 500-159262-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) |
| 500-159262-1 | MW-02 | 90.3 |
| 500-159262-1 DU | MW-02 | 92.9 |
| 500-159262-2 | MW-03 | 93.5 |
| 500-159262-2 DU | MW-03 | 98.8 |
| 500-159262-3 | MW-04 | 95.9 |
| 500-159262-4 | MW-10 | 102 |
| LCS 160-417892/1-A | Lab Control Sample | 104 |
| LCS 160-418074/1-A | Lab Control Sample | 110 |
| MB 160-417892/23-A | Method Blank | 98.2 |
| MB 160-418074/10-A | Method Blank | 107 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) | Y Carrier (40-110) |
| 500-159262-1 | MW-02 | 90.3 | 80.7 |
| 500-159262-1 DU | MW-02 | 92.9 | 81.5 |
| 500-159262-2 | MW-03 | 93.5 | 84.1 |
| 500-159262-2 DU | MW-03 | 98.8 | 83.0 |
| 500-159262-3 | MW-04 | 95.9 | 81.5 |
| 500-159262-4 | MW-10 | 102 | 85.2 |
| LCS 160-417898/1-A | Lab Control Sample | 104 | 87.1 |
| LCS 160-418075/1-A | Lab Control Sample | 110 | 78.5 |
| MB 160-417898/23-A | Method Blank | 98.2 | 92.3 |
| MB 160-418075/10-A | Method Blank | 107 | 74.0 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier
Y Carrier = Y Carrier

eurofins | Environment Testing TestAmerica



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-162824-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*5/22/2019 9:30:12 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-162824-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-162824-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/4/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.3º C, 3.7º C, 4.7º C and 5.3º C.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
Method(s) 375.4, SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample, the MS/MSD was diluted after the spike. The spike amount was adjusted by the dilution factor.

(500-162824-F-13 MS) and (500-162824-F-13 MSD)

Method(s) 375.4, SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-440971 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 375.4, SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-03 (500-162824-3), MW-05 (500-162824-5), MW-09 (500-162824-7), MW-11 (500-162824-9), MW-12 (500-162824-10), MW-15 (500-162824-11), MW-17 (500-162824-12), MW-18 (500-162824-13), MW-19 (500-162824-14), Duplicate (500-162824-15), (500-162824-F-13 MS) and (500-162824-F-13 MSD). Elevated reporting limits (RLs) are provided.

Method(s) 375.4, SM 4500 SO4 E: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-08 (500-162824-6). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-162824-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.039 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.070 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 78 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0017 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 450 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 54 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 27 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-02 — Lab Sample ID: 500-162824-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.048 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.12 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 79 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 440 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 48 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.16 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 30 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-162824-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.060 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.28 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 74 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 390 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 49 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 38 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-162824-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.026 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.36 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 74 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 380 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 48 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-04 (Continued) — Lab Sample ID: 500-162824-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.25 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 35 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-162824-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.041 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.56 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 84 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0061 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 590 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 73 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.36 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 120 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-162824-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.021 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0018 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.068 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.54 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 95 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0069 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 600 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 73 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.35 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 85 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-162824-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.038 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 4.6 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 79 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.031 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0036 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 640 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 37 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-10 — Lab Sample ID: 500-162824-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0023 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.27 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.35 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 92 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0028 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0037 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 470 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 50 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 30 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-162824-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.11 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.60 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.3 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0026 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0011 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.014 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 730 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 60 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.62 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 200 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-162824-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.041 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.13 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.40 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00054 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-12 (Continued) — Lab Sample ID: 500-162824-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 0.0012 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.011 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 170 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.38 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 330 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-162824-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.027 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0045 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.052 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.5 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 180 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.023 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.52 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 420 | | 150 | | mg/L | 30 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-162824-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.015 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.042 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.040 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.98 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cadmium | 0.00052 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 150 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00069 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.060 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 190 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.66 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 660 | | 150 | | mg/L | 30 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-18 — Lab Sample ID: 500-162824-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.013 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.54 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 180 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.61 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 170 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-162824-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.076 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.7 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.031 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0035 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 700 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 39 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 160 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-162824-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.024 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0021 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.052 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.6 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 190 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.024 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.53 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 470 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL PEN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Assest ID |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Water | 04/30/19 13:25 | 05/04/19 09:30 | |
| 500-162824-2 | MW-02 | Water | 04/30/19 09:45 | 05/04/19 09:30 | |
| 500-162824-3 | MW-03 | Water | 04/30/19 10:50 | 05/04/19 09:30 | |
| 500-162824-4 | MW-04 | Water | 04/30/19 11:40 | 05/04/19 09:30 | |
| 500-162824-5 | MW-05 | Water | 04/30/19 12:30 | 05/04/19 09:30 | |
| 500-162824-6 | MW-08 | Water | 05/01/19 15:35 | 05/04/19 09:30 | |
| 500-162824-7 | MW-09 | Water | 05/01/19 13:15 | 05/04/19 09:30 | |
| 500-162824-8 | MW-10 | Water | 05/01/19 09:30 | 05/04/19 09:30 | |
| 500-162824-9 | MW-11 | Water | 05/01/19 10:25 | 05/04/19 09:30 | |
| 500-162824-10 | MW-12 | Water | 05/01/19 11:55 | 05/04/19 09:30 | |
| 500-162824-11 | MW-15 | Water | 05/02/19 12:15 | 05/04/19 09:30 | |
| 500-162824-12 | MW-17 | Water | 04/29/19 15:20 | 05/04/19 09:30 | |
| 500-162824-13 | MW-18 | Water | 04/29/19 14:25 | 05/04/19 09:30 | |
| 500-162824-14 | MW-19 | Water | 05/02/19 10:30 | 05/04/19 09:30 | |
| 500-162824-15 | Duplicate | Water | 04/29/19 00:00 | 05/04/19 09:30 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-01

**Date Collected: 04/30/19 13:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:33 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Arsenic** | **0.0014** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Barium** | **0.039** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:00 | 1 |
| **Boron** | **0.070** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:00 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Calcium** | **78** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| **Lead** | **0.0017** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:00 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:37 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:22 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **450** | | 10 | | mg/L | | | 05/06/19 02:06 | 1 |
| **Chloride** | **54** | | 2.0 | | mg/L | | | 05/11/19 09:12 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 05/11/19 13:06 | 1 |
| **Sulfate** | **27** | | 5.0 | | mg/L | | | 05/14/19 12:33 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-02

**Date Collected: 04/30/19 09:45**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-2

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:53 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| **Barium** | **0.048** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:30 | 1 |
| **Boron** | **0.12** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:30 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| **Calcium** | **79** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:30 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:06 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:28 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **440** | | 10 | | mg/L | | | 05/06/19 02:12 | 1 |
| **Chloride** | **48** | | 2.0 | | mg/L | | | 05/11/19 09:12 | 1 |
| **Fluoride** | **0.16** | | 0.10 | | mg/L | | | 05/13/19 20:22 | 1 |
| **Sulfate** | **30** | | 5.0 | | mg/L | | | 05/14/19 12:33 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-03

**Date Collected: 04/30/19 10:50**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-3

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:57 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| **Barium** | **0.060** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:34 | 1 |
| **Boron** | **0.28** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:34 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| **Calcium** | **74** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:34 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:10 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:29 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **390** | | 10 | | mg/L | | | 05/06/19 02:14 | 1 |
| **Chloride** | **49** | | 2.0 | | mg/L | | | 05/17/19 22:02 | 1 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 05/13/19 20:25 | 1 |
| **Sulfate** | **38** | | 10 | | mg/L | | | 05/14/19 13:57 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-04

**Date Collected: 04/30/19 11:40**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-4

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:01 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| **Barium** | **0.026** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:38 | 1 |
| **Boron** | **0.36** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:38 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| **Calcium** | **74** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:38 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:14 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:31 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **380** | | 10 | | mg/L | | | 05/06/19 02:17 | 1 |
| **Chloride** | **48** | | 2.0 | | mg/L | | | 05/17/19 22:03 | 1 |
| **Fluoride** | **0.25** | | 0.10 | | mg/L | | | 05/13/19 20:28 | 1 |
| **Sulfate** | **35** | | 5.0 | | mg/L | | | 05/14/19 12:40 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-05

**Date Collected: 04/30/19 12:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-5

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:05 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| **Barium** | **0.041** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:42 | 1 |
| **Boron** | **0.56** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:42 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| **Calcium** | **84** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:42 | 1 |
| **Molybdenum** | **0.0061** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:19 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:32 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **590** | | 10 | | mg/L | | | 05/06/19 02:19 | 1 |
| **Chloride** | **73** | | 2.0 | | mg/L | | | 05/17/19 22:06 | 1 |
| **Fluoride** | **0.36** | | 0.10 | | mg/L | | | 05/13/19 20:31 | 1 |
| **Sulfate** | **120** | | 25 | | mg/L | | | 05/14/19 13:57 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-08

**Date Collected: 05/01/19 15:35**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-6

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.021** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:09 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| **Arsenic** | **0.0018** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| **Barium** | **0.068** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:45 | 1 |
| **Boron** | **0.54** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:45 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| **Calcium** | **95** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:45 | 1 |
| **Molybdenum** | **0.0069** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:23 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:34 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **600** | | 10 | | mg/L | | | 05/06/19 02:22 | 1 |
| **Chloride** | **73** | | 2.0 | | mg/L | | | 05/17/19 22:06 | 1 |
| **Fluoride** | **0.35** | | 0.10 | | mg/L | | | 05/13/19 20:34 | 1 |
| **Sulfate** | **85** | | 25 | | mg/L | | | 05/16/19 11:37 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-09

**Date Collected: 05/01/19 13:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-7

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:21 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| **Barium** | **0.038** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:42 | 1 |
| **Boron** | **4.6** | | 0.50 | | mg/L | | 05/07/19 08:14 | 05/10/19 18:49 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| **Calcium** | **79** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:42 | 1 |
| **Molybdenum** | **0.031** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| **Selenium** | **0.0036** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:27 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:40 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **640** | | 10 | | mg/L | | | 05/06/19 02:25 | 1 |
| **Chloride** | **37** | | 2.0 | | mg/L | | | 05/17/19 20:32 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 05/13/19 20:38 | 1 |
| **Sulfate** | **170** | | 25 | | mg/L | | | 05/14/19 14:02 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-10

**Date Collected: 05/01/19 09:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-8

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:25 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Arsenic** | **0.0023** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Barium** | **0.27** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:00 | 1 |
| **Boron** | **0.35** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:00 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Calcium** | **92** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Cobalt** | **0.011** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Lead** | **0.0028** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:00 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| **Selenium** | **0.0037** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:39 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:42 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **470** | | 10 | | mg/L | | | 05/06/19 02:27 | 1 |
| **Chloride** | **50** | | 2.0 | | mg/L | | | 05/17/19 20:32 | 1 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 05/13/19 20:41 | 1 |
| **Sulfate** | **30** | | 5.0 | | mg/L | | | 05/14/19 12:40 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-11

**Date Collected: 05/01/19 10:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-9

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:29 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Arsenic** | **0.11** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Barium** | **0.60** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:46 | 1 |
| **Boron** | **2.3** | | 0.25 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:04 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Cobalt** | **0.0026** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| **Lead** | **0.0011** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:46 | 1 |
| **Molybdenum** | **0.014** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:44 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:48 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **730** | | 10 | | mg/L | | | 05/06/19 02:30 | 1 |
| **Chloride** | **60** | | 2.0 | | mg/L | | | 05/17/19 20:33 | 1 |
| **Fluoride** | **0.62** | | 0.10 | | mg/L | | | 05/13/19 20:45 | 1 |
| **Sulfate** | **200** | | 50 | | mg/L | | | 05/14/19 14:06 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-12

**Date Collected: 05/01/19 11:55**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-10

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.014** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:33 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Arsenic** | **0.041** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Barium** | **0.13** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:08 | 1 |
| **Boron** | **0.40** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:08 | 1 |
| **Cadmium** | **0.00054** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| **Lead** | **0.0012** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:08 | 1 |
| **Molybdenum** | **0.011** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:48 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:49 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/06/19 02:32 | 1 |
| **Chloride** | **170** | | 10 | | mg/L | | | 05/17/19 20:57 | 5 |
| **Fluoride** | **0.38** | | 0.10 | | mg/L | | | 05/13/19 20:57 | 1 |
| **Sulfate** | **330** | | 50 | | mg/L | | | 05/14/19 14:06 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-15

**Date Collected: 05/02/19 12:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-11

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.027** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:37 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| **Arsenic** | **0.0045** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| **Barium** | **0.052** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:49 | 1 |
| **Boron** | **1.5** | | 0.25 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:12 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| **Calcium** | **180** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:49 | 1 |
| **Molybdenum** | **0.023** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:52 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:51 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/06/19 02:35 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 05/17/19 22:57 | 5 |
| **Fluoride** | **0.52** | | 0.10 | | mg/L | | | 05/13/19 21:00 | 1 |
| **Sulfate** | **420** | | 150 | | mg/L | | | 05/14/19 17:14 | 30 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-17

**Date Collected: 04/29/19 15:20**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-12

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.015** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:42 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Arsenic** | **0.042** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Barium** | **0.040** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:16 | 1 |
| **Boron** | **0.98** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:16 | 1 |
| **Cadmium** | **0.00052** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Calcium** | **150** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| **Lead** | **0.00069** | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:16 | 1 |
| **Molybdenum** | **0.060** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 03:56 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:52 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/06/19 02:37 | 1 |
| **Chloride** | **190** | | 10 | | mg/L | | | 05/17/19 22:57 | 5 |
| **Fluoride** | **0.66** | | 0.10 | | mg/L | | | 05/13/19 21:04 | 1 |
| **Sulfate** | **660** | | 150 | | mg/L | | | 05/15/19 10:19 | 30 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-18

**Date Collected: 04/29/19 14:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-13

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.013** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:46 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| **Barium** | **0.12** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:19 | 1 |
| **Boron** | **0.54** | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:19 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:19 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:00 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:54 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/06/19 02:40 | 1 |
| **Chloride** | **180** | | 10 | | mg/L | | | 05/17/19 20:56 | 5 |
| **Fluoride** | **0.61** | | 0.10 | | mg/L | | | 05/13/19 21:07 | 1 |
| **Sulfate** | **170** | | 25 | | mg/L | | | 05/14/19 14:02 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-19

**Date Collected: 05/02/19 10:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-14

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:50 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| **Barium** | **0.076** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:53 | 1 |
| **Boron** | **3.7** | | 0.50 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:23 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:53 | 1 |
| **Molybdenum** | **0.031** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| **Selenium** | **0.0035** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:04 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:55 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **700** | | 10 | | mg/L | | | 05/06/19 02:43 | 1 |
| **Chloride** | **39** | | 2.0 | | mg/L | | | 05/17/19 20:27 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 05/13/19 21:10 | 1 |
| **Sulfate** | **160** | | 25 | | mg/L | | | 05/14/19 14:06 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: Duplicate

**Date Collected: 04/29/19 00:00**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-15

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.024** | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 19:54 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| **Arsenic** | **0.0021** | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| **Barium** | **0.052** | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:57 | 1 |
| **Boron** | **1.6** | | 0.25 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:27 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| **Calcium** | **190** | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 19:57 | 1 |
| **Molybdenum** | **0.024** | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 04:08 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:57 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1500** | | 10 | | mg/L | | | 05/06/19 02:45 | 1 |
| **Chloride** | **200** | | 10 | | mg/L | | | 05/17/19 20:56 | 5 |
| **Fluoride** | **0.53** | | 0.10 | | mg/L | | | 05/13/19 21:12 | 1 |
| **Sulfate** | **470** | | 100 | | mg/L | | | 05/15/19 10:19 | 20 |

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 483975

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-162824-6 | MW-08 | Total Recoverable | Water | 3005A | |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 3005A | |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 3005A | |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 3005A | |

### Analysis Batch: 484171

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-6 | MW-08 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6010C | 483975 |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 6010C | 483975 |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 6010C | 483975 |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 6010C | 483975 |

### Analysis Batch: 484720

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 6020A | 483975 |

## Metals (Continued)

### Analysis Batch: 484720 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-6 | MW-08 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6020A | 483975 |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 6020A | 483975 |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 6020A | 483975 |

### Analysis Batch: 484965

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-2 | MW-02 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-3 | MW-03 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-4 | MW-04 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-5 | MW-05 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-6 | MW-08 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-7 | MW-09 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-8 | MW-10 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-9 | MW-11 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-10 | MW-12 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-11 | MW-15 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-12 | MW-17 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-13 | MW-18 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-14 | MW-19 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-15 | Duplicate | Total Recoverable | Water | 6020A | 483975 |
| MB 500-483975/1-A | Method Blank | Total Recoverable | Water | 6020A | 483975 |
| LCS 500-483975/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MS | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 MSD | MW-01 | Total Recoverable | Water | 6020A | 483975 |
| 500-162824-1 DU | MW-01 | Total Recoverable | Water | 6020A | 483975 |

### Prep Batch: 485450

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | 7470A | |
| 500-162824-2 | MW-02 | Total/NA | Water | 7470A | |
| 500-162824-3 | MW-03 | Total/NA | Water | 7470A | |
| 500-162824-4 | MW-04 | Total/NA | Water | 7470A | |
| 500-162824-5 | MW-05 | Total/NA | Water | 7470A | |

## Metals (Continued)

### Prep Batch: 485450 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-6 | MW-08 | Total/NA | Water | 7470A | |
| 500-162824-7 | MW-09 | Total/NA | Water | 7470A | |
| 500-162824-8 | MW-10 | Total/NA | Water | 7470A | |
| 500-162824-9 | MW-11 | Total/NA | Water | 7470A | |
| 500-162824-10 | MW-12 | Total/NA | Water | 7470A | |
| 500-162824-11 | MW-15 | Total/NA | Water | 7470A | |
| 500-162824-12 | MW-17 | Total/NA | Water | 7470A | |
| 500-162824-13 | MW-18 | Total/NA | Water | 7470A | |
| 500-162824-14 | MW-19 | Total/NA | Water | 7470A | |
| 500-162824-15 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-485450/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-485450/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-162824-6 MS | MW-08 | Total/NA | Water | 7470A | |
| 500-162824-6 MSD | MW-08 | Total/NA | Water | 7470A | |
| 500-162824-6 DU | MW-08 | Total/NA | Water | 7470A | |

### Analysis Batch: 485704

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | 7470A | 485450 |
| 500-162824-2 | MW-02 | Total/NA | Water | 7470A | 485450 |
| 500-162824-3 | MW-03 | Total/NA | Water | 7470A | 485450 |
| 500-162824-4 | MW-04 | Total/NA | Water | 7470A | 485450 |
| 500-162824-5 | MW-05 | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 | MW-08 | Total/NA | Water | 7470A | 485450 |
| 500-162824-7 | MW-09 | Total/NA | Water | 7470A | 485450 |
| 500-162824-8 | MW-10 | Total/NA | Water | 7470A | 485450 |
| 500-162824-9 | MW-11 | Total/NA | Water | 7470A | 485450 |
| 500-162824-10 | MW-12 | Total/NA | Water | 7470A | 485450 |
| 500-162824-11 | MW-15 | Total/NA | Water | 7470A | 485450 |
| 500-162824-12 | MW-17 | Total/NA | Water | 7470A | 485450 |
| 500-162824-13 | MW-18 | Total/NA | Water | 7470A | 485450 |
| 500-162824-14 | MW-19 | Total/NA | Water | 7470A | 485450 |
| 500-162824-15 | Duplicate | Total/NA | Water | 7470A | 485450 |
| MB 500-485450/12-A | Method Blank | Total/NA | Water | 7470A | 485450 |
| LCS 500-485450/13-A | Lab Control Sample | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 MS | MW-08 | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 MSD | MW-08 | Total/NA | Water | 7470A | 485450 |
| 500-162824-6 DU | MW-08 | Total/NA | Water | 7470A | 485450 |

## General Chemistry

### Analysis Batch: 440971

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-2 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-3 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-7 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |

## General Chemistry (Continued)

### Analysis Batch: 440971 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-10 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-440971/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-440971/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-440971/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-13 MS | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-162824-13 MSD | MW-18 | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 441150

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-6 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-441150/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-441150/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-441150/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 483709

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-162824-2 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-162824-3 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-162824-6 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-162824-7 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-162824-10 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-483709/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-483709/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-162824-1 DU | MW-01 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 484846

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-2 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-484846/83 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-484846/84 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 485004

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| MB 500-485004/31 | Method Blank | Total/NA | Water | SM 4500 F C | |

## General Chemistry (Continued)

### Analysis Batch: 485004 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-485004/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 485172

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-2 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-162824-3 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-162824-6 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-162824-7 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-162824-10 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-485172/31 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-485172/32 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 485974

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-7 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-8 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-9 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-10 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-13 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-14 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-15 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-485974/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-485974/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 485996

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-3 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-4 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-5 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-6 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-11 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-12 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-485996/9 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-485996/10 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-4 MS | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-4 MSD | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-12 MS | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-162824-12 MSD | MW-17 | Total/NA | Water | SM 4500 Cl- E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-483975/1-A**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/07/19 08:14 | 05/07/19 18:13 | 1 |

**Lab Sample ID: LCS 500-483975/2-A**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.544 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: 500-162824-1 MS**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.554 | | mg/L | | 111 | 75 - 125 |

**Lab Sample ID: 500-162824-1 MSD**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.500 | 0.557 | | mg/L | | 111 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 484171**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | <0.010 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-483975/1-A**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/07/19 08:14 | 05/10/19 02:29 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-483975/1-A**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 05/07/19 08:14 | 05/10/19 17:53 | 1 |
| Boron | <0.050 | | 0.050 | | mg/L | | 05/07/19 08:14 | 05/10/19 17:53 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/07/19 08:14 | 05/10/19 17:53 | 1 |

**Lab Sample ID: LCS 500-483975/2-A**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.504 | | mg/L | | 101 | 80 - 120 |
| Arsenic | 0.100 | 0.0997 | | mg/L | | 100 | 80 - 120 |
| Barium | 2.00 | 2.02 | | mg/L | | 101 | 80 - 120 |
| Cadmium | 0.0500 | 0.0516 | | mg/L | | 103 | 80 - 120 |
| Calcium | 10.0 | 10.0 | | mg/L | | 100 | 80 - 120 |
| Chromium | 0.200 | 0.195 | | mg/L | | 98 | 80 - 120 |
| Cobalt | 0.500 | 0.498 | | mg/L | | 100 | 80 - 120 |
| Molybdenum | 1.00 | 0.978 | | mg/L | | 98 | 80 - 120 |
| Selenium | 0.100 | 0.0994 | | mg/L | | 99 | 80 - 120 |
| Thallium | 0.100 | 0.0964 | | mg/L | | 96 | 80 - 120 |

**Lab Sample ID: LCS 500-483975/2-A**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Beryllium | 0.0500 | 0.0520 | | mg/L | | 104 | 80 - 120 |
| Boron | 1.00 | 0.983 | | mg/L | | 98 | 80 - 120 |
| Lead | 0.100 | 0.105 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: 500-162824-1 MS**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.486 | | mg/L | | 97 | 75 - 125 |
| Arsenic | 0.0014 | | 0.100 | 0.0971 | | mg/L | | 96 | 75 - 125 |
| Barium | 0.039 | | 2.00 | 2.02 | | mg/L | | 99 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0496 | | mg/L | | 99 | 75 - 125 |
| Calcium | 78 | | 10.0 | 87.8 | 4 | mg/L | | 93 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.192 | | mg/L | | 95 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.475 | | mg/L | | 95 | 75 - 125 |
| Molybdenum | <0.0050 | | 1.00 | 0.930 | | mg/L | | 93 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.0958 | | mg/L | | 96 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.0934 | | mg/L | | 93 | 75 - 125 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-162824-1 MS**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | 0.0500 | 0.0467 | | mg/L | | 93 | 75 - 125 |
| Boron | 0.070 | | 1.00 | 0.965 | | mg/L | | 90 | 75 - 125 |
| Lead | 0.0017 | | 0.100 | 0.102 | | mg/L | | 100 | 75 - 125 |

**Lab Sample ID: 500-162824-1 MSD**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.500 | 0.485 | | mg/L | | 97 | 75 - 125 | 0 | 20 |
| Arsenic | 0.0014 | | 0.100 | 0.0931 | | mg/L | | 92 | 75 - 125 | 4 | 20 |
| Barium | 0.039 | | 2.00 | 1.97 | | mg/L | | 97 | 75 - 125 | 2 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0494 | | mg/L | | 99 | 75 - 125 | 0 | 20 |
| Calcium | 78 | | 10.0 | 85.4 | 4 | mg/L | | 70 | 75 - 125 | 3 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.186 | | mg/L | | 92 | 75 - 125 | 3 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.459 | | mg/L | | 92 | 75 - 125 | 4 | 20 |
| Molybdenum | <0.0050 | | 1.00 | 0.914 | | mg/L | | 91 | 75 - 125 | 2 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.0924 | | mg/L | | 92 | 75 - 125 | 4 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.0910 | | mg/L | | 91 | 75 - 125 | 3 | 20 |

**Lab Sample ID: 500-162824-1 MSD**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | 0.0500 | 0.0476 | | mg/L | | 95 | 75 - 125 | 2 | 20 |
| Boron | 0.070 | | 1.00 | 0.976 | | mg/L | | 91 | 75 - 125 | 1 | 20 |
| Lead | 0.0017 | | 0.100 | 0.103 | | mg/L | | 101 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 484720**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | <0.0030 | | mg/L | | NC | 20 |
| Arsenic | 0.0014 | | 0.00143 | | mg/L | | 5 | 20 |
| Barium | 0.039 | | 0.0380 | | mg/L | | 3 | 20 |
| Cadmium | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Calcium | 78 | | 76.5 | | mg/L | | 3 | 20 |
| Chromium | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Cobalt | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Molybdenum | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Selenium | <0.0025 | | <0.0025 | | mg/L | | NC | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | NC | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 484965**

**Client Sample ID: MW-01**
**Prep Type: Total Recoverable**
**Prep Batch: 483975**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Boron | 0.070 | | 0.0576 | | mg/L | | 19 | 20 |
| Lead | 0.0017 | | 0.00164 | | mg/L | | 4 | 20 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-485450/12-A**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/15/19 10:20 | 05/16/19 08:09 | 1 |

**Lab Sample ID: LCS 500-485450/13-A**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00200 | | mg/L | | 100 | 80 - 120 |

**Lab Sample ID: 500-162824-6 MS**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00101 | | mg/L | | 101 | 75 - 125 |

**Lab Sample ID: 500-162824-6 MSD**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.000965 | | mg/L | | 96 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-162824-6 DU**
**Matrix: Water**
**Analysis Batch: 485704**

**Client Sample ID: MW-08**
**Prep Type: Total/NA**
**Prep Batch: 485450**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-483709/1**
**Matrix: Water**
**Analysis Batch: 483709**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 05/06/19 01:54 | 1 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: LCS 500-483709/2**
**Matrix: Water**
**Analysis Batch: 483709**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 274 | | mg/L | | 110 | 80 - 120 |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 483709**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 450 | | 434 | | mg/L | | 3 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-484846/83**
**Matrix: Water**
**Analysis Batch: 484846**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/11/19 08:50 | 1 |

**Lab Sample ID: LCS 500-484846/84**
**Matrix: Water**
**Analysis Batch: 484846**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 50.7 | | mg/L | | 101 | 85 - 115 |

**Lab Sample ID: MB 500-485974/4**
**Matrix: Water**
**Analysis Batch: 485974**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/17/19 20:11 | 1 |

**Lab Sample ID: LCS 500-485974/5**
**Matrix: Water**
**Analysis Batch: 485974**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 50.4 | | mg/L | | 101 | 85 - 115 |

**Lab Sample ID: MB 500-485996/9**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/17/19 21:52 | 1 |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: LCS 500-485996/10**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 51.5 | | mg/L | | 103 | 85 - 115 | | |

**Lab Sample ID: 500-162824-4 MS**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 48 | | 50.0 | 90.2 | | mg/L | | 84 | 75 - 125 | | |

**Lab Sample ID: 500-162824-4 MSD**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 48 | | 50.0 | 93.7 | | mg/L | | 91 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-162824-12 MS**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 190 | | 50.0 | 228 | | mg/L | | 83 | 75 - 125 | | |

**Lab Sample ID: 500-162824-12 MSD**
**Matrix: Water**
**Analysis Batch: 485996**

**Client Sample ID: MW-17**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 190 | | 50.0 | 226 | | mg/L | | 77 | 75 - 125 | 1 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-485004/31**
**Matrix: Water**
**Analysis Batch: 485004**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/11/19 12:57 | 1 |

**Lab Sample ID: LCS 500-485004/32**
**Matrix: Water**
**Analysis Batch: 485004**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | | | 10.0 | 10.5 | | mg/L | | 105 | 80 - 120 | | |

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: MB 500-485172/31**
**Matrix: Water**
**Analysis Batch: 485172**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/13/19 19:45 | 1 |

**Lab Sample ID: LCS 500-485172/32**
**Matrix: Water**
**Analysis Batch: 485172**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.4 | | mg/L | | 104 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-440971/6**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/14/19 12:26 | 1 |

**Lab Sample ID: LCS 400-440971/7**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 15.0 | 14.4 | | mg/L | | 96 | 90 - 110 |

**Lab Sample ID: MRL 400-440971/3**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 5.00 | <5.0 | | mg/L | | 87 | 50 - 150 |

**Lab Sample ID: 500-162824-13 MS**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 170 | | 10.0 | 173 | 4 | mg/L | | 20 | 77 - 128 |

**Lab Sample ID: 500-162824-13 MSD**
**Matrix: Water**
**Analysis Batch: 440971**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 170 | | 10.0 | 172 | 4 | mg/L | | 12 | 77 - 128 | 0 | 5 |

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: MB 400-441150/6**
**Matrix: Water**
**Analysis Batch: 441150**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/16/19 11:01 | 1 |

**Lab Sample ID: LCS 400-441150/7**
**Matrix: Water**
**Analysis Batch: 441150**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 15.0 | 14.3 | | mg/L | | 95 | 90 - 110 | | |

**Lab Sample ID: MRL 400-441150/3**
**Matrix: Water**
**Analysis Batch: 441150**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 5.00 | <5.0 | | mg/L | | 95 | 50 - 150 | | |

## Client Sample ID: MW-01

**Lab Sample ID: 500-162824-1**

**Date Collected: 04/30/19 13:25**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 18:33 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:00 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 02:37 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:22 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:06 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 484846 | 05/11/19 09:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485004 | 05/11/19 13:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:33 | RRC | TAL PEN |

## Client Sample ID: MW-02

**Lab Sample ID: 500-162824-2**

**Date Collected: 04/30/19 09:45**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 18:53 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:30 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:06 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:28 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:12 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 484846 | 05/11/19 09:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:22 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:33 | RRC | TAL PEN |

## Client Sample ID: MW-03

**Lab Sample ID: 500-162824-3**

**Date Collected: 04/30/19 10:50**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 18:57 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:34 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:10 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:29 | MJG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-03

**Date Collected: 04/30/19 10:50**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:14 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:02 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:25 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 440971 | 05/14/19 13:57 | RRC | TAL PEN |

## Client Sample ID: MW-04

**Date Collected: 04/30/19 11:40**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:01 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:38 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:14 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:31 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:17 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:03 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:28 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:40 | RRC | TAL PEN |

## Client Sample ID: MW-05

**Date Collected: 04/30/19 12:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:05 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:42 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:19 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:32 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:19 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:31 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 13:57 | RRC | TAL PEN |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-08

**Date Collected: 05/01/19 15:35**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:09 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 18:45 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:23 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:34 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:22 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485996 | 05/17/19 22:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:34 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 441150 | 05/16/19 11:37 | RRC | TAL PEN |

## Client Sample ID: MW-09

**Date Collected: 05/01/19 13:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:21 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 484965 | 05/10/19 18:49 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:42 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:27 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:40 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:25 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:32 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:38 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 14:02 | RRC | TAL PEN |

## Client Sample ID: MW-10

**Date Collected: 05/01/19 09:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:25 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:00 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:39 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-10

**Date Collected: 05/01/19 09:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:42 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:27 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:32 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:41 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 440971 | 05/14/19 12:40 | RRC | TAL PEN |

## Client Sample ID: MW-11

**Date Collected: 05/01/19 10:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:29 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 484965 | 05/10/19 19:04 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:46 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:44 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:48 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:30 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:33 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:45 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 440971 | 05/14/19 14:06 | RRC | TAL PEN |

## Client Sample ID: MW-12

**Date Collected: 05/01/19 11:55**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:33 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:08 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:48 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:49 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:32 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485974 | 05/17/19 20:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 20:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 440971 | 05/14/19 14:06 | RRC | TAL PEN |

## Client Sample ID: MW-15

**Lab Sample ID: 500-162824-11**

**Date Collected: 05/02/19 12:15**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:37 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 484965 | 05/10/19 19:12 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:49 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:52 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:51 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:35 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485996 | 05/17/19 22:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:00 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 30 | 440971 | 05/14/19 17:14 | RRC | TAL PEN |

## Client Sample ID: MW-17

**Lab Sample ID: 500-162824-12**

**Date Collected: 04/29/19 15:20**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:42 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:16 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 03:56 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:52 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:37 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485996 | 05/17/19 22:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:04 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 30 | 440971 | 05/15/19 10:19 | RRC | TAL PEN |

## Client Sample ID: MW-18

**Lab Sample ID: 500-162824-13**

**Date Collected: 04/29/19 14:25**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:46 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:19 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 04:00 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: MW-18

**Lab Sample ID: 500-162824-13**

**Date Collected: 04/29/19 14:25**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:54 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:40 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485974 | 05/17/19 20:56 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:07 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 14:02 | RRC | TAL PEN |

## Client Sample ID: MW-19

**Lab Sample ID: 500-162824-14**

**Date Collected: 05/02/19 10:30**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:50 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 484965 | 05/10/19 19:23 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:53 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 04:04 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:55 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:43 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 485974 | 05/17/19 20:27 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:10 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 440971 | 05/14/19 14:06 | RRC | TAL PEN |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-162824-15**

**Date Collected: 04/29/19 00:00**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 484171 | 05/07/19 19:54 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 484965 | 05/10/19 19:27 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484965 | 05/10/19 19:57 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 483975 | 05/07/19 08:14 | SAH | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 484720 | 05/10/19 04:08 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 485450 | 05/15/19 10:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 485704 | 05/16/19 08:57 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 483709 | 05/06/19 02:45 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 485974 | 05/17/19 20:56 | EAT | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Client Sample ID: Duplicate

**Date Collected: 04/29/19 00:00**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 485172 | 05/13/19 21:12 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 440971 | 05/15/19 10:19 | RRC | TAL PEN |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 05-30-19 * |

## Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Alabama | State Program | 4 | 40150 | 06-30-19 |
| ANAB | ISO/IEC 17025 | | L2471 | 02-22-20 |
| Arizona | State Program | 9 | AZ0710 | 01-12-20 |
| Arkansas DEQ | State Program | 6 | 88-0689 | 09-01-19 |
| California | State Program | 9 | 2510 | 06-30-19 |
| Florida | NELAP | 4 | E81010 | 06-30-19 |
| Georgia | State Program | 4 | E81010 (FL) | 06-30-19 |
| Illinois | NELAP | 5 | 200041 | 10-09-19 |
| Iowa | State Program | 7 | 367 | 08-01-20 |
| Kansas | NELAP | 7 | E-10253 | 10-31-19 |
| Kentucky (UST) | State Program | 4 | 53 | 06-30-19 |
| Kentucky (WW) | State Program | 4 | 98030 | 12-31-19 |
| Louisiana | NELAP | 6 | 30976 | 06-30-19 |
| Louisiana (DW) | NELAP | 6 | LA017 | 12-31-19 |
| Maryland | State Program | 3 | 233 | 09-30-19 |
| Massachusetts | State Program | 1 | M-FL094 | 06-30-19 |
| Michigan | State Program | 5 | 9912 | 06-30-19 |
| New Jersey | NELAP | 2 | FL006 | 06-30-19 |
| North Carolina (WW/SW) | State Program | 4 | 314 | 12-31-19 |
| Oklahoma | State Program | 6 | 9810 | 08-31-19 |
| Pennsylvania | NELAP | 3 | 68-00467 | 01-31-20 |
| Rhode Island | State Program | 1 | LAO00307 | 12-30-19 |
| South Carolina | State Program | 4 | 96026 | 06-30-19 |
| Tennessee | State Program | 4 | TN02907 | 06-30-19 |
| Texas | NELAP | 6 | T104704286-18-15 | 09-30-19 |
| US Fish & Wildlife | Federal | | LE058448-0 | 07-31-19 |
| USDA | Federal | | P330-18-00148 | 05-17-21 |
| Virginia | NELAP | 3 | 460166 | 06-14-19 |
| Washington | State Program | 10 | C915 | 05-15-20 |
| West Virginia DEP | State Program | 3 | 136 | 07-31-19 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL
Phone: 708.534.5200 Fax: 708.5

500-162824 COC

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-162824

Chain of Custody Number:

Page 1 of 2

5.3

Temperature °C of Cooler: 3.7, 4.7, 2.3

| | |
|---|---|
| Client | KPRG and Assoc. |
| Client Project # | 12313.1 |
| Project Name | NRG Powerton CCR |
| Project Location/State | Pekin, IL |
| Lab Project # | |
| Sampler | Mitchel Dolan |
| Lab PM | Eric Lang |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | 3 | 8 | 3 | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Parameter | Total Metals | Cl, Fl, SO4, TDS | Rad 226/228 | | | | | | | |
| 1 | | MW-01 | 4/30 | 1325 | 5 | W | | X | X | X | | | | | | | |
| 2 | | MW-02 | 4/30 | 0945 | | | | | | | | | | | | | |
| 3 | | MW-03 | 4/30 | 1050 | | | | | | | | | | | | | |
| 4 | | MW-04 | 4/30 | 1140 | | | | | | | | | | | | | |
| 5 | | MW-05 | 4/30 | 1230 | | | | | | | | | | | | | |
| 6 | | MW-08 | 5/1 | 1535 | | | | | | | | | | | | | |
| 7 | | MW-09 | 5/1 | 1315 | | | | | | | | | | | | | |
| 8 | | MW-10 | 5/1 | 0930 | | | | | | | | | | | | | |
| 9 | | MW-11 | 5/1 | 1025 | | | | | | | | | | | | | |
| 10 | | MW-12 | 5/1 | 1155 | | | | | | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| | Company | Date | Time |
|---|---|---|---|
| Relinquished By | KPRG | 5/2/2019 | 1700 |
| Relinquished By | | | |
| Relinquished By | | | |

| | Company | Date | Time |
|---|---|---|---|
| Received By | FEDEX | 5/2/2019 | 1700 |
| Received By | Neil Fioravanti | TACHE 05/04/19 | 0930 |
| Received By | | | |

Lab Courier
Shipped FX SATURDAY
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

# Chain of Custody Record

Lab Job #: 500-16282-4
Chain of Custody Number:
Page 2 of 2
Temperature °C of Cooler: 3.7, 4.7, 2.3, 5.3

| Client | Client Project # | Preservative | 3 | 8 | 3 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KPRG and Assoc. | 12313.1 | | | | | | | | | | |
| Project Name: NRG Powerton CCR | | Parameter | Total Metals | Cl, Fl, SO4, TDS | Rad 226/228 | | | | | | |
| Project Location/State: Pekin, IL | Lab Project # | | | | | | | | | | |
| Sampler: Mitchel Dolan | Lab PM: Eric Lang | | | | | | | | | | |

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | | MW-15 | 5/2 | 1215 | 5 | W | | | | | | | | | | |
| 12 | | MW-17 | 4/29 | 1520 | | | | | | | | | | | | |
| 13 | | MW-18 | 4/29 | 1425 | | | | | | | | | | | | |
| 14 | | MW-19 | 5/2 | 1030 | | | | | | | | | | | | |
| 15 | | DUPLICATE | — | — | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Comments

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 5/2/2019 | 1700 | FEDEX | | 5/2/2019 | 1700 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | [signature] Fiorawanti | THLH | 05/04/19 | 0930 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | | | | |

Lab Courier
Shipped FX SATurday
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 61.40 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-MHEZ-7SSOM25EXP 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

500-162824 Waybill

(000) 000-0000
INV:
PO:
REF:
DEPT:

FedEx Express

REL# 3785346

SATURDAY 4:30P
** 2DAY **

8 of 9

MPS# 7870 1648 7850
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Mstr# 7870 1648 7780

0201

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60484
IL-US ORD

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 64.10 LB
CAD: 006994[illegible]SSFE2002
DIMS: 24[illegible]

BILL

Part # 156297-MHEZ-7SSOM25EXP 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

RT 717
ST 11

5 A
16.30 7780
05.04

UNIVERSITY PARK

(000) 000-0000
INV:
PO:
REF:
DEPT:

FedEx Express

REL# 3785346

SATURDAY 4:30P
** 2DAY **

1 of 9

TRK# 7870 1648 7780
0201

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reasonably necessary, appropriate or advisable to do so. TestAmerica will in no way be liable for any
subcontracted services [illegible]

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of shall not

safety for conversion, reference and shall not affect in any way these Terms and Conditions or their
interpretation. No waiver by either party of any provision, term or condition of the other
party thereunder shall constitute a waiver of any subsequent breach or other provision.

8.3 The obligations, indemnities and remedies of the parties provided herein are exclusive and in lieu of any
others available at law or in equity. Indemnification shall provide herein, and limitations of liability shall apply
notwithstanding the fault, negligence or strict liability of the party to be indemnified, released or whose liability is
limited, except to the extent of such party's gross negligence or willful misconduct.

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ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 57.70 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-4962-7/SSFE2002 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484
(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx Express

REL# 3785346

6 of 9
MPS# 0263 7870 1648 7838
Mstr# 7870 1648 7780

0201

SATURDAY 4:30P
** 2DAY **

60484
IL-US ORD

SO JOTA

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 60.00 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-4962-7/SSFE2002 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484
(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx Express

REL# 3785346

5 of 9
MPS# 0263 7870 1648 7827
Mstr# 7870 1648 7780

0201

SATURDAY 4:30P
** 2DAY **

60484
IL-US ORD

SO JOTA

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-120630.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-162824-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 5/17/2019 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-01 (500-162824-1) | 4/30/19 | 13:25 Central | | Water | | | X | 1 | |
| MW-02 (500-162824-2) | 4/30/19 | 09:45 Central | | Water | | | X | 1 | |
| MW-03 (500-162824-3) | 4/30/19 | 10:50 Central | | Water | | | X | 1 | |
| MW-04 (500-162824-4) | 4/30/19 | 11:40 Central | | Water | | | X | 1 | |
| MW-05 (500-162824-5) | 4/30/19 | 12:30 Central | | Water | | | X | 1 | |
| MW-08 (500-162824-6) | 5/1/19 | 15:35 Central | | Water | | | X | 1 | |
| MW-09 (500-162824-7) | 5/1/19 | 13:15 Central | | Water | | | X | 1 | |
| MW-10 (500-162824-8) | 5/1/19 | 09:30 Central | | Water | | | X | 1 | |
| MW-11 (500-162824-9) | 5/1/19 | 10:25 Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 5/6/19 1500 | TA | Kathy R Auer | 5-7-19 851 | TA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.9°C IR 7 |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-120630.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-162824-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 5/17/2019 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-12 (500-162824-10) | 5/1/19 | 11:55 Central | | Water | | | X | 1 | |
| MW-15 (500-162824-11) | 5/2/19 | 12:15 Central | | Water | | | X | 1 | |
| MW-17 (500-162824-12) | 4/29/19 | 15:20 Central | | Water | | | X | 1 | |
| MW-18 (500-162824-13) | 4/29/19 | 14:25 Central | | Water | | | X | 1 | |
| MW-19 (500-162824-14) | 5/2/19 | 10:30 Central | | Water | | | X | 1 | |
| Duplicate (500-162824-15) | 4/29/19 | Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 5/6/19 1500 | TA | Kathy R Avery | 5-7-19 851 | TA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.9°C IR7 |
|---|---|---|

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-1

**Login Number: 162824**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.7,4.7,5.3,2.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-1

**Login Number: 162824**
**List Number: 2**
**Creator: Avery, Kathy R**

**List Source: Eurofins TestAmerica, Pensacola**
**List Creation: 05/07/19 05:40 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | Not Present |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.9°C IR 7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing TestAmerica



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-162824-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*8/15/2019 1:57:27 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-162824-2

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-162824-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/4/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.3º C, 3.7º C, 4.7º C and 5.3º C.

**RAD**
Method(s) 904.0, 9320: Ra-228 Prep Batch 160-430397
The Ra-228 recovery in the LCS was slightly low (72) outside QC limits (75%-125%) indicating a potential slight low bias to the sample results. The barium recovery in the LCS (107%) and the Replicate Error Ratio (RER) were within limits demonstrating acceptable method performance.
MW-01 (500-162824-1), MW-02 (500-162824-2), MW-03 (500-162824-3), MW-04 (500-162824-4), MW-05 (500-162824-5), MW-08 (500-162824-6), MW-09 (500-162824-7), MW-10 (500-162824-8), MW-11 (500-162824-9), (LCS 160-430397/1-A), (MB 160-430397/23-A) and (500-162824-C-1-B DU)

Method(s) PrecSep_0: Radium 228 Prep Batch 160-430139
The following samples had yellow discoloration:MW-12 (500-162824-10), MW-17 (500-162824-12) and MW-18 (500-162824-13). Sample 500-162824-C-10 had brown solids.

Method(s) PrecSep_0: Radium 228 Prep Batch 160-430397
The following samples were prepared at a reduced aliquot due to cloudy discoloration: MW-10 (500-162824-8) and MW-11 (500-162824-9).

Method(s) PrecSep-21: Radium 226 Prep Batch 160-430133
The following samples had white discoloration:MW-12 (500-162824-10), MW-17 (500-162824-12) and MW-18 (500-162824-13). Sample 500-162824-C-10 had brown solids.

Method(s) PrecSep-21: Radium 226 Prep Batch 160-430235
The following samples were prepared at a reduced aliquot due to cloudy discoloration: MW-10 (500-162824-8) and MW-11 (500-162824-9).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Water | 04/30/19 13:25 | 05/04/19 09:30 | |
| 500-162824-2 | MW-02 | Water | 04/30/19 09:45 | 05/04/19 09:30 | |
| 500-162824-3 | MW-03 | Water | 04/30/19 10:50 | 05/04/19 09:30 | |
| 500-162824-4 | MW-04 | Water | 04/30/19 11:40 | 05/04/19 09:30 | |
| 500-162824-5 | MW-05 | Water | 04/30/19 12:30 | 05/04/19 09:30 | |
| 500-162824-6 | MW-08 | Water | 05/01/19 15:35 | 05/04/19 09:30 | |
| 500-162824-7 | MW-09 | Water | 05/01/19 13:15 | 05/04/19 09:30 | |
| 500-162824-8 | MW-10 | Water | 05/01/19 09:30 | 05/04/19 09:30 | |
| 500-162824-9 | MW-11 | Water | 05/01/19 10:25 | 05/04/19 09:30 | |
| 500-162824-10 | MW-12 | Water | 05/01/19 11:55 | 05/04/19 09:30 | |
| 500-162824-11 | MW-15 | Water | 05/02/19 12:15 | 05/04/19 09:30 | |
| 500-162824-12 | MW-17 | Water | 04/29/19 15:20 | 05/04/19 09:30 | |
| 500-162824-13 | MW-18 | Water | 04/29/19 14:25 | 05/04/19 09:30 | |
| 500-162824-14 | MW-19 | Water | 05/02/19 10:30 | 05/04/19 09:30 | |
| 500-162824-15 | Duplicate | Water | 04/29/19 00:00 | 05/04/19 09:30 | |

## Client Sample ID: MW-01

**Date Collected: 04/30/19 13:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0249 | U | 0.0545 | 0.0545 | 1.00 | 0.121 | pCi/L | 05/30/19 10:35 | 08/13/19 21:10 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.1* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:10* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.000 | U * | 0.369 | 0.369 | 1.00 | 0.656 | pCi/L | 05/31/19 10:52 | 07/23/19 14:24 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.1* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:24* | *1* |
| *Y Carrier* | *75.5* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:24* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | -0.0249 | U | 0.373 | 0.373 | 5.00 | 0.656 | pCi/L | | 08/15/19 09:45 | 1 |

## Client Sample ID: MW-02

**Date Collected: 04/30/19 09:45**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0445 | U | 0.0705 | 0.0707 | 1.00 | 0.121 | pCi/L | 05/30/19 10:35 | 08/13/19 21:10 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.5* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:10* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.171 | U * | 0.262 | 0.262 | 1.00 | 0.441 | pCi/L | 05/31/19 10:52 | 07/23/19 14:25 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.5* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:25* | *1* |
| *Y Carrier* | *76.6* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:25* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.215 | U | 0.271 | 0.271 | 5.00 | 0.441 | pCi/L | | 08/15/19 09:45 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-03

**Date Collected: 04/30/19 10:50**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0298 | U | 0.0613 | 0.0613 | 1.00 | 0.111 | pCi/L | 05/30/19 10:35 | 08/13/19 21:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *74.0* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.0589 | U * | 0.366 | 0.366 | 1.00 | 0.668 | pCi/L | 05/31/19 10:52 | 07/23/19 14:25 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *74.0* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:25* | *1* |
| *Y Carrier* | *73.3* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:25* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | -0.0291 | U | 0.371 | 0.371 | 5.00 | 0.668 | pCi/L | | 08/15/19 09:45 | 1 |

## Client Sample ID: MW-04

**Date Collected: 04/30/19 11:40**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0600 | U | 0.0531 | 0.0534 | 1.00 | 0.130 | pCi/L | 05/30/19 10:35 | 08/14/19 06:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.6* | | *40 - 110* | *05/30/19 10:35* | *08/14/19 06:57* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.260 | U * | 0.408 | 0.409 | 1.00 | 0.684 | pCi/L | 05/31/19 10:52 | 07/23/19 14:29 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.6* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |
| *Y Carrier* | *80.4* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.200 | U | 0.411 | 0.412 | 5.00 | 0.684 | pCi/L | | 08/15/19 09:45 | 1 |

## Client Sample ID: MW-05

**Date Collected: 04/30/19 12:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.115 | U | 0.0338 | 0.0354 | 1.00 | 0.136 | pCi/L | 05/30/19 10:35 | 08/13/19 21:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *73.7* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.325 | U * | 0.427 | 0.428 | 1.00 | 0.709 | pCi/L | 05/31/19 10:52 | 07/23/19 14:29 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *73.7* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |
| *Y Carrier* | *77.8* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.209 | U | 0.428 | 0.429 | 5.00 | 0.709 | pCi/L | | 08/15/19 09:45 | 1 |

## Client Sample ID: MW-08

**Date Collected: 05/01/19 15:35**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0735 | U | 0.0635 | 0.0638 | 1.00 | 0.0942 | pCi/L | 05/30/19 10:35 | 08/13/19 21:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.1* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.819** | * | 0.427 | 0.433 | 1.00 | 0.639 | pCi/L | 05/31/19 10:52 | 07/23/19 14:29 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.1* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |
| *Y Carrier* | *74.4* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.892** | | 0.432 | 0.438 | 5.00 | 0.639 | pCi/L | | 08/15/19 09:45 | 1 |

## Client Sample ID: MW-09

**Date Collected: 05/01/19 13:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0249 | U | 0.0422 | 0.0422 | 1.00 | 0.108 | pCi/L | 05/30/19 10:35 | 08/13/19 21:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.0* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.606 | U * | 0.422 | 0.426 | 1.00 | 0.660 | pCi/L | 05/31/19 10:52 | 07/23/19 14:29 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.0* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |
| *Y Carrier* | *78.1* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:29* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.581 | U | 0.424 | 0.428 | 5.00 | 0.660 | pCi/L | | 08/15/19 09:45 | 1 |

## Client Sample ID: MW-10

**Date Collected: 05/01/19 09:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.491 | | 0.142 | 0.148 | 1.00 | 0.131 | pCi/L | 05/30/19 10:35 | 08/13/19 21:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.1* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.834 | * | 0.468 | 0.474 | 1.00 | 0.706 | pCi/L | 05/31/19 10:52 | 07/23/19 14:32 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.1* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:32* | *1* |
| *Y Carrier* | *74.0* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:32* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.33 | | 0.489 | 0.497 | 5.00 | 0.706 | pCi/L | | 08/15/19 09:45 | 1 |

## Client Sample ID: MW-11

**Date Collected: 05/01/19 10:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.679 | | 0.171 | 0.182 | 1.00 | 0.137 | pCi/L | 05/30/19 10:35 | 08/13/19 21:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.0* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 21:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.906 | * | 0.490 | 0.497 | 1.00 | 0.733 | pCi/L | 05/31/19 10:52 | 07/23/19 14:32 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.0* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:32* | *1* |
| *Y Carrier* | *76.3* | | *40 - 110* | *05/31/19 10:52* | *07/23/19 14:32* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.59 | | 0.519 | 0.529 | 5.00 | 0.733 | pCi/L | | 08/15/19 09:45 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

**Client Sample ID: MW-12**
**Date Collected: 05/01/19 11:55**
**Date Received: 05/04/19 09:30**

**Lab Sample ID: 500-162824-10**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.309** | | 0.0978 | 0.102 | 1.00 | 0.0781 | pCi/L | 05/29/19 11:23 | 08/03/19 12:56 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.7* | | *40 - 110* | *05/29/19 11:23* | *08/03/19 12:56* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.358 | U | 0.277 | 0.279 | 1.00 | 0.439 | pCi/L | 05/29/19 12:41 | 07/17/19 08:46 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.7* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:46* | *1* |
| *Y Carrier* | *86.4* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:46* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.666** | | 0.294 | 0.297 | 5.00 | 0.439 | pCi/L | | 08/06/19 11:03 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-15

**Date Collected: 05/02/19 12:15**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-11

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0738 | U | 0.0681 | 0.0684 | 1.00 | 0.105 | pCi/L | 05/29/19 11:23 | 08/03/19 12:56 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.1* | | *40 - 110* | *05/29/19 11:23* | *08/03/19 12:56* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.204 | U | 0.256 | 0.257 | 1.00 | 0.424 | pCi/L | 05/29/19 12:41 | 07/17/19 08:46 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.1* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:46* | *1* |
| *Y Carrier* | *88.6* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:46* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.278 | U | 0.265 | 0.266 | 5.00 | 0.424 | pCi/L | | 08/06/19 11:03 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-17

**Date Collected: 04/29/19 15:20**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-12

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.120** | | 0.0667 | 0.0675 | 1.00 | 0.0798 | pCi/L | 05/29/19 11:23 | 08/03/19 13:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.8* | | *40 - 110* | *05/29/19 11:23* | *08/03/19 13:00* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.397 | U | 0.265 | 0.267 | 1.00 | 0.411 | pCi/L | 05/29/19 12:41 | 07/17/19 08:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.8* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |
| *Y Carrier* | *89.7* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.517** | | 0.273 | 0.275 | 5.00 | 0.411 | pCi/L | | 08/06/19 11:03 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-18

**Date Collected: 04/29/19 14:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-13

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.220 | | 0.0987 | 0.101 | 1.00 | 0.112 | pCi/L | 05/29/19 11:23 | 08/03/19 13:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.4* | | *40 - 110* | *05/29/19 11:23* | *08/03/19 13:00* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.122 | U | 0.261 | 0.261 | 1.00 | 0.445 | pCi/L | 05/29/19 12:41 | 07/17/19 08:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.4* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |
| *Y Carrier* | *89.7* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.342 | U | 0.279 | 0.280 | 5.00 | 0.445 | pCi/L | | 08/06/19 11:03 | 1 |

## Client Sample ID: MW-19

**Date Collected: 05/02/19 10:30**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-14

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.129 | | 0.0694 | 0.0704 | 1.00 | 0.0795 | pCi/L | 05/29/19 11:23 | 08/03/19 14:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *86.7* | | *40 - 110* | *05/29/19 11:23* | *08/03/19 14:52* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.175 | U | 0.257 | 0.257 | 1.00 | 0.431 | pCi/L | 05/29/19 12:41 | 07/17/19 08:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *86.7* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |
| *Y Carrier* | *88.2* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.304 | U | 0.266 | 0.266 | 5.00 | 0.431 | pCi/L | | 08/06/19 11:03 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: Duplicate

**Date Collected: 04/29/19 00:00**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-15

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.165 | | 0.0830 | 0.0843 | 1.00 | 0.103 | pCi/L | 05/29/19 11:23 | 08/03/19 14:52 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.7* | | *40 - 110* | *05/29/19 11:23* | *08/03/19 14:52* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.134 | U | 0.230 | 0.230 | 1.00 | 0.390 | pCi/L | 05/29/19 12:41 | 07/17/19 08:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.7* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *05/29/19 12:41* | *07/17/19 08:47* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.298 | U | 0.245 | 0.245 | 5.00 | 0.390 | pCi/L | | 08/06/19 11:04 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD is outside acceptance limits. |
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Rad

### Prep Batch: 430133

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-10 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-162824-11 | MW-15 | Total/NA | Water | PrecSep-21 | |
| 500-162824-12 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-162824-13 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-162824-14 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-162824-15 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-430133/23-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-430133/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 430139

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-10 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-162824-11 | MW-15 | Total/NA | Water | PrecSep_0 | |
| 500-162824-12 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-162824-13 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-162824-14 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-162824-15 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-430139/23-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-430139/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |

### Prep Batch: 430235

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-162824-2 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-162824-3 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-162824-4 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-162824-5 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-162824-6 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-162824-7 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-162824-8 | MW-10 | Total/NA | Water | PrecSep-21 | |
| 500-162824-9 | MW-11 | Total/NA | Water | PrecSep-21 | |
| MB 160-430235/23-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-430235/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-162824-1 DU | MW-01 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 430397

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-162824-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-162824-2 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-162824-3 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-162824-4 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-162824-5 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-162824-6 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-162824-7 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-162824-8 | MW-10 | Total/NA | Water | PrecSep_0 | |
| 500-162824-9 | MW-11 | Total/NA | Water | PrecSep_0 | |
| MB 160-430397/23-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-430397/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-162824-1 DU | MW-01 | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-430133/23-A**
**Matrix: Water**
**Analysis Batch: 438092**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 430133**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.03041 | U | 0.0531 | 0.0531 | 1.00 | 0.120 | pCi/L | 05/29/19 11:23 | 08/04/19 21:19 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *102* | | *40 - 110* | *05/29/19 11:23* | *08/04/19 21:19* | *1* |

**Lab Sample ID: LCS 160-430133/1-A**
**Matrix: Water**
**Analysis Batch: 437770**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 430133**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 8.842 | | 0.939 | 1.00 | 0.103 | pCi/L | 78 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *103* | | *40 - 110* |

**Lab Sample ID: MB 160-430235/23-A**
**Matrix: Water**
**Analysis Batch: 439426**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 430235**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.005455 | U | 0.0525 | 0.0525 | 1.00 | 0.107 | pCi/L | 05/30/19 10:35 | 08/13/19 23:00 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *98.9* | | *40 - 110* | *05/30/19 10:35* | *08/13/19 23:00* | *1* |

**Lab Sample ID: LCS 160-430235/1-A**
**Matrix: Water**
**Analysis Batch: 439308**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 430235**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 8.579 | | 0.902 | 1.00 | 0.103 | pCi/L | 76 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *95.2* | | *40 - 110* |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 439426**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 430235**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0249 | U | | 0.02744 | U | 0.0559 | 1.00 | 0.100 | pCi/L | | | 0.47 | 1 |

## Method: 903.0 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 439426**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 430235**

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 88.7 | | 40 - 110 |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-430139/23-A**
**Matrix: Water**
**Analysis Batch: 435082**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 430139**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.3048 | U | 0.265 | 0.267 | 1.00 | 0.426 | pCi/L | 05/29/19 12:41 | 07/17/19 08:57 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 102 | | 40 - 110 | 05/29/19 12:41 | 07/17/19 08:57 | 1 |
| Y Carrier | 82.6 | | 40 - 110 | 05/29/19 12:41 | 07/17/19 08:57 | 1 |

**Lab Sample ID: LCS 160-430139/1-A**
**Matrix: Water**
**Analysis Batch: 435081**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 430139**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.02 | 8.352 | | 0.988 | 1.00 | 0.440 | pCi/L | 93 | 75 - 125 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 103 | | 40 - 110 |
| Y Carrier | 87.1 | | 40 - 110 |

**Lab Sample ID: MB 160-430397/23-A**
**Matrix: Water**
**Analysis Batch: 435974**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 430397**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.03968 | U | 0.302 | 0.302 | 1.00 | 0.553 | pCi/L | 05/31/19 10:52 | 07/23/19 14:34 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 98.9 | | 40 - 110 | 05/31/19 10:52 | 07/23/19 14:34 | 1 |
| Y Carrier | 62.8 | | 40 - 110 | 05/31/19 10:52 | 07/23/19 14:34 | 1 |

**Lab Sample ID: LCS 160-430397/1-A**
**Matrix: Water**
**Analysis Batch: 436112**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 430397**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.00 | 6.483 | * | 0.923 | 1.00 | 0.554 | pCi/L | 72 | 75 - 125 | | |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-430397/1-A**
**Matrix: Water**
**Analysis Batch: 436112**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 430397**

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 95.2 | | 40 - 110 |
| Y Carrier | 65.8 | | 40 - 110 |

**Lab Sample ID: 500-162824-1 DU**
**Matrix: Water**
**Analysis Batch: 436112**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 430397**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.000 | U * | | -0.07644 | U * | 0.300 | 1.00 | 0.550 | pCi/L | | | 0.11 | 1 |

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 88.7 | | 40 - 110 |
| Y Carrier | 75.5 | | 40 - 110 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-01
**Date Collected: 04/30/19 13:25**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:10 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 436112 | 07/23/19 14:24 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

## Client Sample ID: MW-02
**Date Collected: 04/30/19 09:45**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:10 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 436112 | 07/23/19 14:25 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 04/30/19 10:50**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:11 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 436112 | 07/23/19 14:25 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

## Client Sample ID: MW-04
**Date Collected: 04/30/19 11:40**
**Date Received: 05/04/19 09:30**

## Lab Sample ID: 500-162824-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439521 | 08/14/19 06:57 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 436097 | 07/23/19 14:29 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-05

**Lab Sample ID: 500-162824-5**

**Date Collected: 04/30/19 12:30**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:11 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 436097 | 07/23/19 14:29 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

## Client Sample ID: MW-08

**Lab Sample ID: 500-162824-6**

**Date Collected: 05/01/19 15:35**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:11 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 436097 | 07/23/19 14:29 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

## Client Sample ID: MW-09

**Lab Sample ID: 500-162824-7**

**Date Collected: 05/01/19 13:15**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:11 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 436097 | 07/23/19 14:29 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

## Client Sample ID: MW-10

**Lab Sample ID: 500-162824-8**

**Date Collected: 05/01/19 09:30**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:11 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435974 | 07/23/19 14:32 | AMJ | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-11

**Date Collected: 05/01/19 10:25**
**Date Received: 05/04/19 09:30**

**Lab Sample ID: 500-162824-9**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430235 | 05/30/19 10:35 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 439426 | 08/13/19 21:11 | CDR | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430397 | 05/31/19 10:52 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435974 | 07/23/19 14:32 | AMJ | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 439616 | 08/15/19 09:45 | SMP | TAL SL |

## Client Sample ID: MW-12

**Date Collected: 05/01/19 11:55**
**Date Received: 05/04/19 09:30**

**Lab Sample ID: 500-162824-10**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430133 | 05/29/19 11:23 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 437844 | 08/03/19 12:56 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430139 | 05/29/19 12:41 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435081 | 07/17/19 08:46 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 438275 | 08/06/19 11:03 | SMP | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 05/02/19 12:15**
**Date Received: 05/04/19 09:30**

**Lab Sample ID: 500-162824-11**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430133 | 05/29/19 11:23 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 437844 | 08/03/19 12:56 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430139 | 05/29/19 12:41 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435081 | 07/17/19 08:46 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 438275 | 08/06/19 11:03 | SMP | TAL SL |

## Client Sample ID: MW-17

**Date Collected: 04/29/19 15:20**
**Date Received: 05/04/19 09:30**

**Lab Sample ID: 500-162824-12**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430133 | 05/29/19 11:23 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 437902 | 08/03/19 13:00 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430139 | 05/29/19 12:41 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435081 | 07/17/19 08:47 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 438275 | 08/06/19 11:03 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Client Sample ID: MW-18

**Lab Sample ID: 500-162824-13**

**Date Collected: 04/29/19 14:25**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430133 | 05/29/19 11:23 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 437902 | 08/03/19 13:00 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430139 | 05/29/19 12:41 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435081 | 07/17/19 08:47 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 438275 | 08/06/19 11:03 | SMP | TAL SL |

## Client Sample ID: MW-19

**Lab Sample ID: 500-162824-14**

**Date Collected: 05/02/19 10:30**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430133 | 05/29/19 11:23 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 437844 | 08/03/19 14:52 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430139 | 05/29/19 12:41 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435081 | 07/17/19 08:47 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 438275 | 08/06/19 11:03 | SMP | TAL SL |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-162824-15**

**Date Collected: 04/29/19 00:00**

**Matrix: Water**

**Date Received: 05/04/19 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 430133 | 05/29/19 11:23 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 437844 | 08/03/19 14:52 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 430139 | 05/29/19 12:41 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 435081 | 07/17/19 08:47 | CDR | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 438275 | 08/06/19 11:04 | SMP | TAL SL |

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 100201 | 04-30-20 |

## Laboratory: Eurofins TestAmerica, St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Illinois | NELAP | 5 | 200023 | 11-30-19 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL
Phone: 708.534.5200 Fax: 708.5

500-162824 COC

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-162824

Chain of Custody Number:

Page 1 of 2

Temperature °C of Cooler: 3.7, 4.7, 2.3 5.3

| Client | Client Project # | Preservative | 3 | 8 | 3 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KPRG and Assoc. | 12313.1 | | | | | | | | | | |
| Project Name: NRG Powerton CCR | | Parameter | Total Metals | Cl, Fl, SO4, TDS | Rad 226/228 | | | | | | |
| Project Location/State: Pekin, IL | Lab Project # | | | | | | | | | | |
| Sampler: Mitchel Dolan | Lab PM: Eric Lang | | | | | | | | | | |

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | MW-01 | 4/30 | 1325 | 5 | W | X | X | X | | | | | |
| 2 | | MW-02 | 4/30 | 0945 | | | | | | | | | | |
| 3 | | MW-03 | 4/30 | 1050 | | | | | | | | | | |
| 4 | | MW-04 | 4/30 | 1140 | | | | | | | | | | |
| 5 | | MW-05 | 4/30 | 1230 | | | | | | | | | | |
| 6 | | MW-08 | 5/1 | 1535 | | | | | | | | | | |
| 7 | | MW-09 | 5/1 | 1315 | | | | | | | | | | |
| 8 | | MW-10 | 5/1 | 0930 | | | | | | | | | | |
| 9 | | MW-11 | 5/1 | 1025 | | | | | | | | | | |
| 10 | | MW-12 | 5/1 | 1155 | | | | | | | | | | |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 5/2/2019 | 1700 | FEDEX | | 5/2/2019 | 1700 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | Neil Fioravanti | TACHE | 05/04/19 | 0930 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | | | | |

Lab Courier
Shipped FX SATURDAY
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)



8/15/2019

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)

Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)

Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-16284

Chain of Custody Number:

Page 2 of 2

Temperature °C of Cooler: 3.7A.7, 23, 5-3

| Client | Client Project # | Preservative | 3 | 8 | 3 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| KPRG and Assoc. | 12313.1 | | | | | | | | | | |
| Project Name: NRG Powerton CCR | | Parameter | Total Metals | Cl, Fl, SO4, TDS | Rad 226/228 | | | | | | |
| Project Location/State: Pekin, IL | Lab Project # | | | | | | | | | | |
| Sampler: Mitchel Dolan | Lab PM: Eric Lang | | | | | | | | | | |

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | | MW-15 | 5/2 | 1215 | 5 | W | | | | | | | | |
| 12 | | MW-17 | 4/29 | 1520 | | | | | | | | | | |
| 13 | | MW-18 | 4/29 | 1425 | | | | | | | | | | |
| 14 | | MW-19 | 5/2 | 1030 | | | | | | | | | | |
| 15 | | DUPLICATE | — | — | | | | | | | | | | |
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Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 5/2/2019 | 1700 | FEDEX | | 5/2/2019 | 1700 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | [signature] Fiorawanti | THLH | 05/04/19 | 0930 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| | | | | | | | |

Lab Courier
Shipped FX SATurday
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:



TAL-4124-500 (1209)

8/15/2019

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 61.40 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-MEB-7850-MPS EXP 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

500-162824 Waybill

(000) 000-0000
INV:
PO:
REF:
DEPT:

FedEx Express

REL# 3785346

SATURDAY 4:30P
** 2DAY **

8 of 9

MPS# 7870 1648 7850
0263

Mstr# 7870 1648 7780

0201

60484
IL-US ORD

SO JOTA

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 64.10 LB
CAD: 006994[illegible] SSFE2002
DIMS: 24[illegible]

BILL [illegible]

5 A
16.30 7780
05.04

RT 717
ST 11

Part # 156297-MEB-7850-MPS EXP 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK

(000) 000-0000
INV:
PO:
REF:
DEPT:

FedEx Express

REL# 3785346

SATURDAY 4:30P
** 2DAY **

1 of 9

TRK# 7870 1648 7780
0201

## MASTER ##

60484
IL-US ORD

SO JOTA

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[illegible] of Consultants, status hearing tion shall not ion of the laws of this

[illegible] and accounts pliation of the shall not be

[illegible] in writing by these acts or herein and tions, claims, warranties, or laws of this

[illegible] Client, Client attorney fees ises related to

[illegible] TestAmerica

[illegible] issued, unless [illegible] status hearing [illegible] is [illegible] [illegible] review. Longer [illegible] charge. Any returned to the sue portion of a signature week. RNED TO THE

safety for convenient reference and shall not affect in any way the meaning or interpretation hereof. No waiver by either party of any provision, term or condition of this Agreement shall constitute a waiver of any subsequent breach or other provision.

8.3 The obligations, indemnities and remedies of the parties provided herein, and exclusive remedy of any others available at law or in equity. Indemnification by a party from liability and liabilities of such party shall apply notwithstanding any fault, negligence or strict liability of the party to be indemnified, except to the extent of gross negligence or willful misconduct.

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ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 57.70 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-4852-7/SSFE2002 11/19

ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx Express

REL# 3785346

6 of 9

MPS# 0263 7870 1648 7838

Mstr# 7870 1648 7780

0201

SATURDAY 4:30P
** 2DAY **

60484
IL-US ORD

SO JOTA

ORIGIN ID:PIAA (262) 622-1143

KPRG
414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 02MAY19
ACTWGT: 60.00 LB
CAD: 006994780/SSFE2002
DIMS: 24x14x14 IN

BILL THIRD PARTY

Part # 156297-4852-7/SSFE2002 11/19

TO ERIC LANG
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(000) 000-0000 REF:
INV:
PO: DEPT:

FedEx Express

REL# 3785346

5 of 9

MPS# 0263 7870 1648 7827

Mstr# 7870 1648 7780

0201

SATURDAY 4:30P
** 2DAY **

60484
IL-US ORD

SO JOTA

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-120636.2 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 2 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-162824-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 6/4/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-12 (500-162824-10) | 5/1/19 | 11:55 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-15 (500-162824-11) | 5/2/19 | 12:15 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-17 (500-162824-12) | 4/29/19 | 15:20 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-18 (500-162824-13) | 4/29/19 | 14:25 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-19 (500-162824-14) | 5/2/19 | 10:30 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-162824-15) | 4/29/19 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

500-162824 Chain of Custody

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: 5/6/19 1500 | Company TA | Received by: | Date/Time: 5-7-19 09:00 | Company TA SLC |
|---|---|---|---|---|---|
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019



8/15/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone (708) 534-5200 Fax (708) 534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-120636.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 2 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-162824-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 6/4/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-162824-1) | 4/30/19 | 13:25 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-02 (500-162824-2) | 4/30/19 | 09:45 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-162824-3) | 4/30/19 | 10:50 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-162824-4) | 4/30/19 | 11:40 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-162824-5) | 4/30/19 | 12:30 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-08 (500-162824-6) | 5/1/19 | 15:35 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-09 (500-162824-7) | 5/1/19 | 13:15 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-162824-8) | 5/1/19 | 09:30 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-11 (500-162824-9) | 5/1/19 | 10:25 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| *Possible Hazard Identification* | *Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)* |
|---|---|
| *Unconfirmed* | ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| | [signature] | 5/6/19 1508 | TA | [signature] | 5-7-19 0:100 | TA SLT |
| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-2

**Login Number: 162824**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 3.7,4.7,5.3,2.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-162824-2

**Login Number: 162824**
**List Number: 3**
**Creator: Hellm, Michael**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 05/09/19 11:00 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 18.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) |
| 500-162824-1 | MW-01 | 79.1 |
| 500-162824-1 DU | MW-01 | 88.7 |
| 500-162824-2 | MW-02 | 91.5 |
| 500-162824-3 | MW-03 | 74.0 |
| 500-162824-4 | MW-04 | 83.6 |
| 500-162824-5 | MW-05 | 73.7 |
| 500-162824-6 | MW-08 | 83.1 |
| 500-162824-7 | MW-09 | 76.0 |
| 500-162824-8 | MW-10 | 94.1 |
| 500-162824-9 | MW-11 | 89.0 |
| 500-162824-10 | MW-12 | 88.7 |
| 500-162824-11 | MW-15 | 88.1 |
| 500-162824-12 | MW-17 | 89.8 |
| 500-162824-13 | MW-18 | 88.4 |
| 500-162824-14 | MW-19 | 86.7 |
| 500-162824-15 | Duplicate | 90.7 |
| LCS 160-430133/1-A | Lab Control Sample | 103 |
| LCS 160-430235/1-A | Lab Control Sample | 95.2 |
| MB 160-430133/23-A | Method Blank | 102 |
| MB 160-430235/23-A | Method Blank | 98.9 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) | Y Carrier (40-110) |
| 500-162824-1 | MW-01 | 79.1 | 75.5 |
| 500-162824-1 DU | MW-01 | 88.7 | 75.5 |
| 500-162824-2 | MW-02 | 91.5 | 76.6 |
| 500-162824-3 | MW-03 | 74.0 | 73.3 |
| 500-162824-4 | MW-04 | 83.6 | 80.4 |
| 500-162824-5 | MW-05 | 73.7 | 77.8 |
| 500-162824-6 | MW-08 | 83.1 | 74.4 |
| 500-162824-7 | MW-09 | 76.0 | 78.1 |
| 500-162824-8 | MW-10 | 94.1 | 74.0 |
| 500-162824-9 | MW-11 | 89.0 | 76.3 |
| 500-162824-10 | MW-12 | 88.7 | 86.4 |
| 500-162824-11 | MW-15 | 88.1 | 88.6 |
| 500-162824-12 | MW-17 | 89.8 | 89.7 |
| 500-162824-13 | MW-18 | 88.4 | 89.7 |
| 500-162824-14 | MW-19 | 86.7 | 88.2 |
| 500-162824-15 | Duplicate | 90.7 | 87.9 |
| LCS 160-430139/1-A | Lab Control Sample | 103 | 87.1 |
| LCS 160-430397/1-A | Lab Control Sample | 95.2 | 65.8 |
| MB 160-430139/23-A | Method Blank | 102 | 82.6 |
| MB 160-430397/23-A | Method Blank | 98.9 | 62.8 |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-162824-2

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier
Y Carrier = Y Carrier

eurofins | Environment Testing TestAmerica



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-169046-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*9/11/2019 6:45:20 AM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-169046-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-169046-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/27/2019 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.7º C and 5.6º C.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
Method(s) SM 4500 Cl- E: The CCB at line 46 in analytical batch 500-502812 contained chloride above the reporting limit (RL). Associated samples were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the CCB.MW-05 (500-169046-6) and Duplicate (500-169046-7)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

## Client Sample ID: MW-02 — Lab Sample ID: 500-169046-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.065 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.51 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 86 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 400 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 50 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.18 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 32 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-169046-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0014 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.069 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.31 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 75 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 380 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 50 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.26 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 14 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-169046-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.032 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.64 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 91 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0080 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 490 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 60 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.24 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 14 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-169046-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0017 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.19 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.30 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 84 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

## Client Sample ID: MW-10 (Continued) — Lab Sample ID: 500-169046-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.0066 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0016 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0050 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 410 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 48 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.19 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 30 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-01 — Lab Sample ID: 500-169046-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.053 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.57 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 550 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 39 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.13 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 71 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-169046-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.050 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.57 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0067 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 660 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 75 | ^ | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.29 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 110 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-169046-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.050 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.55 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0066 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 660 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 85 | ^ | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.29 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 110 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Chicago

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL PEN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Water | 08/26/19 12:40 | 08/27/19 10:20 | |
| 500-169046-2 | MW-03 | Water | 08/26/19 11:25 | 08/27/19 10:20 | |
| 500-169046-3 | MW-04 | Water | 08/26/19 10:20 | 08/27/19 10:20 | |
| 500-169046-4 | MW-10 | Water | 08/26/19 00:00 | 08/27/19 10:20 | |
| 500-169046-5 | MW-01 | Water | 08/26/19 13:20 | 08/27/19 10:20 | |
| 500-169046-6 | MW-05 | Water | 08/26/19 08:45 | 08/27/19 10:20 | |
| 500-169046-7 | Duplicate | Water | 08/26/19 00:00 | 08/27/19 10:20 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

## Client Sample ID: MW-02

**Date Collected: 08/26/19 12:40**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/28/19 16:05 | 08/30/19 23:25 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:58 | 1 |
| **Arsenic** | **0.0011** | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:58 | 1 |
| **Barium** | **0.065** | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:58 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/29/19 17:49 | 1 |
| **Boron** | **0.51** | | 0.050 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:58 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:58 | 1 |
| **Calcium** | **86** | | 0.20 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:58 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:58 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:58 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:58 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:58 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:58 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:58 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 09/05/19 14:45 | 09/06/19 09:17 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **400** | | 10 | | mg/L | | | 08/28/19 05:41 | 1 |
| **Chloride** | **50** | | 2.0 | | mg/L | | | 09/02/19 19:21 | 1 |
| **Fluoride** | **0.18** | | 0.10 | | mg/L | | | 09/02/19 15:53 | 1 |
| **Sulfate** | **32** | | 10 | | mg/L | | | 09/07/19 09:42 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

## Client Sample ID: MW-03

**Date Collected: 08/26/19 11:25**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-2

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/28/19 16:05 | 08/30/19 23:29 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:01 | 1 |
| **Arsenic** | **0.0014** | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:01 | 1 |
| **Barium** | **0.069** | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:01 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/29/19 17:53 | 1 |
| **Boron** | **0.31** | | 0.050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:01 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:01 | 1 |
| **Calcium** | **75** | | 0.20 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:01 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:01 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:01 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:01 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:01 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:01 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:01 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 09/05/19 14:45 | 09/06/19 09:19 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **380** | | 10 | | mg/L | | | 08/28/19 05:44 | 1 |
| **Chloride** | **50** | | 2.0 | | mg/L | | | 09/02/19 19:22 | 1 |
| **Fluoride** | **0.26** | | 0.10 | | mg/L | | | 09/02/19 15:57 | 1 |
| **Sulfate** | **14** | | 5.0 | | mg/L | | | 09/07/19 09:20 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

## Client Sample ID: MW-04

**Date Collected: 08/26/19 10:20**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-3

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/28/19 16:05 | 08/30/19 23:33 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:05 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:05 | 1 |
| **Barium** | **0.032** | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:05 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/29/19 17:56 | 1 |
| **Boron** | **0.64** | | 0.050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:05 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:05 | 1 |
| **Calcium** | **91** | | 0.20 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:05 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:05 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:05 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:05 | 1 |
| **Molybdenum** | **0.0080** | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:05 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:05 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:05 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 09/05/19 14:45 | 09/06/19 09:21 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **490** | | 10 | | mg/L | | | 08/28/19 05:46 | 1 |
| **Chloride** | **60** | | 2.0 | | mg/L | | | 09/02/19 19:22 | 1 |
| **Fluoride** | **0.24** | | 0.10 | | mg/L | | | 09/02/19 16:00 | 1 |
| **Sulfate** | **14** | | 5.0 | | mg/L | | | 09/07/19 09:20 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

## Client Sample ID: MW-10

**Date Collected: 08/26/19 00:00**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-4

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/28/19 16:05 | 08/30/19 23:49 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:09 | 1 |
| **Arsenic** | **0.0017** | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:09 | 1 |
| **Barium** | **0.19** | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:09 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/29/19 18:00 | 1 |
| **Boron** | **0.30** | | 0.050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:09 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:09 | 1 |
| **Calcium** | **84** | | 0.20 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:09 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:09 | 1 |
| **Cobalt** | **0.0066** | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:09 | 1 |
| **Lead** | **0.0016** | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:09 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:09 | 1 |
| **Selenium** | **0.0050** | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:09 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:09 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 09/05/19 14:45 | 09/06/19 09:22 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **410** | | 10 | | mg/L | | | 08/28/19 05:49 | 1 |
| **Chloride** | **48** | | 2.0 | | mg/L | | | 09/02/19 19:24 | 1 |
| **Fluoride** | **0.19** | | 0.10 | | mg/L | | | 09/02/19 16:04 | 1 |
| **Sulfate** | **30** | | 5.0 | | mg/L | | | 09/07/19 09:20 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

## Client Sample ID: MW-01

**Date Collected: 08/26/19 13:20**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-5

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/28/19 16:05 | 08/30/19 23:53 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:13 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:13 | 1 |
| **Barium** | **0.053** | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:13 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/29/19 18:04 | 1 |
| **Boron** | **0.57** | | 0.050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:13 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:13 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:13 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:13 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:13 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:13 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:13 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:13 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:13 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 09/05/19 14:45 | 09/06/19 09:24 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **550** | | 10 | | mg/L | | | 08/28/19 05:52 | 1 |
| **Chloride** | **39** | | 2.0 | | mg/L | | | 09/02/19 19:25 | 1 |
| **Fluoride** | **0.13** | | 0.10 | | mg/L | | | 09/02/19 16:08 | 1 |
| **Sulfate** | **71** | | 25 | | mg/L | | | 09/07/19 09:42 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

## Client Sample ID: MW-05

**Date Collected: 08/26/19 08:45**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-6

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/28/19 16:05 | 08/30/19 23:57 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:16 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:16 | 1 |
| **Barium** | **0.050** | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:16 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/29/19 18:08 | 1 |
| **Boron** | **0.57** | | 0.050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:16 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:16 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:16 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:16 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:16 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:16 | 1 |
| **Molybdenum** | **0.0067** | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:16 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:16 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:16 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 09/05/19 14:45 | 09/06/19 09:25 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **660** | | 10 | | mg/L | | | 08/28/19 05:54 | 1 |
| **Chloride** | **75** | ^ | 10 | | mg/L | | | 09/02/19 19:53 | 5 |
| **Fluoride** | **0.29** | | 0.10 | | mg/L | | | 09/02/19 16:21 | 1 |
| **Sulfate** | **110** | | 50 | | mg/L | | | 09/07/19 09:42 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

## Client Sample ID: Duplicate

**Date Collected: 08/26/19 00:00**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-7

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/28/19 16:05 | 08/31/19 00:01 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:20 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:20 | 1 |
| **Barium** | **0.050** | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:20 | 1 |
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/29/19 18:11 | 1 |
| **Boron** | **0.55** | | 0.050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:20 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:20 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:20 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:20 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:20 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:20 | 1 |
| **Molybdenum** | **0.0066** | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:20 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:20 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/27/19 15:36 | 08/28/19 14:20 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 09/05/19 14:45 | 09/06/19 09:27 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **660** | | 10 | | mg/L | | | 08/28/19 05:57 | 1 |
| **Chloride** | **85** | ^ | 10 | | mg/L | | | 09/02/19 19:54 | 5 |
| **Fluoride** | **0.29** | | 0.10 | | mg/L | | | 09/02/19 16:25 | 1 |
| **Sulfate** | **110** | | 50 | | mg/L | | | 09/07/19 09:45 | 10 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

## Qualifiers

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| ^ | ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 501913

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-169046-2 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-169046-3 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-169046-4 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-169046-5 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-169046-6 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-169046-7 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-501913/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-501913/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Prep Batch: 502147

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-169046-2 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-169046-3 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-169046-4 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-169046-5 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-169046-6 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-169046-7 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-502147/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-502147/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 502276

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Total Recoverable | Water | 6020A | 501913 |
| 500-169046-2 | MW-03 | Total Recoverable | Water | 6020A | 501913 |
| 500-169046-3 | MW-04 | Total Recoverable | Water | 6020A | 501913 |
| 500-169046-4 | MW-10 | Total Recoverable | Water | 6020A | 501913 |
| 500-169046-5 | MW-01 | Total Recoverable | Water | 6020A | 501913 |
| 500-169046-6 | MW-05 | Total Recoverable | Water | 6020A | 501913 |
| 500-169046-7 | Duplicate | Total Recoverable | Water | 6020A | 501913 |
| MB 500-501913/1-A | Method Blank | Total Recoverable | Water | 6020A | 501913 |
| LCS 500-501913/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 501913 |

### Analysis Batch: 502543

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Total Recoverable | Water | 6020A | 501913 |
| 500-169046-2 | MW-03 | Total Recoverable | Water | 6020A | 501913 |
| 500-169046-3 | MW-04 | Total Recoverable | Water | 6020A | 501913 |
| 500-169046-4 | MW-10 | Total Recoverable | Water | 6020A | 501913 |
| 500-169046-5 | MW-01 | Total Recoverable | Water | 6020A | 501913 |
| 500-169046-6 | MW-05 | Total Recoverable | Water | 6020A | 501913 |
| 500-169046-7 | Duplicate | Total Recoverable | Water | 6020A | 501913 |
| MB 500-501913/1-A | Method Blank | Total Recoverable | Water | 6020A | 501913 |
| LCS 500-501913/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 501913 |

### Analysis Batch: 502796

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Total Recoverable | Water | 6010C | 502147 |
| 500-169046-2 | MW-03 | Total Recoverable | Water | 6010C | 502147 |
| 500-169046-3 | MW-04 | Total Recoverable | Water | 6010C | 502147 |

## Metals (Continued)

### Analysis Batch: 502796 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-4 | MW-10 | Total Recoverable | Water | 6010C | 502147 |
| 500-169046-5 | MW-01 | Total Recoverable | Water | 6010C | 502147 |
| 500-169046-6 | MW-05 | Total Recoverable | Water | 6010C | 502147 |
| 500-169046-7 | Duplicate | Total Recoverable | Water | 6010C | 502147 |
| MB 500-502147/1-A | Method Blank | Total Recoverable | Water | 6010C | 502147 |
| LCS 500-502147/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 502147 |

### Prep Batch: 503373

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Total/NA | Water | 7470A | |
| 500-169046-2 | MW-03 | Total/NA | Water | 7470A | |
| 500-169046-3 | MW-04 | Total/NA | Water | 7470A | |
| 500-169046-4 | MW-10 | Total/NA | Water | 7470A | |
| 500-169046-5 | MW-01 | Total/NA | Water | 7470A | |
| 500-169046-6 | MW-05 | Total/NA | Water | 7470A | |
| 500-169046-7 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-503373/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-503373/13-A | Lab Control Sample | Total/NA | Water | 7470A | |

### Analysis Batch: 503526

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Total/NA | Water | 7470A | 503373 |
| 500-169046-2 | MW-03 | Total/NA | Water | 7470A | 503373 |
| 500-169046-3 | MW-04 | Total/NA | Water | 7470A | 503373 |
| 500-169046-4 | MW-10 | Total/NA | Water | 7470A | 503373 |
| 500-169046-5 | MW-01 | Total/NA | Water | 7470A | 503373 |
| 500-169046-6 | MW-05 | Total/NA | Water | 7470A | 503373 |
| 500-169046-7 | Duplicate | Total/NA | Water | 7470A | 503373 |
| MB 500-503373/12-A | Method Blank | Total/NA | Water | 7470A | 503373 |
| LCS 500-503373/13-A | Lab Control Sample | Total/NA | Water | 7470A | 503373 |

## General Chemistry

### Analysis Batch: 455869

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-169046-2 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-169046-3 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-169046-4 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-169046-5 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-169046-6 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-169046-7 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-455869/17 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-455869/18 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-455869/14 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 501976

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-169046-2 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-169046-3 | MW-04 | Total/NA | Water | SM 2540C | |

## General Chemistry (Continued)

### Analysis Batch: 501976 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-4 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-169046-5 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-169046-6 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-169046-7 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-501976/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-501976/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 502773

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-169046-2 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-169046-3 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-169046-4 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-169046-5 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-169046-6 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-169046-7 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-502773/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-502773/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 502812

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| 500-169046-2 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-169046-3 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-169046-4 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-169046-5 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-169046-6 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-169046-7 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-502812/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-502812/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-502147/1-A**
**Matrix: Water**
**Analysis Batch: 502796**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 502147**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 08/28/19 16:05 | 08/30/19 23:17 | 1 |

**Lab Sample ID: LCS 500-502147/2-A**
**Matrix: Water**
**Analysis Batch: 502796**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 502147**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.548 | | mg/L | | 110 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-501913/1-A**
**Matrix: Water**
**Analysis Batch: 502276**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 501913**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:05 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:05 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:05 | 1 |
| Boron | <0.050 | | 0.050 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:05 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:05 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:05 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:05 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:05 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:05 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:05 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:05 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 08/27/19 15:36 | 08/28/19 13:05 | 1 |

**Lab Sample ID: MB 500-501913/1-A**
**Matrix: Water**
**Analysis Batch: 502543**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 501913**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | <0.0010 | | 0.0010 | | mg/L | | 08/27/19 15:36 | 08/29/19 17:41 | 1 |

**Lab Sample ID: LCS 500-501913/2-A**
**Matrix: Water**
**Analysis Batch: 502276**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 501913**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.512 | | mg/L | | 102 | 80 - 120 |
| Arsenic | 0.100 | 0.0942 | | mg/L | | 94 | 80 - 120 |
| Barium | 0.500 | 0.482 | | mg/L | | 96 | 80 - 120 |
| Boron | 1.00 | 1.04 | | mg/L | | 104 | 80 - 120 |
| Cadmium | 0.0500 | 0.0498 | | mg/L | | 100 | 80 - 120 |
| Calcium | 10.0 | 8.40 | | mg/L | | 84 | 80 - 120 |
| Chromium | 0.200 | 0.198 | | mg/L | | 99 | 80 - 120 |
| Cobalt | 0.500 | 0.499 | | mg/L | | 100 | 80 - 120 |
| Lead | 0.100 | 0.100 | | mg/L | | 100 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-501913/2-A**
**Matrix: Water**
**Analysis Batch: 502276**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 501913**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Molybdenum | 1.00 | 0.961 | | mg/L | | 96 | 80 - 120 |
| Selenium | 0.100 | 0.0942 | | mg/L | | 94 | 80 - 120 |
| Thallium | 0.100 | 0.0991 | | mg/L | | 99 | 80 - 120 |

**Lab Sample ID: LCS 500-501913/2-A**
**Matrix: Water**
**Analysis Batch: 502543**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 501913**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Beryllium | 0.0500 | 0.0567 | | mg/L | | 113 | 80 - 120 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-503373/12-A**
**Matrix: Water**
**Analysis Batch: 503526**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 503373**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 09/05/19 14:45 | 09/06/19 09:14 | 1 |

**Lab Sample ID: LCS 500-503373/13-A**
**Matrix: Water**
**Analysis Batch: 503526**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 503373**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00194 | | mg/L | | 97 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-501976/1**
**Matrix: Water**
**Analysis Batch: 501976**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 08/28/19 05:03 | 1 |

**Lab Sample ID: LCS 500-501976/2**
**Matrix: Water**
**Analysis Batch: 501976**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 282 | | mg/L | | 113 | 80 - 120 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-502812/4**
**Matrix: Water**
**Analysis Batch: 502812**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 09/02/19 19:06 | 1 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: LCS 500-502812/5**
**Matrix: Water**
**Analysis Batch: 502812**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 52.6 | | mg/L | | 105 | 85 - 115 | | |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-502773/3**
**Matrix: Water**
**Analysis Batch: 502773**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 09/02/19 15:37 | 1 |

**Lab Sample ID: LCS 500-502773/4**
**Matrix: Water**
**Analysis Batch: 502773**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | | | 10.0 | 10.6 | | mg/L | | 106 | 80 - 120 | | |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-455869/17**
**Matrix: Water**
**Analysis Batch: 455869**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 09/07/19 08:48 | 1 |

**Lab Sample ID: LCS 400-455869/18**
**Matrix: Water**
**Analysis Batch: 455869**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 15.0 | 13.7 | | mg/L | | 91 | 90 - 110 | | |

**Lab Sample ID: MRL 400-455869/14**
**Matrix: Water**
**Analysis Batch: 455869**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 5.00 | <5.0 | | mg/L | | 99 | 50 - 150 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

## Client Sample ID: MW-02

**Date Collected: 08/26/19 12:40**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 502147 | 08/28/19 16:05 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 502796 | 08/30/19 23:25 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 501913 | 08/27/19 15:36 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 502276 | 08/28/19 13:58 | ASF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 501913 | 08/27/19 15:36 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 502543 | 08/29/19 17:49 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 503373 | 09/05/19 14:45 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 503526 | 09/06/19 09:17 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 501976 | 08/28/19 05:41 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 502812 | 09/02/19 19:21 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 502773 | 09/02/19 15:53 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 455869 | 09/07/19 09:42 | RRC | TAL PEN |

## Client Sample ID: MW-03

**Date Collected: 08/26/19 11:25**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 502147 | 08/28/19 16:05 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 502796 | 08/30/19 23:29 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 501913 | 08/27/19 15:36 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 502276 | 08/28/19 14:01 | ASF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 501913 | 08/27/19 15:36 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 502543 | 08/29/19 17:53 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 503373 | 09/05/19 14:45 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 503526 | 09/06/19 09:19 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 501976 | 08/28/19 05:44 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 502812 | 09/02/19 19:22 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 502773 | 09/02/19 15:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 455869 | 09/07/19 09:20 | RRC | TAL PEN |

## Client Sample ID: MW-04

**Date Collected: 08/26/19 10:20**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 502147 | 08/28/19 16:05 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 502796 | 08/30/19 23:33 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 501913 | 08/27/19 15:36 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 502276 | 08/28/19 14:05 | ASF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 501913 | 08/27/19 15:36 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 502543 | 08/29/19 17:56 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 503373 | 09/05/19 14:45 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 503526 | 09/06/19 09:21 | MJG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

## Client Sample ID: MW-04

**Date Collected: 08/26/19 10:20**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 2540C | | 1 | 501976 | 08/28/19 05:46 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 502812 | 09/02/19 19:22 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 502773 | 09/02/19 16:00 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 455869 | 09/07/19 09:20 | RRC | TAL PEN |

## Client Sample ID: MW-10

**Date Collected: 08/26/19 00:00**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 502147 | 08/28/19 16:05 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 502796 | 08/30/19 23:49 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 501913 | 08/27/19 15:36 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 502276 | 08/28/19 14:09 | ASF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 501913 | 08/27/19 15:36 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 502543 | 08/29/19 18:00 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 503373 | 09/05/19 14:45 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 503526 | 09/06/19 09:22 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 501976 | 08/28/19 05:49 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 502812 | 09/02/19 19:24 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 502773 | 09/02/19 16:04 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 455869 | 09/07/19 09:20 | RRC | TAL PEN |

## Client Sample ID: MW-01

**Date Collected: 08/26/19 13:20**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 502147 | 08/28/19 16:05 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 502796 | 08/30/19 23:53 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 501913 | 08/27/19 15:36 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 502276 | 08/28/19 14:13 | ASF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 501913 | 08/27/19 15:36 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 502543 | 08/29/19 18:04 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 503373 | 09/05/19 14:45 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 503526 | 09/06/19 09:24 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 501976 | 08/28/19 05:52 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 502812 | 09/02/19 19:25 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 502773 | 09/02/19 16:08 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 455869 | 09/07/19 09:42 | RRC | TAL PEN |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

## Client Sample ID: MW-05

**Date Collected: 08/26/19 08:45**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 502147 | 08/28/19 16:05 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 502796 | 08/30/19 23:57 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 501913 | 08/27/19 15:36 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 502276 | 08/28/19 14:16 | ASF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 501913 | 08/27/19 15:36 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 502543 | 08/29/19 18:08 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 503373 | 09/05/19 14:45 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 503526 | 09/06/19 09:25 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 501976 | 08/28/19 05:54 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 502812 | 09/02/19 19:53 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 502773 | 09/02/19 16:21 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 455869 | 09/07/19 09:42 | RRC | TAL PEN |

## Client Sample ID: Duplicate

**Date Collected: 08/26/19 00:00**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 502147 | 08/28/19 16:05 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 502796 | 08/31/19 00:01 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 501913 | 08/27/19 15:36 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 502276 | 08/28/19 14:20 | ASF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 501913 | 08/27/19 15:36 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 502543 | 08/29/19 18:11 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 503373 | 09/05/19 14:45 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 503526 | 09/06/19 09:27 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 501976 | 08/28/19 05:57 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 502812 | 09/02/19 19:54 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 502773 | 09/02/19 16:25 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 455869 | 09/07/19 09:45 | RRC | TAL PEN |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | 100201 | 04-30-20 |

## Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Alabama | State | 40150 | 07-01-20 |
| Alabama | State Program | 40150 | 06-30-20 |
| ANAB | ISO/IEC 17025 | L2471 | 02-22-20 |
| ANAB | ISO/IEC 17025 | L2471 | 02-22-20 |
| Arizona | State | AZ0710 | 01-12-20 |
| Arizona | State Program | AZ0710 | 01-12-20 |
| Arkansas DEQ | State Program | 88-0689 | 09-01-20 |
| California | State Program | 2510 | 06-30-20 |
| Florida | NELAP | E81010 | 06-30-20 |
| Florida | NELAP | E81010 | 06-30-20 |
| Georgia | State Program | E81010 (FL) | 06-30-20 |
| Illinois | NELAP | 200041 | 10-09-19 |
| Illinois | NELAP | 004586 | 10-09-19 |
| Iowa | State Program | 367 | 08-01-20 |
| Kansas | NELAP | E-10253 | 10-31-19 |
| Kentucky (UST) | State Program | 53 | 06-30-20 |
| Kentucky (WW) | State Program | 98030 | 12-31-19 |
| Louisiana | NELAP | 30976 | 06-30-20 |
| Louisiana (DW) | NELAP | LA017 | 12-31-19 |
| Maryland | State Program | 233 | 09-30-20 |
| Massachusetts | State Program | M-FL094 | 06-30-20 |
| Michigan | State | 9912 | 05-06-20 |
| Michigan | State Program | 9912 | 05-06-20 |
| Minnesota | NELAP | 012-999-481 | 12-31-19 |
| Minnesota | NELAP | 012-999-481 | 12-31-19 |
| New Jersey | NELAP | FL006 | 06-30-20 |
| New Jersey | NELAP | FL006 | 07-30-20 |
| North Carolina (WW/SW) | State Program | 314 | 12-31-19 |
| Oklahoma | State Program | 9810 | 08-31-20 |
| Pennsylvania | NELAP | 68-00467 | 01-31-20 |
| Pennsylvania | NELAP | 68-00467 | 01-31-20 |
| Rhode Island | State Program | LAO00307 | 12-30-19 |
| South Carolina | State Program | 96026 | 06-30-20 |
| Tennessee | State | TN02907 | 06-30-20 |
| Tennessee | State Program | TN02907 | 06-30-20 |
| Texas | NELAP | T104704286-18-15 | 09-30-19 |
| Texas | NELAP | T104704286 | 09-30-19 |
| US Fish & Wildlife | Federal | LE058448-0 | 07-31-20 |
| USDA | Federal | P330-18-00148 | 05-17-21 |
| Virginia | NELAP | 460166 | 06-14-20 |
| Washington | State | C915 | 05-15-20 |
| Washington | State Program | C915 | 05-15-20 |
| West Virginia DEP | State Program | 136 | 09-30-19 |

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 8/26/19 | COC No: |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Eric Lang | Carrier: FedEx | 1 of 1 COCs |
| 14665 West Lisbon Road, Suite 1A | Analysis Turnaround Time | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| (262) 781-0475 Phone | TAT if different from Below _____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR | ☐ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: 500-169046 |
| P O # 12313.1 | ☐ 1 day | | | |

500-169046 COC

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y / N) | Perform MS / MSD (Y / N) | Total Metals | Cl, Fl, SO4, TDS | Radium 226/228 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-02 | 8-26 | 1240 | G | W | 5 | N | N | x | x | x | |
| MW-03 | | 1125 | G | W | 5 | N | N | x | x | x | |
| MW-04 | | 1020 | G | W | 5 | N | N | x | x | x | |
| MW-10 | | | G | W | 5 | N | N | x | x | x | |
| MW-01 | | 1320 | G | W | 5 | N | N | x | x | x | |
| MW-05 | | 0845 | G | W | 5 | N | N | x | x | x | |
| DUPLICATE | ↓ | — | | | | | | | | | |
| | | | | | | | | 4 | 1 | 4 | |

**Preservation Used:** 1= Ice, 2= HCl; 3= $H_2SO_4$; 4=$HNO_3$; 5=NaOH; 6= Other _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:**

5.6, 2.7

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____ | | |
|---|---|---|---|---|---|
| Relinquished by: Mitchel Dolan | Company: KPRG | Date/Time: 8-26-19 1700 | Received by: FEDEX | Company: | Date/Time: 8-26-19 1700 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: TA-CHI | Date/Time: 8/27/19 1020 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 26AUG19
ACTWGT: 56.10 LB
CAD: 006994779/SSFE2021
DIMS: 24x13x14 IN

BILL THIRD PARTY

Part # 156297-2558 REV12 SXP 06/20

TO TEST AMERICA

2415 BOND ST

UNIVERSITY PARK IL 60484

500-169046 Waybill

(000) 000-0000 REF:

INV:
PO: DEPT:

FedEx Express

1 of 3

TRK# 0201 7893 8896 3043

## MASTER ##

XH JOTA

TUE - 27 AUG 10:30A
PRIORITY OVERNIGHT
AHS
60484
IL-US ORD

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 26AUG19
ACTWGT: 64.90 LB
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BILL THIRD PARTY

Part # 156297-2558 REV12 SXP 06/20

TO TEST AMERICA

2415 BOND ST

UNIVERSITY PARK IL 60484

(000) 000-0000 REF:

INV:
PO: DEPT:

FedEx Express

2 of 3

MPS# 0263 7893 8896 3054

Mstr# 7893 8896 3043

0201

XH JOTA

TUE - 27 AUG 10:30A
PRIORITY OVERNIGHT
AHS
60484
IL-US ORD

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-125096.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-169046-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 9/10/2019 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-02 (500-169046-1) | 8/26/19 | 12:40 Central | | Water | | | X | 1 | |
| MW-03 (500-169046-2) | 8/26/19 | 11:25 Central | | Water | | | X | 1 | |
| MW-04 (500-169046-3) | 8/26/19 | 10:20 Central | | Water | | | X | 1 | |
| MW-10 (500-169046-4) | 8/26/19 | Central | | Water | | | X | 1 | |
| MW-01 (500-169046-5) | 8/26/19 | 13:20 Central | | Water | | | X | 1 | |
| MW-05 (500-169046-6) | 8/26/19 | 08:45 Central | | Water | | | X | 1 | |
| Duplicate (500-169046-7) | 8/26/19 | Central | | Water | | | X | 1 | |
| | | | | | | | | | |
| | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Allison Scott | 8/27/19 1505 | TAL-CHI | | 8/28/19 900 | TAL-PGW |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.6°C IR8 |
|---|---|---|

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-169046-1

**Login Number: 169046**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 5.6,2.7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-169046-1

**Login Number: 169046**
**List Number: 2**
**Creator: Perez, Trina M**

**List Source: Eurofins TestAmerica, Pensacola**
**List Creation: 08/28/19 05:45 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.6°C IR-8 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

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# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-169046-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 2B
Brookfield, Wisconsin 53005

Attn: Richard Gnat

*Authorized for release by:*
*9/27/2019 2:44:01 PM*

Eric Lang, Manager of Project Management
(708)534-5200
eric.lang@testamericainc.com

LINKS

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Have a Question? Ask The Expert

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

## Job ID: 500-169046-2

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-169046-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/27/2019 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.7º C and 5.6º C.

**RAD**
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Water | 08/26/19 12:40 | 08/27/19 10:20 | |
| 500-169046-2 | MW-03 | Water | 08/26/19 11:25 | 08/27/19 10:20 | |
| 500-169046-3 | MW-04 | Water | 08/26/19 10:20 | 08/27/19 10:20 | |
| 500-169046-4 | MW-10 | Water | 08/26/19 00:00 | 08/27/19 10:20 | |
| 500-169046-5 | MW-01 | Water | 08/26/19 13:20 | 08/27/19 10:20 | |
| 500-169046-6 | MW-05 | Water | 08/26/19 08:45 | 08/27/19 10:20 | |
| 500-169046-7 | Duplicate | Water | 08/26/19 00:00 | 08/27/19 10:20 | |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

## Client Sample ID: MW-02

**Date Collected: 08/26/19 12:40**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0901 | U | 0.0606 | 0.0611 | 1.00 | 0.160 | pCi/L | 09/03/19 13:37 | 09/25/19 06:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.2* | | *40 - 110* | *09/03/19 13:37* | *09/25/19 06:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **1.27** | | 0.331 | 0.351 | 1.00 | 0.413 | pCi/L | 09/03/19 15:11 | 09/19/19 09:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.2* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:17* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:17* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **1.18** | | 0.337 | 0.356 | 5.00 | 0.413 | pCi/L | | 09/27/19 13:12 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

## Client Sample ID: MW-03

**Date Collected: 08/26/19 11:25**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0333 | U | 0.0696 | 0.0697 | 1.00 | 0.154 | pCi/L | 09/03/19 13:37 | 09/25/19 06:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.3* | | *40 - 110* | *09/03/19 13:37* | *09/25/19 06:12* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.443 | U | 0.288 | 0.291 | 1.00 | 0.444 | pCi/L | 09/03/19 15:11 | 09/19/19 09:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.3* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:17* | *1* |
| *Y Carrier* | *81.5* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:17* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.410 | U | 0.296 | 0.299 | 5.00 | 0.444 | pCi/L | | 09/27/19 13:12 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

## Client Sample ID: MW-04

**Date Collected: 08/26/19 10:20**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0536 | U | 0.0579 | 0.0581 | 1.00 | 0.146 | pCi/L | 09/03/19 13:37 | 09/25/19 06:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.9* | | *40 - 110* | *09/03/19 13:37* | *09/25/19 06:12* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **1.14** | | 0.354 | 0.369 | 1.00 | 0.466 | pCi/L | 09/03/19 15:11 | 09/19/19 09:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.9* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:17* | *1* |
| *Y Carrier* | *80.7* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:17* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **1.09** | | 0.359 | 0.374 | 5.00 | 0.466 | pCi/L | | 09/27/19 13:12 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

## Client Sample ID: MW-10

**Date Collected: 08/26/19 00:00**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.257 | | 0.113 | 0.115 | 1.00 | 0.133 | pCi/L | 09/03/19 13:37 | 09/25/19 06:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.3* | | *40 - 110* | *09/03/19 13:37* | *09/25/19 06:12* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.28 | | 0.341 | 0.361 | 1.00 | 0.427 | pCi/L | 09/03/19 15:11 | 09/19/19 09:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *96.3* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:17* | *1* |
| *Y Carrier* | *80.7* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:17* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.54 | | 0.359 | 0.379 | 5.00 | 0.427 | pCi/L | | 09/27/19 13:12 | 1 |

## Client Sample ID: MW-01

**Date Collected: 08/26/19 13:20**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0887 | U | 0.0603 | 0.0608 | 1.00 | 0.161 | pCi/L | 09/03/19 13:37 | 09/25/19 06:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.0* | | *40 - 110* | *09/03/19 13:37* | *09/25/19 06:12* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.891** | | 0.323 | 0.333 | 1.00 | 0.444 | pCi/L | 09/03/19 15:11 | 09/19/19 09:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.0* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:18* | *1* |
| *Y Carrier* | *83.4* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.802** | | 0.329 | 0.339 | 5.00 | 0.444 | pCi/L | | 09/27/19 13:12 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

## Client Sample ID: MW-05

**Date Collected: 08/26/19 08:45**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0298 | U | 0.0729 | 0.0730 | 1.00 | 0.133 | pCi/L | 09/03/19 13:37 | 09/25/19 06:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.4* | | *40 - 110* | *09/03/19 13:37* | *09/25/19 06:12* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.621** | | 0.278 | 0.284 | 1.00 | 0.394 | pCi/L | 09/03/19 15:11 | 09/19/19 09:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.4* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:18* | *1* |
| *Y Carrier* | *81.1* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.651** | | 0.287 | 0.293 | 5.00 | 0.394 | pCi/L | | 09/27/19 13:12 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

## Client Sample ID: Duplicate

**Date Collected: 08/26/19 00:00**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0458 | U | 0.0795 | 0.0796 | 1.00 | 0.139 | pCi/L | 09/03/19 13:37 | 09/25/19 06:12 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.9* | | *40 - 110* | *09/03/19 13:37* | *09/25/19 06:12* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **1.08** | | 0.330 | 0.345 | 1.00 | 0.429 | pCi/L | 09/03/19 15:11 | 09/19/19 09:18 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.9* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:18* | *1* |
| *Y Carrier* | *86.0* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:18* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **1.13** | | 0.339 | 0.354 | 5.00 | 0.429 | pCi/L | | 09/27/19 13:12 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

## Rad

### Prep Batch: 441645

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-169046-2 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-169046-3 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-169046-4 | MW-10 | Total/NA | Water | PrecSep-21 | |
| 500-169046-5 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-169046-6 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-169046-7 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-441645/26-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-441645/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 441652

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-169046-1 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-169046-2 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-169046-3 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-169046-4 | MW-10 | Total/NA | Water | PrecSep_0 | |
| 500-169046-5 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-169046-6 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-169046-7 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-441652/26-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-441652/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-441645/26-A**
**Matrix: Water**
**Analysis Batch: 444138**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 441645**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.02560 | U | 0.0642 | 0.0642 | 1.00 | 0.119 | pCi/L | 09/03/19 13:37 | 09/25/19 09:25 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.2* | | *40 - 110* | *09/03/19 13:37* | *09/25/19 09:25* | *1* |

**Lab Sample ID: LCS 160-441645/1-A**
**Matrix: Water**
**Analysis Batch: 444128**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 441645**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.4 | 10.53 | | 1.12 | 1.00 | 0.144 | pCi/L | 93 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *92.7* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-441652/26-A**
**Matrix: Water**
**Analysis Batch: 443457**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 441652**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.8575 | | 0.329 | 0.339 | 1.00 | 0.464 | pCi/L | 09/03/19 15:11 | 09/19/19 09:22 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *99.2* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:22* | *1* |
| *Y Carrier* | *78.9* | | *40 - 110* | *09/03/19 15:11* | *09/19/19 09:22* | *1* |

**Lab Sample ID: LCS 160-441652/1-A**
**Matrix: Water**
**Analysis Batch: 443363**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 441652**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.57 | 10.69 | | 1.23 | 1.00 | 0.424 | pCi/L | 112 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *92.7* | | *40 - 110* |
| *Y Carrier* | *81.1* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

## Client Sample ID: MW-02
**Date Collected: 08/26/19 12:40**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 441645 | 09/03/19 13:37 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 444138 | 09/25/19 06:11 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 441652 | 09/03/19 15:11 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 443363 | 09/19/19 09:17 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 444474 | 09/27/19 13:12 | SMP | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 08/26/19 11:25**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 441645 | 09/03/19 13:37 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 444138 | 09/25/19 06:12 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 441652 | 09/03/19 15:11 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 443363 | 09/19/19 09:17 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 444474 | 09/27/19 13:12 | SMP | TAL SL |

## Client Sample ID: MW-04
**Date Collected: 08/26/19 10:20**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 441645 | 09/03/19 13:37 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 444138 | 09/25/19 06:12 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 441652 | 09/03/19 15:11 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 443363 | 09/19/19 09:17 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 444474 | 09/27/19 13:12 | SMP | TAL SL |

## Client Sample ID: MW-10
**Date Collected: 08/26/19 00:00**
**Date Received: 08/27/19 10:20**

## Lab Sample ID: 500-169046-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 441645 | 09/03/19 13:37 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 444138 | 09/25/19 06:12 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 441652 | 09/03/19 15:11 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 443363 | 09/19/19 09:17 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 444474 | 09/27/19 13:12 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

## Client Sample ID: MW-01

**Lab Sample ID: 500-169046-5**

**Date Collected: 08/26/19 13:20**

**Matrix: Water**

**Date Received: 08/27/19 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 441645 | 09/03/19 13:37 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 444138 | 09/25/19 06:12 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 441652 | 09/03/19 15:11 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 443363 | 09/19/19 09:18 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 444474 | 09/27/19 13:12 | SMP | TAL SL |

## Client Sample ID: MW-05

**Lab Sample ID: 500-169046-6**

**Date Collected: 08/26/19 08:45**

**Matrix: Water**

**Date Received: 08/27/19 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 441645 | 09/03/19 13:37 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 444138 | 09/25/19 06:12 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 441652 | 09/03/19 15:11 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 443363 | 09/19/19 09:18 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 444474 | 09/27/19 13:12 | SMP | TAL SL |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-169046-7**

**Date Collected: 08/26/19 00:00**

**Matrix: Water**

**Date Received: 08/27/19 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 441645 | 09/03/19 13:37 | ORM | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 444138 | 09/25/19 06:12 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 441652 | 09/03/19 15:11 | ORM | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 443363 | 09/19/19 09:18 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 444474 | 09/27/19 13:12 | SMP | TAL SL |

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | 100201 | 04-30-20 |

## Laboratory: Eurofins TestAmerica, St. Louis

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | 200023 | 11-30-19 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|---|---|---|---|
| 903.0 | PrecSep-21 | Water | Radium-226 |
| 904.0 | PrecSep_0 | Water | Radium-228 |
| Ra226_Ra228 | | Water | Combined Radium 226 + 228 |

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 8/26/19 | COC No: |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Eric Lang | Carrier: FedEx | 1 of 1 COCs |
| 14665 West Lisbon Road, Suite 1A | Analysis Turnaround Time | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| (262) 781-0475 Phone | TAT if different from Below _____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR | ☐ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: 500-169046 |
| P O # 12313.1 | ☐ 1 day | | | |

500-169046 COC

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y / N) | Perform MS / MSD (Y / N) | Total Metals | Cl, Fl, SO4, TDS | Radium 226/228 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-02 | 8-26 | 1240 | G | W | 5 | N | N | x | x | x | |
| MW-03 | | 1125 | G | W | 5 | N | N | x | x | x | |
| MW-04 | | 1020 | G | W | 5 | N | N | x | x | x | |
| MW-10 | | | G | W | 5 | N | N | x | x | x | |
| MW-01 | | 1320 | G | W | 5 | N | N | x | x | x | |
| MW-05 | | 0845 | G | W | 5 | N | N | x | x | x | |
| DUPLICATE | ↓ | — | | | | | | | | | |
| | | | | | | | | 4 | 1 | 4 | |

**Preservation Used:** 1= Ice, 2= HCl; 3= $H_2SO_4$; 4=$HNO_3$; 5=NaOH; 6= Other _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:**

5.6, 2.7

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____ | | | |
|---|---|---|---|---|---|
| Relinquished by: Mitchel Dolan | Company: KPRG | Date/Time: 8-26-19 1700 | Received by: FEDEX | Company: | Date/Time: 8-26-19 1700 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: TA-CHI | Date/Time: 8/27/19 1020 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 26AUG19
ACTWGT: 56.10 LB
CAD: 006994779/SSFE2021
DIMS: 24x13x14 IN

BILL THIRD PARTY

Part # 156297-2558 REV12 SXP 06/20

TO TEST AMERICA

2415 BOND ST

UNIVERSITY PARK IL 60484

500-169046 Waybill

(000) 000-0000 REF:

INV:
PO: DEPT:

FedEx Express

1 of 3

TRK# 0201 7893 8896 3043

## MASTER ##

XH JOTA

TUE - 27 AUG 10:30A
PRIORITY OVERNIGHT
AHS
60484
IL-US ORD

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 26AUG19
ACTWGT: 64.90 LB
CAD: 006994779/SSFE2021
DIMS: 24x13x14 IN

BILL THIRD PARTY

Part # 156297-2558 REV12 SXP 06/20

TO TEST AMERICA

2415 BOND ST

UNIVERSITY PARK IL 60484

(000) 000-0000 REF:

INV:
PO: DEPT:

FedEx Express

2 of 3

MPS# 0263 7893 8896 3054

Mstr# 7893 8896 3043 0201

XH JOTA

TUE - 27 AUG 10:30A
PRIORITY OVERNIGHT
AHS
60484
IL-US ORD

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-125098.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-169046-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 9/25/2019 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-02 (500-169046-1) | 8/26/19 | 12:40 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-169046-2) | 8/26/19 | 11:25 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-169046-3) | 8/26/19 | 10:20 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-169046-4) | 8/26/19 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-01 (500-169046-5) | 8/26/19 | 13:20 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-169046-6) | 8/26/19 | 08:45 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-169046-7) | 8/26/19 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

| Possible Hazard Identification: Unconfirmed | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
|---|---|
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Relinquished by: | 8/27/19 1505 | TA-CHI | | 8/29/19 09:30 | TASTL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-169046-2

**Login Number: 169046**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 5.6,2.7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-169046-2

**Login Number: 169046**
**List Number: 3**
**Creator: Harris, Lorin C**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 08/29/19 11:12 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | False | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-169046-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) |
| 500-169046-1 | MW-02 | 91.2 |
| 500-169046-2 | MW-03 | 87.3 |
| 500-169046-3 | MW-04 | 87.9 |
| 500-169046-4 | MW-10 | 96.3 |
| 500-169046-5 | MW-01 | 89.0 |
| 500-169046-6 | MW-05 | 90.4 |
| 500-169046-7 | Duplicate | 87.9 |
| LCS 160-441645/1-A | Lab Control Sample | 92.7 |
| MB 160-441645/26-A | Method Blank | 99.2 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) | Y Carrier (40-110) |
| 500-169046-1 | MW-02 | 91.2 | 87.9 |
| 500-169046-2 | MW-03 | 87.3 | 81.5 |
| 500-169046-3 | MW-04 | 87.9 | 80.7 |
| 500-169046-4 | MW-10 | 96.3 | 80.7 |
| 500-169046-5 | MW-01 | 89.0 | 83.4 |
| 500-169046-6 | MW-05 | 90.4 | 81.1 |
| 500-169046-7 | Duplicate | 87.9 | 86.0 |
| LCS 160-441652/1-A | Lab Control Sample | 92.7 | 81.1 |
| MB 160-441652/26-A | Method Blank | 99.2 | 78.9 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

Y Carrier = Y Carrier

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# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-178418-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

Diana Mockler

*Authorized for release by:*
*3/19/2020 7:32:27 PM*

Diana Mockler, Project Manager I
(219)252-7570
diana.mockler@testamericainc.com

LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

## Job ID: 500-178418-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-178418-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 2/26/2020 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were -0.9º C and 2.3º C.

**Metals**
Method 6020A: The low level continuing calibration verification (ICVL/CCVL) associated with batch 500-532318 recovered above the upper control limit for Beryllium. The samples associated with this ICVL/CCVL were non-detects for the affected analyte; therefore, the data have been reported.

Method 6020A: The low level and continuing calibration verification (CCV/CCVL) associated with batch 500-532452 recovered above the upper control limit for Beryllium. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
Method SM 2540C: Reanalysis of the following sample was performed outside of the analytical holding time for TDS. MW-05 (500-178418-6).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

## Client Sample ID: MW-02 — Lab Sample ID: 500-178418-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.061 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.33 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 89 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 410 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 53 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.20 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 37 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-178418-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.066 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.33 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 87 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 470 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 53 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 65 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-178418-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.024 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.34 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 81 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 440 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 49 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.20 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 67 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-178418-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0033 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.28 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.4 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Chromium | 0.0086 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

## Client Sample ID: MW-10 (Continued)

Lab Sample ID: 500-178418-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 0.0046 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0058 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 45 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.23 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 59 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-01

Lab Sample ID: 500-178418-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.044 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.28 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 87 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00057 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 410 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 53 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.21 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 34 | | 5.0 | | mg/L | 1 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05

Lab Sample ID: 500-178418-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.057 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.54 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0061 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 700 | H | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 70 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.36 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 120 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL PEN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-178418-1 | MW-02 | Water | 02/24/20 11:16 | 02/26/20 09:30 | |
| 500-178418-2 | MW-03 | Water | 02/24/20 12:21 | 02/26/20 09:30 | |
| 500-178418-3 | MW-04 | Water | 02/24/20 13:26 | 02/26/20 09:30 | |
| 500-178418-4 | MW-10 | Water | 02/25/20 09:06 | 02/26/20 09:30 | |
| 500-178418-5 | MW-01 | Water | 02/24/20 15:51 | 02/26/20 09:30 | |
| 500-178418-6 | MW-05 | Water | 02/24/20 14:41 | 02/26/20 09:30 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

## Client Sample ID: MW-02

**Date Collected: 02/24/20 11:16**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/26/20 15:45 | 02/27/20 10:13 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:24 | 1 |
| **Arsenic** | **0.0011** | | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:24 | 1 |
| **Barium** | **0.061** | | 0.0025 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:24 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:24 | 1 |
| **Boron** | **0.33** | | 0.050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:24 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:24 | 1 |
| **Calcium** | **89** | | 0.20 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:24 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:24 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:24 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:24 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:24 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:24 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:24 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/03/20 09:50 | 03/04/20 09:33 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **410** | | 10 | | mg/L | | | 03/02/20 03:34 | 1 |
| **Chloride** | **53** | | 2.0 | | mg/L | | | 03/10/20 16:24 | 1 |
| **Fluoride** | **0.20** | | 0.10 | | mg/L | | | 03/17/20 12:21 | 1 |
| **Sulfate** | **37** | | 25 | | mg/L | | | 03/09/20 17:48 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

## Client Sample ID: MW-03

**Date Collected: 02/24/20 12:21**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-2

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/26/20 15:45 | 02/27/20 10:17 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:27 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:27 | 1 |
| **Barium** | **0.066** | | 0.0025 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:27 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:27 | 1 |
| **Boron** | **0.33** | | 0.050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:27 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:27 | 1 |
| **Calcium** | **87** | | 0.20 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:27 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:27 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:27 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:27 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:27 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:27 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:27 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/03/20 09:50 | 03/04/20 09:44 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **470** | | 10 | | mg/L | | | 03/02/20 03:37 | 1 |
| **Chloride** | **53** | | 2.0 | | mg/L | | | 03/10/20 16:24 | 1 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 03/17/20 12:18 | 1 |
| **Sulfate** | **65** | | 25 | | mg/L | | | 03/09/20 17:48 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

## Client Sample ID: MW-04

**Date Collected: 02/24/20 13:26**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-3

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/26/20 15:45 | 02/27/20 10:22 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:31 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:31 | 1 |
| **Barium** | **0.024** | | 0.0025 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:31 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:31 | 1 |
| **Boron** | **0.34** | | 0.050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:31 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:31 | 1 |
| **Calcium** | **81** | | 0.20 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:31 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:31 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:31 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:31 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:31 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:31 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:31 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/03/20 09:50 | 03/04/20 09:46 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **440** | | 10 | | mg/L | | | 03/02/20 03:40 | 1 |
| **Chloride** | **49** | | 2.0 | | mg/L | | | 03/10/20 19:16 | 1 |
| **Fluoride** | **0.20** | | 0.10 | | mg/L | | | 03/17/20 12:11 | 1 |
| **Sulfate** | **67** | | 25 | | mg/L | | | 03/09/20 17:48 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

## Client Sample ID: MW-10

**Date Collected: 02/25/20 09:06**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-4

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/26/20 15:45 | 02/27/20 10:27 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:34 | 1 |
| **Arsenic** | **0.0033** | | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:34 | 1 |
| **Barium** | **0.28** | | 0.0025 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:34 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/03/20 13:52 | 1 |
| **Boron** | **1.4** | | 0.050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:34 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:34 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:34 | 1 |
| **Chromium** | **0.0086** | | 0.0050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:34 | 1 |
| **Cobalt** | **0.011** | | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:34 | 1 |
| **Lead** | **0.0046** | | 0.00050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:34 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:34 | 1 |
| **Selenium** | **0.0058** | | 0.0025 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:34 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:34 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/03/20 09:50 | 03/04/20 09:47 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **500** | | 10 | | mg/L | | | 03/02/20 03:42 | 1 |
| **Chloride** | **45** | | 2.0 | | mg/L | | | 03/10/20 19:19 | 1 |
| **Fluoride** | **0.23** | | 0.10 | | mg/L | | | 03/17/20 12:08 | 1 |
| **Sulfate** | **59** | | 25 | | mg/L | | | 03/09/20 17:48 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

## Client Sample ID: MW-01

**Date Collected: 02/24/20 15:51**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-5

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/26/20 15:45 | 02/27/20 10:31 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:38 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:38 | 1 |
| **Barium** | **0.044** | | 0.0025 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:38 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:38 | 1 |
| **Boron** | **0.28** | | 0.050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:38 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:38 | 1 |
| **Calcium** | **87** | | 0.20 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:38 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:38 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:38 | 1 |
| **Lead** | **0.00057** | | 0.00050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:38 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:38 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:38 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:38 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/03/20 09:50 | 03/04/20 09:49 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **410** | | 10 | | mg/L | | | 03/02/20 03:45 | 1 |
| **Chloride** | **53** | | 2.0 | | mg/L | | | 03/10/20 19:19 | 1 |
| **Fluoride** | **0.21** | | 0.10 | | mg/L | | | 03/17/20 12:02 | 1 |
| **Sulfate** | **34** | | 5.0 | | mg/L | | | 03/09/20 17:27 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

## Client Sample ID: MW-05

**Date Collected: 02/24/20 14:41**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-6

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/26/20 15:45 | 02/27/20 10:36 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:41 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:41 | 1 |
| **Barium** | **0.057** | | 0.0025 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:41 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:41 | 1 |
| **Boron** | **0.54** | | 0.050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:41 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:41 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:41 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:41 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:41 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:41 | 1 |
| **Molybdenum** | **0.0061** | | 0.0050 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:41 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:41 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/26/20 15:45 | 03/02/20 18:41 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/03/20 09:50 | 03/04/20 09:56 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **700** | **H** | 10 | | mg/L | | | 03/11/20 11:23 | 1 |
| **Chloride** | **70** | | 10 | | mg/L | | | 03/19/20 15:50 | 5 |
| **Fluoride** | **0.36** | | 0.10 | | mg/L | | | 03/17/20 11:56 | 1 |
| **Sulfate** | **120** | | 50 | | mg/L | | | 03/09/20 17:52 | 10 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| ^ | ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| H | Sample was prepped or analyzed beyond the specified holding time |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 531594

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-1 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-178418-2 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-178418-3 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-178418-4 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-178418-5 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-178418-6 | MW-05 | Total Recoverable | Water | 3005A | |
| MB 500-531594/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-531594/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 531838

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-1 | MW-02 | Total Recoverable | Water | 6010C | 531594 |
| 500-178418-2 | MW-03 | Total Recoverable | Water | 6010C | 531594 |
| 500-178418-3 | MW-04 | Total Recoverable | Water | 6010C | 531594 |
| 500-178418-4 | MW-10 | Total Recoverable | Water | 6010C | 531594 |
| 500-178418-5 | MW-01 | Total Recoverable | Water | 6010C | 531594 |
| 500-178418-6 | MW-05 | Total Recoverable | Water | 6010C | 531594 |
| MB 500-531594/1-A | Method Blank | Total Recoverable | Water | 6010C | 531594 |
| LCS 500-531594/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 531594 |

### Prep Batch: 532316

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-1 | MW-02 | Total/NA | Water | 7470A | |
| 500-178418-2 | MW-03 | Total/NA | Water | 7470A | |
| 500-178418-3 | MW-04 | Total/NA | Water | 7470A | |
| 500-178418-4 | MW-10 | Total/NA | Water | 7470A | |
| 500-178418-5 | MW-01 | Total/NA | Water | 7470A | |
| 500-178418-6 | MW-05 | Total/NA | Water | 7470A | |
| MB 500-532316/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-532316/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-178418-5 MS | MW-01 | Total/NA | Water | 7470A | |
| 500-178418-5 MSD | MW-01 | Total/NA | Water | 7470A | |
| 500-178418-5 DU | MW-01 | Total/NA | Water | 7470A | |

### Analysis Batch: 532318

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-1 | MW-02 | Total Recoverable | Water | 6020A | 531594 |
| 500-178418-2 | MW-03 | Total Recoverable | Water | 6020A | 531594 |
| 500-178418-3 | MW-04 | Total Recoverable | Water | 6020A | 531594 |
| 500-178418-4 | MW-10 | Total Recoverable | Water | 6020A | 531594 |
| 500-178418-5 | MW-01 | Total Recoverable | Water | 6020A | 531594 |
| 500-178418-6 | MW-05 | Total Recoverable | Water | 6020A | 531594 |
| MB 500-531594/1-A | Method Blank | Total Recoverable | Water | 6020A | 531594 |
| LCS 500-531594/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 531594 |

### Analysis Batch: 532452

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-4 | MW-10 | Total Recoverable | Water | 6020A | 531594 |

## Metals

### Analysis Batch: 532470

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-1 | MW-02 | Total/NA | Water | 7470A | 532316 |
| 500-178418-2 | MW-03 | Total/NA | Water | 7470A | 532316 |
| 500-178418-3 | MW-04 | Total/NA | Water | 7470A | 532316 |
| 500-178418-4 | MW-10 | Total/NA | Water | 7470A | 532316 |
| 500-178418-5 | MW-01 | Total/NA | Water | 7470A | 532316 |
| 500-178418-6 | MW-05 | Total/NA | Water | 7470A | 532316 |
| MB 500-532316/12-A | Method Blank | Total/NA | Water | 7470A | 532316 |
| LCS 500-532316/13-A | Lab Control Sample | Total/NA | Water | 7470A | 532316 |
| 500-178418-5 MS | MW-01 | Total/NA | Water | 7470A | 532316 |
| 500-178418-5 MSD | MW-01 | Total/NA | Water | 7470A | 532316 |
| 500-178418-5 DU | MW-01 | Total/NA | Water | 7470A | 532316 |

## General Chemistry

### Analysis Batch: 481170

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-1 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-178418-2 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-178418-3 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-178418-4 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-178418-5 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-178418-6 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-481170/17 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-481170/18 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| LCSD 400-481170/24 | Lab Control Sample Dup | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-481170/14 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 532036

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-1 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-178418-2 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-178418-3 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-178418-4 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-178418-5 | MW-01 | Total/NA | Water | SM 2540C | |
| MB 500-532036/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-532036/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 533356

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-1 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| 500-178418-2 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-533356/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-533356/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 533366

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-3 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-178418-4 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-178418-5 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-533366/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-533366/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

## General Chemistry (Continued)

### Analysis Batch: 533366 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-3 MS | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-178418-3 MSD | MW-04 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 533510

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-6 | MW-05 | Total/NA | Water | SM 2540C | |
| MB 500-533510/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-533510/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-178418-6 DU | MW-05 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 534280

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-1 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-178418-2 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-178418-3 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-178418-4 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-178418-5 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-178418-6 | MW-05 | Total/NA | Water | SM 4500 F C | |
| MB 500-534280/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-534280/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 534640

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-6 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-534640/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-534640/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-178418-6 MS | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-178418-6 MSD | MW-05 | Total/NA | Water | SM 4500 Cl- E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-531594/1-A**
**Matrix: Water**
**Analysis Batch: 531838**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 531594**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 02/26/20 15:45 | 02/27/20 10:04 | 1 |

**Lab Sample ID: LCS 500-531594/2-A**
**Matrix: Water**
**Analysis Batch: 531838**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 531594**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.505 | | mg/L | | 101 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-531594/1-A**
**Matrix: Water**
**Analysis Batch: 532318**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 531594**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | <0.0030 | | 0.0030 | | mg/L | | 02/26/20 15:45 | 03/02/20 17:37 | 1 |
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 17:37 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 02/26/20 15:45 | 03/02/20 17:37 | 1 |
| Beryllium | <0.0010 | ^ | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 17:37 | 1 |
| Boron | <0.050 | | 0.050 | | mg/L | | 02/26/20 15:45 | 03/02/20 17:37 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 02/26/20 15:45 | 03/02/20 17:37 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 02/26/20 15:45 | 03/02/20 17:37 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 02/26/20 15:45 | 03/02/20 17:37 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 02/26/20 15:45 | 03/02/20 17:37 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 02/26/20 15:45 | 03/02/20 17:37 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 02/26/20 15:45 | 03/02/20 17:37 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 02/26/20 15:45 | 03/02/20 17:37 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 02/26/20 15:45 | 03/02/20 17:37 | 1 |

**Lab Sample ID: LCS 500-531594/2-A**
**Matrix: Water**
**Analysis Batch: 532318**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 531594**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.500 | 0.469 | | mg/L | | 94 | 80 - 120 |
| Arsenic | 0.100 | 0.0977 | | mg/L | | 98 | 80 - 120 |
| Barium | 2.00 | 1.99 | | mg/L | | 99 | 80 - 120 |
| Beryllium | 0.0500 | 0.0436 | ^ | mg/L | | 87 | 80 - 120 |
| Boron | 1.00 | 1.02 | | mg/L | | 102 | 80 - 120 |
| Cadmium | 0.0500 | 0.0469 | | mg/L | | 94 | 80 - 120 |
| Calcium | 10.0 | 10.5 | | mg/L | | 105 | 80 - 120 |
| Chromium | 0.200 | 0.190 | | mg/L | | 95 | 80 - 120 |
| Cobalt | 0.500 | 0.486 | | mg/L | | 97 | 80 - 120 |
| Lead | 0.100 | 0.0973 | | mg/L | | 97 | 80 - 120 |
| Molybdenum | 1.00 | 0.949 | | mg/L | | 95 | 80 - 120 |
| Selenium | 0.100 | 0.100 | | mg/L | | 100 | 80 - 120 |
| Thallium | 0.100 | 0.103 | | mg/L | | 103 | 80 - 120 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-532316/12-A**
**Matrix: Water**
**Analysis Batch: 532470**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 532316**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 03/03/20 09:50 | 03/04/20 09:30 | 1 |

**Lab Sample ID: LCS 500-532316/13-A**
**Matrix: Water**
**Analysis Batch: 532470**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 532316**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00213 | | mg/L | | 106 | 80 - 120 |

**Lab Sample ID: 500-178418-5 MS**
**Matrix: Water**
**Analysis Batch: 532470**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 532316**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00109 | | mg/L | | 109 | 75 - 125 |

**Lab Sample ID: 500-178418-5 MSD**
**Matrix: Water**
**Analysis Batch: 532470**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 532316**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00109 | | mg/L | | 109 | 75 - 125 | 0 | 20 |

**Lab Sample ID: 500-178418-5 DU**
**Matrix: Water**
**Analysis Batch: 532470**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**
**Prep Batch: 532316**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-532036/1**
**Matrix: Water**
**Analysis Batch: 532036**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 03/02/20 02:51 | 1 |

**Lab Sample ID: LCS 500-532036/2**
**Matrix: Water**
**Analysis Batch: 532036**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 254 | | mg/L | | 102 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: MB 500-533510/1**
**Matrix: Water**
**Analysis Batch: 533510**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 03/11/20 11:18 | 1 |

**Lab Sample ID: LCS 500-533510/2**
**Matrix: Water**
**Analysis Batch: 533510**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 254 | | mg/L | | 102 | 80 - 120 |

**Lab Sample ID: 500-178418-6 DU**
**Matrix: Water**
**Analysis Batch: 533510**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 700 | H | 718 | | mg/L | | 2 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-533356/12**
**Matrix: Water**
**Analysis Batch: 533356**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 03/10/20 16:24 | 1 |

**Lab Sample ID: LCS 500-533356/13**
**Matrix: Water**
**Analysis Batch: 533356**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 51.7 | | mg/L | | 103 | 85 - 115 |

**Lab Sample ID: MB 500-533366/12**
**Matrix: Water**
**Analysis Batch: 533366**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 03/10/20 19:13 | 1 |

**Lab Sample ID: LCS 500-533366/13**
**Matrix: Water**
**Analysis Batch: 533366**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 53.0 | | mg/L | | 106 | 85 - 115 |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: 500-178418-3 MS**
**Matrix: Water**
**Analysis Batch: 533366**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 49 | | 50.0 | 89.9 | | mg/L | | 81 | 75 - 125 | | |

**Lab Sample ID: 500-178418-3 MSD**
**Matrix: Water**
**Analysis Batch: 533366**

**Client Sample ID: MW-04**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 49 | | 50.0 | 91.8 | | mg/L | | 85 | 75 - 125 | 2 | 20 |

**Lab Sample ID: MB 500-534640/12**
**Matrix: Water**
**Analysis Batch: 534640**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 03/19/20 15:50 | 1 |

**Lab Sample ID: LCS 500-534640/13**
**Matrix: Water**
**Analysis Batch: 534640**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 50.4 | | mg/L | | 101 | 85 - 115 | | |

**Lab Sample ID: 500-178418-6 MS**
**Matrix: Water**
**Analysis Batch: 534640**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 70 | | 50.0 | 121 | | mg/L | | 102 | 75 - 125 | | |

**Lab Sample ID: 500-178418-6 MSD**
**Matrix: Water**
**Analysis Batch: 534640**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 70 | | 50.0 | 121 | | mg/L | | 102 | 75 - 125 | 0 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-534280/3**
**Matrix: Water**
**Analysis Batch: 534280**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 03/17/20 10:51 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: LCS 500-534280/4**
**Matrix: Water**
**Analysis Batch: 534280**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.9 | | mg/L | | 109 | 80 - 120 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-481170/17**
**Matrix: Water**
**Analysis Batch: 481170**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 03/09/20 16:11 | 1 |

**Lab Sample ID: LCS 400-481170/18**
**Matrix: Water**
**Analysis Batch: 481170**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 15.0 | 14.9 | | mg/L | | 99 | 90 - 110 |

**Lab Sample ID: MRL 400-481170/14**
**Matrix: Water**
**Analysis Batch: 481170**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 5.00 | 5.18 | | mg/L | | 104 | 50 - 150 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

## Client Sample ID: MW-02

**Lab Sample ID: 500-178418-1**

**Date Collected: 02/24/20 11:16**

**Matrix: Water**

**Date Received: 02/26/20 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 531594 | 02/26/20 15:45 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 531838 | 02/27/20 10:13 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 531594 | 02/26/20 15:45 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 532318 | 03/02/20 18:24 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 532316 | 03/03/20 09:50 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 532470 | 03/04/20 09:33 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 532036 | 03/02/20 03:34 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 533356 | 03/10/20 16:24 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 534280 | 03/17/20 12:21 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 481170 | 03/09/20 17:48 | HES | TAL PEN |

## Client Sample ID: MW-03

**Lab Sample ID: 500-178418-2**

**Date Collected: 02/24/20 12:21**

**Matrix: Water**

**Date Received: 02/26/20 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 531594 | 02/26/20 15:45 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 531838 | 02/27/20 10:17 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 531594 | 02/26/20 15:45 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 532318 | 03/02/20 18:27 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 532316 | 03/03/20 09:50 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 532470 | 03/04/20 09:44 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 532036 | 03/02/20 03:37 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 533356 | 03/10/20 16:24 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 534280 | 03/17/20 12:18 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 481170 | 03/09/20 17:48 | HES | TAL PEN |

## Client Sample ID: MW-04

**Lab Sample ID: 500-178418-3**

**Date Collected: 02/24/20 13:26**

**Matrix: Water**

**Date Received: 02/26/20 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 531594 | 02/26/20 15:45 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 531838 | 02/27/20 10:22 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 531594 | 02/26/20 15:45 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 532318 | 03/02/20 18:31 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 532316 | 03/03/20 09:50 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 532470 | 03/04/20 09:46 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 532036 | 03/02/20 03:40 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 533366 | 03/10/20 19:16 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 534280 | 03/17/20 12:11 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 481170 | 03/09/20 17:48 | HES | TAL PEN |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

## Client Sample ID: MW-10

**Date Collected: 02/25/20 09:06**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-4

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 531594 | 02/26/20 15:45 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 531838 | 02/27/20 10:27 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 531594 | 02/26/20 15:45 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 532318 | 03/02/20 18:34 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 531594 | 02/26/20 15:45 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 532452 | 03/03/20 13:52 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 532316 | 03/03/20 09:50 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 532470 | 03/04/20 09:47 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 532036 | 03/02/20 03:42 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 533366 | 03/10/20 19:19 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 534280 | 03/17/20 12:08 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 481170 | 03/09/20 17:48 | HES | TAL PEN |

## Client Sample ID: MW-01

**Date Collected: 02/24/20 15:51**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-5

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 531594 | 02/26/20 15:45 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 531838 | 02/27/20 10:31 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 531594 | 02/26/20 15:45 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 532318 | 03/02/20 18:38 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 532316 | 03/03/20 09:50 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 532470 | 03/04/20 09:49 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 532036 | 03/02/20 03:45 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 533366 | 03/10/20 19:19 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 534280 | 03/17/20 12:02 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 1 | 481170 | 03/09/20 17:27 | HES | TAL PEN |

## Client Sample ID: MW-05

**Date Collected: 02/24/20 14:41**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-6

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 531594 | 02/26/20 15:45 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 531838 | 02/27/20 10:36 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 531594 | 02/26/20 15:45 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 532318 | 03/02/20 18:41 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 532316 | 03/03/20 09:50 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 532470 | 03/04/20 09:56 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 533510 | 03/11/20 11:23 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 534640 | 03/19/20 15:50 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 534280 | 03/17/20 11:56 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 481170 | 03/09/20 17:52 | HES | TAL PEN |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-30-20 |

## Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Alabama | State | 40150 | 07-01-20 |
| ANAB | ISO/IEC 17025 | L2471 | 02-23-23 |
| Arizona | State | AZ0710 | 01-13-21 |
| Arkansas DEQ | State | 88-0689 | 09-01-20 |
| California | State | 2510 | 07-01-20 |
| Florida | NELAP | E81010 | 06-30-20 |
| Georgia | State | E81010(FL) | 06-30-20 |
| Illinois | NELAP | 004586 | 10-09-20 |
| Iowa | State | 367 | 08-01-20 |
| Kansas | NELAP | E-10253 | 08-16-20 |
| Kentucky (UST) | State | 53 | 06-30-20 |
| Kentucky (WW) | State | KY98030 | 12-31-20 |
| Louisiana | NELAP | 30976 | 06-30-20 |
| Louisiana (DW) | State | LA017 | 12-31-20 |
| Maryland | State | 233 | 09-30-20 |
| Massachusetts | State | M-FL094 | 06-30-20 |
| Michigan | State | 9912 | 05-06-20 |
| Minnesota | NELAP | 012-999-481 | 12-31-20 |
| New Jersey | NELAP | FL006 | 06-30-20 |
| New York | NELAP | 12115 | 04-30-20 |
| New York | NELAP Secondary AB | 12115 | 04-01-20 |
| North Carolina (WW/SW) | State | 314 | 12-31-20 |
| Oklahoma | State | 9810-186 | 08-31-20 |
| Pennsylvania | NELAP | 68-00467 | 01-31-21 |
| Rhode Island | State | LAO00307 | 12-30-20 |
| South Carolina | State | 96026002 | 06-30-20 |
| Tennessee | State | TN02907 | 06-30-20 |
| Texas | NELAP | T104704286 | 09-30-20 |
| US Fish & Wildlife | US Federal Programs | 058448 | 07-31-20 |
| USDA | US Federal Programs | P330-18-00148 | 05-17-21 |
| Virginia | NELAP | 460166 | 06-14-20 |
| Washington | State | C915 | 05-15-20 |
| West Virginia DEP | State | 136 | 06-30-20 |

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 2/25/20 | COC No: |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Eric Lang | Carrier: FedEx | 1 of 1 COCs |
| 14665 West Lisbon Road, Suite 1A | Analysis Turnaround Time | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| (262) 781-0475 Phone | TAT if different from Below _____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR | ☐ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: 500-178418 |
| P O # 12313.1 | ☐ 1 day | | | |

500-178418 COC

| | Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS/MSD (Y/N) | Total Metals | Cl, Fl, SO4, TDS | Radium 226/228 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-02 ~~MW-02~~ | | | G | W | 5 | N | N | x | x | x | |
| 2 | -03 ~~MW-03~~ | | | G | W | 5 | N | N | x | x | x | |
| 3 | -04 ~~MW-04~~ | | | G | W | 5 | N | N | x | x | x | |
| 4 | -10 MW-10 | 2/25 | 0926 | G | W | 5 | N | N | x | x | x | |
| 5 | -01 ~~MW-01~~ | | | G | W | 5 | N | N | x | x | x | |
| 6 | -05 ~~MW-05~~ | | | G | W | 5 | N | N | x | x | x | |

**Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other** _____

4 1 4

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:**

-1.9 -0.9
1.3 2.3

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 1.3 Corr'd: 2.3 | Therm ID No.:

| | Company | Date/Time | | Company | Date/Time |
|---|---|---|---|---|---|
| Relinquished by: Mitchel Dolan | Company: KPRG | Date/Time: 2/25/1530 | Received by: FEDEX | Company: | Date/Time: 2/25/1530 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: TA | Date/Time: 2/26/20 0930 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

# Chain of Custody Record

387173 eurofins | Environment Testing TestAmerica

Address: _____

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

| Client Contact | Project Manager: | Site Contact: M. Athel Dolan | Date: 2/26/20 | COC No: |
|---|---|---|---|---|
| Company Name: KPRG | Tel/Email: | Lab Contact: Eric Lang | Carrier: FEDEX | ___ of ___ COCs |
| Address: 1515 W Lisbon Rd Ste 114 | Analysis Turnaround Time | | | Sampler: |
| City/State/Zip: Brookfield, WI 53005 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| Phone: 262-781-0475 | TAT if different from Below _____ | | | Walk-in Client: |
| Fax: | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton FAB CCR | ☐ 1 week | | | |
| Site: Powerton | ☐ 2 days | | | Job / SDG No.: 500-178418 |
| P O # | ☐ 1 day | | | |

500-178418 COC

| | Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | Total Metals | Cl, Fl, SO4, TDS | Rad 226/228 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | MW-01 | 2/24 | 1551 | G | W | 5 | N | N | X | X | X | |
| 1 | MW-02 | 2/24 | 1116 | | | | | | | | | |
| 2 | MW-03 | 2/24 | 1221 | | | | | | | | | |
| 3 | MW-04 | 2/24 | 1326 | | | | | | | | | |
| 6 | MW-05 | 2/24 | 1441 | | | | | | | | | |
| 4 | MW-10 | 2/25 | 0906 | | | | | | | | | |
| | | | | | | | | | 4 | 1 | 4 | |

**Preservation Used:** 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

**Special Instructions/QC Requirements & Comments:**
Amended FAB CCR COC ; Appendix III and IV Parameters

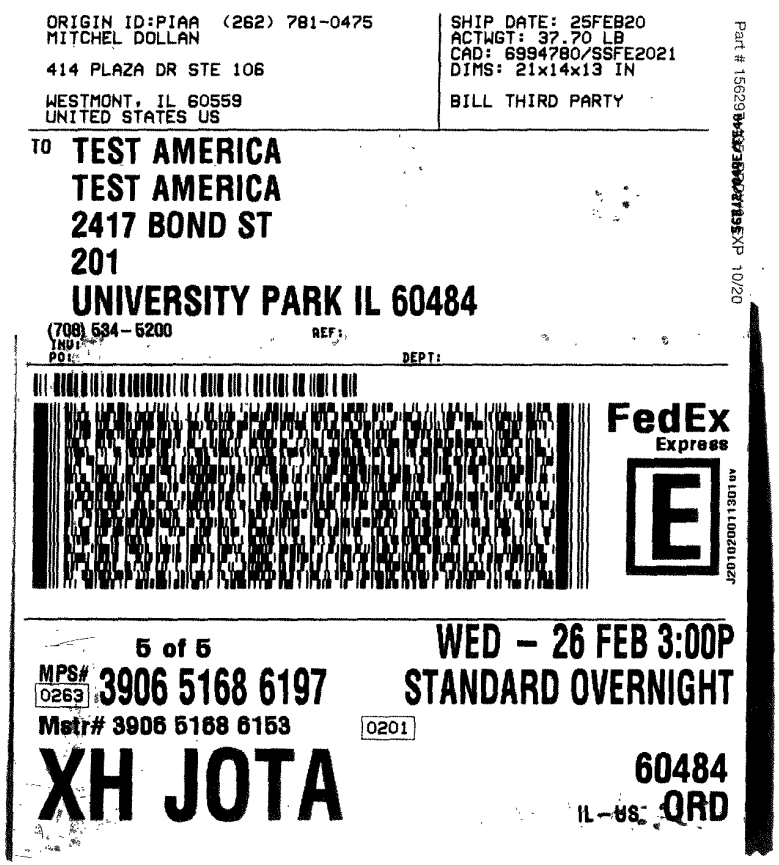
Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

| | Company: | Date/Time: | | Company: | Date/Time: |
|---|---|---|---|---|---|
| Relinquished by: M. Athel Dolan | KPRG | 2/26 | Received by: | | 2/26/20 0950 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |




500-178418 Wayt





ORIGIN ID:PIAA (262) 781-0475
MITCHEL DOLLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 25FEB20
ACTWGT: 37.70 LB
CAD: 6994780/SSFE2021
DIMS: 21x14x13 IN

BILL THIRD PARTY

TO TEST AMERICA
TEST AMERICA
2417 BOND ST
201
UNIVERSITY PARK IL 60484

(708) 534-6200 REF:
INV:
PO: DEPT:

FedEx Express

5 of 5

MPS# 0263 3906 5168 6197

Mstr# 3906 5168 6153 0201

WED - 26 FEB 3:00P
STANDARD OVERNIGHT

XH JOTA

60484
IL-US ORD

Part # 156291-XXXX XXX XXP 10/20

3 lbs.

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-132453.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-178418-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 3/13/2020 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-02 (500-178418-1) | 2/24/20 | 11:16 Central | | Water | | | X | 1 | |
| MW-03 (500-178418-2) | 2/24/20 | 12:21 Central | | Water | | | X | 1 | |
| MW-04 (500-178418-3) | 2/24/20 | 13:26 Central | | Water | | | X | 1 | |
| MW-10 (500-178418-4) | 2/25/20 | 09:06 Central | | Water | | | X | 1 | |
| MW-01 (500-178418-5) | 2/24/20 | 15:51 Central | | Water | | | X | 1 | |
| MW-05 (500-178418-6) | 2/24/20 | 14:41 Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| ***Possible Hazard Identification*** *Unconfirmed* | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
|---|---|
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] | 2/26/20 1600 | TA | Kathy Raines | 2-27-20 925 | ETA |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.1°C IR8 |
|---|---|---|

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-178418-1

**Login Number: 178418**
**List Number: 1**
**Creator: James, Jeff A**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.3,-0.9(samples not frozen) |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-178418-1

**Login Number: 178418**
**List Number: 2**
**Creator: Avery, Kathy R**

**List Source: Eurofins TestAmerica, Pensacola**
**List Creation: 02/27/20 11:52 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | 1009984 |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.1°C IR 8 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

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# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-178418-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

Diana Mockler

*Authorized for release by:*
*3/24/2020 10:27:40 AM*

Diana Mockler, Project Manager I
(219)252-7570
diana.mockler@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-178418-2

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-178418-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 2/26/2020 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were -0.9º C and 2.3º C.

**RAD**
Methods 903.0, 9315: Ra-226 Prep Batch 160-462243
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

MW-02 (500-178418-1), MW-03 (500-178418-2), MW-04 (500-178418-3), MW-10 (500-178418-4), MW-01 (500-178418-5), MW-05 (500-178418-6), (LCS 160-462243/1-A), (MB 160-462243/23-A) and (500-178418-D-1-A DU)

Methods 904.0, 9320: Radium-228 Prep Batch 160-462246
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

MW-02 (500-178418-1), MW-03 (500-178418-2), MW-04 (500-178418-3), MW-10 (500-178418-4), MW-01 (500-178418-5), MW-05 (500-178418-6), (LCS 160-462246/1-A), (MB 160-462246/23-A) and (500-178418-D-1-B DU)

Method PrecSep_0: Radium 228 Prep batch 160-462246:
The following samples were prepared at a reduced aliquot due to brown discoloration: MW-10 (500-178418-4).

Method PrecSep-21: Radium 226 Prep batch 160-462243:
The following samples were prepared at a reduced aliquot due to brown discoloration: MW-10 (500-178418-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-178418-1 | MW-02 | Water | 02/24/20 11:16 | 02/26/20 09:30 | |
| 500-178418-2 | MW-03 | Water | 02/24/20 12:21 | 02/26/20 09:30 | |
| 500-178418-3 | MW-04 | Water | 02/24/20 13:26 | 02/26/20 09:30 | |
| 500-178418-4 | MW-10 | Water | 02/25/20 09:06 | 02/26/20 09:30 | |
| 500-178418-5 | MW-01 | Water | 02/24/20 15:51 | 02/26/20 09:30 | |
| 500-178418-6 | MW-05 | Water | 02/24/20 14:41 | 02/26/20 09:30 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-2

**Client Sample ID: MW-02**
**Date Collected: 02/24/20 11:16**
**Date Received: 02/26/20 09:30**

**Lab Sample ID: 500-178418-1**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0806 | U | 0.0787 | 0.0791 | 1.00 | 0.122 | pCi/L | 02/28/20 07:32 | 03/23/20 07:35 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.8* | | *40 - 110* | *02/28/20 07:32* | *03/23/20 07:35* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.404** | | 0.252 | 0.255 | 1.00 | 0.385 | pCi/L | 02/28/20 07:57 | 03/18/20 18:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.8* | | *40 - 110* | *02/28/20 07:57* | *03/18/20 18:20* | *1* |
| *Y Carrier* | *86.0* | | *40 - 110* | *02/28/20 07:57* | *03/18/20 18:20* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.485** | | 0.264 | 0.267 | 5.00 | 0.385 | pCi/L | | 03/24/20 09:52 | 1 |

## Client Sample ID: MW-03

**Date Collected: 02/24/20 12:21**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0381 | U | 0.0642 | 0.0643 | 1.00 | 0.154 | pCi/L | 02/28/20 07:32 | 03/23/20 07:36 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.4* | | *40 - 110* | *02/28/20 07:32* | *03/23/20 07:36* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.404** | | 0.261 | 0.264 | 1.00 | 0.400 | pCi/L | 02/28/20 07:57 | 03/18/20 18:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.4* | | *40 - 110* | *02/28/20 07:57* | *03/18/20 18:20* | *1* |
| *Y Carrier* | *86.4* | | *40 - 110* | *02/28/20 07:57* | *03/18/20 18:20* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.366 | U | 0.269 | 0.272 | 5.00 | 0.400 | pCi/L | | 03/24/20 09:52 | 1 |

## Client Sample ID: MW-04

**Date Collected: 02/24/20 13:26**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0315 | U | 0.0697 | 0.0698 | 1.00 | 0.127 | pCi/L | 02/28/20 07:32 | 03/23/20 07:36 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.6* | | *40 - 110* | *02/28/20 07:32* | *03/23/20 07:36* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.564** | | 0.289 | 0.294 | 1.00 | 0.428 | pCi/L | 02/28/20 07:57 | 03/18/20 18:21 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.6* | | *40 - 110* | *02/28/20 07:57* | *03/18/20 18:21* | *1* |
| *Y Carrier* | *80.0* | | *40 - 110* | *02/28/20 07:57* | *03/18/20 18:21* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.595** | | 0.297 | 0.302 | 5.00 | 0.428 | pCi/L | | 03/24/20 09:52 | 1 |

## Client Sample ID: MW-10

**Date Collected: 02/25/20 09:06**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.491 | | 0.194 | 0.199 | 1.00 | 0.225 | pCi/L | 02/28/20 07:32 | 03/23/20 07:36 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.7* | | *40 - 110* | *02/28/20 07:32* | *03/23/20 07:36* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.576 | | 0.373 | 0.377 | 1.00 | 0.574 | pCi/L | 02/28/20 07:57 | 03/18/20 18:21 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *87.7* | | *40 - 110* | *02/28/20 07:57* | *03/18/20 18:21* | *1* |
| *Y Carrier* | *84.9* | | *40 - 110* | *02/28/20 07:57* | *03/18/20 18:21* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.07 | | 0.420 | 0.426 | 5.00 | 0.574 | pCi/L | | 03/24/20 09:52 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-2

## Client Sample ID: MW-01

**Date Collected: 02/24/20 15:51**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.107 | U | 0.102 | 0.102 | 1.00 | 0.157 | pCi/L | 02/28/20 07:32 | 03/23/20 07:36 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.2* | | *40 - 110* | *02/28/20 07:32* | *03/23/20 07:36* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.273 | U | 0.292 | 0.293 | 1.00 | 0.478 | pCi/L | 02/28/20 07:57 | 03/18/20 18:22 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.2* | | *40 - 110* | *02/28/20 07:57* | *03/18/20 18:22* | *1* |
| *Y Carrier* | *83.0* | | *40 - 110* | *02/28/20 07:57* | *03/18/20 18:22* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.380 | U | 0.309 | 0.310 | 5.00 | 0.478 | pCi/L | | 03/24/20 09:52 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-2

## Client Sample ID: MW-05

**Date Collected: 02/24/20 14:41**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0162 | U | 0.0727 | 0.0727 | 1.00 | 0.155 | pCi/L | 02/28/20 07:32 | 03/23/20 07:37 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.0* | | *40 - 110* | *02/28/20 07:32* | *03/23/20 07:37* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.522** | | 0.262 | 0.267 | 1.00 | 0.383 | pCi/L | 02/28/20 07:57 | 03/18/20 18:22 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *92.0* | | *40 - 110* | *02/28/20 07:57* | *03/18/20 18:22* | *1* |
| *Y Carrier* | *84.1* | | *40 - 110* | *02/28/20 07:57* | *03/18/20 18:22* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.506** | | 0.272 | 0.277 | 5.00 | 0.383 | pCi/L | | 03/24/20 09:52 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Rad

### Prep Batch: 462243

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-1 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-178418-2 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-178418-3 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-178418-4 | MW-10 | Total/NA | Water | PrecSep-21 | |
| 500-178418-5 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-178418-6 | MW-05 | Total/NA | Water | PrecSep-21 | |
| MB 160-462243/23-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-462243/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-178418-1 DU | MW-02 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 462246

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-178418-1 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-178418-2 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-178418-3 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-178418-4 | MW-10 | Total/NA | Water | PrecSep_0 | |
| 500-178418-5 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-178418-6 | MW-05 | Total/NA | Water | PrecSep_0 | |
| MB 160-462246/23-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-462246/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-178418-1 DU | MW-02 | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-462243/23-A**
**Matrix: Water**
**Analysis Batch: 465272**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 462243**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.009010 | U | 0.0725 | 0.0725 | 1.00 | 0.145 | pCi/L | 02/28/20 07:32 | 03/23/20 09:27 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.5* | | *40 - 110* | *02/28/20 07:32* | *03/23/20 09:27* | *1* |

**Lab Sample ID: LCS 160-462243/1-A**
**Matrix: Water**
**Analysis Batch: 465272**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 462243**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.3 | 8.847 | | 0.960 | 1.00 | 0.111 | pCi/L | 78 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *99.1* | | *40 - 110* |

**Lab Sample ID: 500-178418-1 DU**
**Matrix: Water**
**Analysis Batch: 465272**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**
**Prep Batch: 462243**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0806 | U | | 0.04534 | U | 0.0982 | 1.00 | 0.176 | pCi/L | | | 0.20 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *86.5* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-462246/23-A**
**Matrix: Water**
**Analysis Batch: 464837**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 462246**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.5689 | | 0.299 | 0.303 | 1.00 | 0.443 | pCi/L | 02/28/20 07:57 | 03/18/20 18:37 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *89.5* | | *40 - 110* | *02/28/20 07:57* | *03/18/20 18:37* | *1* |
| *Y Carrier* | *84.5* | | *40 - 110* | *02/28/20 07:57* | *03/18/20 18:37* | *1* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-462246/1-A**
**Matrix: Water**
**Analysis Batch: 464630**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 462246**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.01 | 7.198 | | 0.883 | 1.00 | 0.390 | pCi/L | 80 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *99.1* | | *40 - 110* |
| *Y Carrier* | *87.1* | | *40 - 110* |

**Lab Sample ID: 500-178418-1 DU**
**Matrix: Water**
**Analysis Batch: 464630**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**
**Prep Batch: 462246**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.404 | | | 0.007153 | U | 0.258 | 1.00 | 0.460 | pCi/L | | | 0.77 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *86.5* | | *40 - 110* |
| *Y Carrier* | *84.9* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-2

## Client Sample ID: MW-02
**Date Collected: 02/24/20 11:16**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 462243 | 02/28/20 07:32 | MNH | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 465272 | 03/23/20 07:35 | CJQ | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 462246 | 02/28/20 07:57 | MNH | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 464630 | 03/18/20 18:20 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 465430 | 03/24/20 09:52 | SMP | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 02/24/20 12:21**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 462243 | 02/28/20 07:32 | MNH | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 465272 | 03/23/20 07:36 | CJQ | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 462246 | 02/28/20 07:57 | MNH | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 464630 | 03/18/20 18:20 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 465430 | 03/24/20 09:52 | SMP | TAL SL |

## Client Sample ID: MW-04
**Date Collected: 02/24/20 13:26**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 462243 | 02/28/20 07:32 | MNH | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 465272 | 03/23/20 07:36 | CJQ | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 462246 | 02/28/20 07:57 | MNH | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 464630 | 03/18/20 18:21 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 465430 | 03/24/20 09:52 | SMP | TAL SL |

## Client Sample ID: MW-10
**Date Collected: 02/25/20 09:06**
**Date Received: 02/26/20 09:30**

## Lab Sample ID: 500-178418-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 462243 | 02/28/20 07:32 | MNH | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 465272 | 03/23/20 07:36 | CJQ | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 462246 | 02/28/20 07:57 | MNH | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 464630 | 03/18/20 18:21 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 465430 | 03/24/20 09:52 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-2

## Client Sample ID: MW-01

**Lab Sample ID: 500-178418-5**

**Date Collected: 02/24/20 15:51**

**Matrix: Water**

**Date Received: 02/26/20 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 462243 | 02/28/20 07:32 | MNH | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 465272 | 03/23/20 07:36 | CJQ | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 462246 | 02/28/20 07:57 | MNH | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 464630 | 03/18/20 18:22 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 465430 | 03/24/20 09:52 | SMP | TAL SL |

## Client Sample ID: MW-05

**Lab Sample ID: 500-178418-6**

**Date Collected: 02/24/20 14:41**

**Matrix: Water**

**Date Received: 02/26/20 09:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 462243 | 02/28/20 07:32 | MNH | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 465272 | 03/23/20 07:37 | CJQ | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 462246 | 02/28/20 07:57 | MNH | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 464630 | 03/18/20 18:22 | KLS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 465430 | 03/24/20 09:52 | SMP | TAL SL |

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-2

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-30-20 |

## Laboratory: Eurofins TestAmerica, St. Louis

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | 004553 | 11-30-20 |

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 2/25/20 | COC No: |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Eric Lang | Carrier: FedEx | 1 of 1 COCs |
| 14665 West Lisbon Road, Suite 1A | Analysis Turnaround Time | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| (262) 781-0475 Phone | TAT if different from Below _____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR | ☐ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: 500-178418 |
| P O # 12313.1 | ☐ 1 day | | | |

500-178418 COC

| | Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS/MSD (Y/N) | Total Metals | Cl, Fl, SO4, TDS | Radium 226/228 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-02 ~~MW-02~~ | | | G | W | 5 | N | N | x | x | x | |
| 2 | -03 ~~MW-03~~ | | | G | W | 5 | N | N | x | x | x | |
| 3 | -04 ~~MW-04~~ | | | G | W | 5 | N | N | x | x | x | |
| 4 | -10 MW-10 | 2/25 | 0926 | G | W | 5 | N | N | x | x | x | |
| 5 | -01 ~~MW-01~~ | | | G | W | 5 | N | N | x | x | x | |
| 6 | -05 ~~MW-05~~ | | | G | W | 5 | N | N | x | x | x | |

**Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other** _____

4 1 4

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:**

-1.9 -0.9
1.3 2.3

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 1.3 Corr'd: 2.3 | Therm ID No.: |
|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Relinquished by: Mitchel Dolan | Company: KPRG | Date/Time: 2/25/1530 | Received by: FEDEX | Company: | Date/Time: 2/25/1530 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: TA | Date/Time: 2/26/20 0930 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

# Chain of Custody Record

387173

eurofins | Environment Testing TestAmerica

Address: _____

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

| Client Contact | Project Manager: | Site Contact: M. Athel Dolan | Date: 2/26/20 | COC No: |
|---|---|---|---|---|
| Company Name: KPRG | Tel/Email: | Lab Contact: Eric Lang | Carrier: FEDEX | ___ of ___ COCs |
| Address: 1515 W Lisbon Rd Ste 114 | Analysis Turnaround Time | | | Sampler: |
| City/State/Zip: Brookfield, WI 53005 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| Phone: 262-781-0475 | TAT if different from Below _____ | | | Walk-in Client: |
| Fax: | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton FAB CCR | ☐ 1 week | | | |
| Site: Powerton | ☐ 2 days | | | Job / SDG No.: 500-178418 |
| P O # | ☐ 1 day | | | |

500-178418 COC

| | Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | Total Metals | Cl, Fl, SO4, TDS | Rad 226/228 | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | MW-01 | 2/24 | 1551 | G | W | 5 | N | N | X | X | X | |
| 1 | MW-02 | 2/24 | 1116 | | | | | | | | | |
| 2 | MW-03 | 2/24 | 1221 | | | | | | | | | |
| 3 | MW-04 | 2/24 | 1326 | | | | | | | | | |
| 6 | MW-05 | 2/24 | 1441 | | | | | | | | | |
| 4 | MW-10 | 2/25 | 0906 | | | | | | | | | |
| | | | | | | | | | 4 | 1 | 4 | |

**Preservation Used:** 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

**Special Instructions/QC Requirements & Comments:**
Amended FAB CCR COC ; Appendix III and IV Parameters

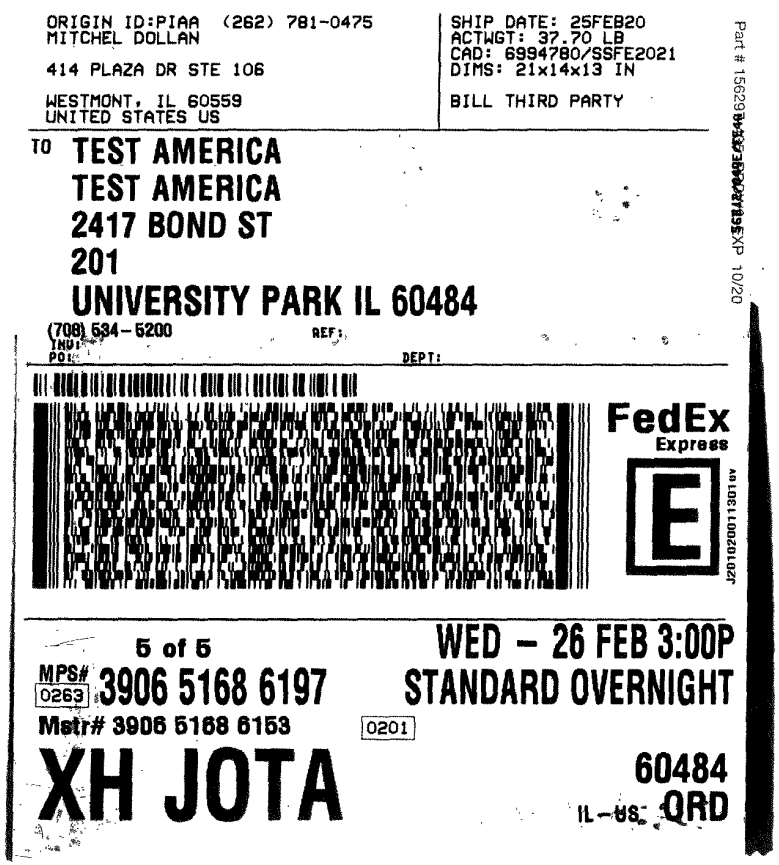
Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| M. Athel Dolan | KPRG | 2/26 | | | 2/26/20 0950 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |




500-178418 Wayt





ORIGIN ID:PIAA (262) 781-0475
MITCHEL DOLLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 25FEB20
ACTWGT: 37.70 LB
CAD: 6994780/SSFE2021
DIMS: 21x14x13 IN

BILL THIRD PARTY

TO TEST AMERICA
TEST AMERICA
2417 BOND ST
201
UNIVERSITY PARK IL 60484

(708) 534-6200 REF:
INV:
PO: DEPT:

FedEx Express

5 of 5

WED - 26 FEB 3:00P
STANDARD OVERNIGHT

MPS# 0263 3906 5168 6197
Mstr# 3906 5168 6153 0201

XH JOTA

60484
IL-US ORD

Part # 156291-XXXX XXX XXP 10/20

3 qt.

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Lang, Eric A. | Carrier Tracking No(s): | COC No: 500-132449.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: eric.lang@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-178418-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 3/25/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-02 (500-178418-1) | 2/24/20 | 11:16 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-178418-2) | 2/24/20 | 12:21 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-178418-3) | 2/24/20 | 13:26 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-178418-4) | 2/25/20 | 09:06 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-01 (500-178418-5) | 2/24/20 | 15:51 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-178418-6) | 2/24/20 | 14:41 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 2/26/20 1600 | [signature] | [signature] | 2-27-20 08:55 | ETA STL |
| 2 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-178418-2

**Login Number: 178418**
**List Number: 1**
**Creator: James, Jeff A**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.3,-0.9(samples not frozen) |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-178418-2

**Login Number: 178418**
**List Number: 3**
**Creator: Hellm, Michael**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 02/27/20 12:42 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 20.0 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | N/A | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | N/A | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-178418-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) |
| 500-178418-1 | MW-02 | 94.8 |
| 500-178418-1 DU | MW-02 | 86.5 |
| 500-178418-2 | MW-03 | 87.4 |
| 500-178418-3 | MW-04 | 92.6 |
| 500-178418-4 | MW-10 | 87.7 |
| 500-178418-5 | MW-01 | 82.2 |
| 500-178418-6 | MW-05 | 92.0 |
| LCS 160-462243/1-A | Lab Control Sample | 99.1 |
| MB 160-462243/23-A | Method Blank | 89.5 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba Carrier (40-110) | Y Carrier (40-110) |
| 500-178418-1 | MW-02 | 94.8 | 86.0 |
| 500-178418-1 DU | MW-02 | 86.5 | 84.9 |
| 500-178418-2 | MW-03 | 87.4 | 86.4 |
| 500-178418-3 | MW-04 | 92.6 | 80.0 |
| 500-178418-4 | MW-10 | 87.7 | 84.9 |
| 500-178418-5 | MW-01 | 82.2 | 83.0 |
| 500-178418-6 | MW-05 | 92.0 | 84.1 |
| LCS 160-462246/1-A | Lab Control Sample | 99.1 | 87.1 |
| MB 160-462246/23-A | Method Blank | 89.5 | 84.5 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

Y Carrier = Y Carrier

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-181249-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

Diana Mockler

*Authorized for release by:*
*5/19/2020 3:10:06 PM*

Diana Mockler, Project Manager I
(219)252-7570
diana.mockler@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Job ID: 500-181249-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-181249-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 4/28/2020 9:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 1.6º C, 2.4º C, 2.6º C, 2.8º C, 3.3º C and 5.8º C.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
Methods 375.4, SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-18 (500-181249-1), MW-17 (500-181249-2), MW-19 (500-181249-3), (500-180998-C-6), (500-180998-C-6 MS) and (500-180998-C-6 MSD). Elevated reporting limits (RLs) are provided.

Method SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-487586 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD was diluted after the spike. The spike amount was adjusted by the dilution factor.

(500-180998-C-6 MS) and (500-180998-C-6 MSD)

Method SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 400-487903 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Methods 375.4, SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-01 (500-181249-4), MW-02 (500-181249-5), MW-03 (500-181249-6), MW-04 (500-181249-7), MW-05 (500-181249-8), MW-10 (500-181249-9), MW-08 (500-181249-10), MW-09 (500-181249-11), MW-11 (500-181249-12), MW-12 (500-181249-13), MW-15 (500-181249-14), Duplicate (500-181249-15), (500-181249-A-6 MS) and (500-181249-A-6 MSD). Elevated reporting limits (RLs) are provided.

Method SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD was diluted after the spike. Then spike amount was adjusted by the dilution factor.
(500-181249-A-6 MS) and (500-181249-A-6 MSD)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-18 — Lab Sample ID: 500-181249-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.016 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.60 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 170 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.69 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 180 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-181249-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.021 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.026 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.036 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 150 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00081 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.075 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 170 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.79 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 520 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-181249-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.077 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.3 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.042 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 570 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 43 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 110 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-01 — Lab Sample ID: 500-181249-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.051 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-01 (Continued) — Lab Sample ID: 500-181249-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.33 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 470 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 46 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.19 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 41 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-02 — Lab Sample ID: 500-181249-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0016 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.060 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.33 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 90 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 430 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 50 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.20 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 41 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-181249-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.066 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.24 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 86 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0036 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 410 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 46 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 79 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-181249-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.025 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.55 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 76 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 380 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 52 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.27 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 47 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-05 — Lab Sample ID: 500-181249-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0010 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.052 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.49 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0074 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 620 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 56 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.37 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 130 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-181249-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0022 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.25 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.0 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0065 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0017 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0054 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 550 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 41 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.24 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 64 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-181249-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.026 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0026 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.095 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.74 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.011 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 660 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 120 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.38 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 58 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-09 — Lab Sample ID: 500-181249-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0012 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.031 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.0 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 71 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.028 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 510 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 34 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.20 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 140 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-181249-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.019 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.21 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0019 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.024 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 950 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 110 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.62 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 320 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-181249-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.012 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0029 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.034 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.34 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 71 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.015 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 980 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 150 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.34 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 360 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-15 — Lab Sample ID: 500-181249-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.027 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0036 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.060 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 160 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.023 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.58 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 370 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-181249-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.027 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0027 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.061 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 170 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.024 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.56 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 370 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL PEN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Water | 04/27/20 10:49 | 04/28/20 09:35 | |
| 500-181249-2 | MW-17 | Water | 04/27/20 11:32 | 04/28/20 09:35 | |
| 500-181249-3 | MW-19 | Water | 04/27/20 12:19 | 04/28/20 09:35 | |
| 500-181249-4 | MW-01 | Water | 04/28/20 08:32 | 04/29/20 11:30 | |
| 500-181249-5 | MW-02 | Water | 04/28/20 09:56 | 04/29/20 11:30 | |
| 500-181249-6 | MW-03 | Water | 04/28/20 10:46 | 04/29/20 11:30 | |
| 500-181249-7 | MW-04 | Water | 04/28/20 11:43 | 04/29/20 11:30 | |
| 500-181249-8 | MW-05 | Water | 04/28/20 12:36 | 04/29/20 11:30 | |
| 500-181249-9 | MW-10 | Water | 04/28/20 13:39 | 04/29/20 11:30 | |
| 500-181249-10 | MW-08 | Water | 04/28/20 14:38 | 04/29/20 11:30 | |
| 500-181249-11 | MW-09 | Water | 04/29/20 09:43 | 04/30/20 09:40 | |
| 500-181249-12 | MW-11 | Water | 04/29/20 08:41 | 04/30/20 09:40 | |
| 500-181249-13 | MW-12 | Water | 04/29/20 10:58 | 04/30/20 09:40 | |
| 500-181249-14 | MW-15 | Water | 04/29/20 12:16 | 04/30/20 09:40 | |
| 500-181249-15 | Duplicate | Water | 04/29/20 00:00 | 04/30/20 09:40 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-18

**Date Collected: 04/27/20 10:49**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.016** | | 0.010 | | mg/L | | 04/28/20 17:57 | 04/29/20 10:20 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| **Barium** | **0.12** | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| **Boron** | **0.60** | | 0.050 | | mg/L | | 04/28/20 17:57 | 05/05/20 11:12 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/04/20 10:40 | 05/05/20 09:18 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/01/20 01:49 | 1 |
| **Chloride** | **170** | | 10 | | mg/L | | | 05/05/20 21:56 | 5 |
| **Fluoride** | **0.69** | | 0.10 | | mg/L | | | 05/19/20 08:38 | 1 |
| **Sulfate** | **180** | | 50 | | mg/L | | | 04/30/20 13:01 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-17

**Date Collected: 04/27/20 11:32**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-2

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.021** | | 0.010 | | mg/L | | 04/28/20 17:57 | 04/29/20 10:24 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.026** | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| **Barium** | **0.036** | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| **Boron** | **1.2** | | 0.25 | | mg/L | | 04/28/20 17:57 | 05/05/20 11:16 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| **Calcium** | **150** | | 0.20 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| **Lead** | **0.00081** | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| **Molybdenum** | **0.075** | | 0.0050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/04/20 10:40 | 05/05/20 09:24 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1300** | | 10 | | mg/L | | | 05/01/20 01:54 | 1 |
| **Chloride** | **170** | | 10 | | mg/L | | | 05/05/20 21:57 | 5 |
| **Fluoride** | **0.79** | | 0.10 | | mg/L | | | 05/19/20 08:58 | 1 |
| **Sulfate** | **520** | | 100 | | mg/L | | | 04/30/20 13:04 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-19

**Date Collected: 04/27/20 12:19**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-3

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 04/28/20 17:57 | 04/29/20 10:29 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| **Barium** | **0.077** | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| **Boron** | **2.3** | | 0.25 | | mg/L | | 04/28/20 17:57 | 05/05/20 11:20 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| **Molybdenum** | **0.042** | | 0.0050 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/04/20 10:40 | 05/05/20 09:26 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **570** | | 10 | | mg/L | | | 05/01/20 01:56 | 1 |
| **Chloride** | **43** | | 2.0 | | mg/L | | | 05/02/20 14:05 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 05/19/20 09:05 | 1 |
| **Sulfate** | **110** | | 25 | | mg/L | | | 04/30/20 13:04 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-01

**Date Collected: 04/28/20 08:32**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-4

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 04/29/20 17:08 | 04/30/20 09:27 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| **Barium** | **0.051** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| **Boron** | **0.33** | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 11:38 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/04/20 10:40 | 05/05/20 09:32 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **470** | | 10 | | mg/L | | | 05/01/20 01:59 | 1 |
| **Chloride** | **46** | | 2.0 | | mg/L | | | 05/02/20 14:05 | 1 |
| **Fluoride** | **0.19** | | 0.10 | | mg/L | | | 05/19/20 09:12 | 1 |
| **Sulfate** | **41** | | 10 | | mg/L | | | 05/04/20 11:53 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-02

**Date Collected: 04/28/20 09:56**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-5

**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.0016** | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |
| **Barium** | **0.060** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |
| **Boron** | **0.33** | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 11:49 | 1 |
| **Calcium** | **90** | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **430** | | 10 | | mg/L | | | 05/01/20 02:02 | 1 |
| **Chloride** | **50** | | 2.0 | | mg/L | | | 05/02/20 14:06 | 1 |
| **Fluoride** | **0.20** | | 0.10 | | mg/L | | | 05/19/20 09:19 | 1 |
| **Sulfate** | **41** | | 10 | | mg/L | | | 05/04/20 11:57 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-03

**Date Collected: 04/28/20 10:46**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-6

**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |
| **Barium** | **0.066** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |
| **Boron** | **0.24** | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 11:52 | 1 |
| **Calcium** | **86** | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |
| **Selenium** | **0.0036** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **410** | | 10 | | mg/L | | | 05/01/20 02:04 | 1 |
| **Chloride** | **46** | | 2.0 | | mg/L | | | 05/02/20 13:03 | 1 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 05/19/20 09:25 | 1 |
| **Sulfate** | **79** | | 25 | | mg/L | | | 05/04/20 11:57 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-04

**Date Collected: 04/28/20 11:43**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-7

**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |
| **Barium** | **0.025** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |
| **Boron** | **0.55** | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 11:56 | 1 |
| **Calcium** | **76** | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **380** | | 10 | | mg/L | | | 05/01/20 02:07 | 1 |
| **Chloride** | **52** | | 2.0 | | mg/L | | | 05/05/20 19:45 | 1 |
| **Fluoride** | **0.27** | | 0.10 | | mg/L | | | 05/19/20 09:46 | 1 |
| **Sulfate** | **47** | | 25 | | mg/L | | | 05/04/20 12:01 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-05

**Date Collected: 04/28/20 12:36**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-8

**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.0010** | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |
| **Barium** | **0.052** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |
| **Boron** | **0.49** | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 11:59 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |
| **Molybdenum** | **0.0074** | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **620** | | 10 | | mg/L | | | 05/01/20 02:09 | 1 |
| **Chloride** | **56** | | 2.0 | | mg/L | | | 05/05/20 21:58 | 1 |
| **Fluoride** | **0.37** | | 0.10 | | mg/L | | | 05/19/20 09:53 | 1 |
| **Sulfate** | **130** | | 25 | | mg/L | | | 05/04/20 12:01 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-10

**Date Collected: 04/28/20 13:39**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-9

**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.0022** | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |
| **Barium** | **0.25** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |
| **Boron** | **1.0** | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 12:03 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |
| **Cobalt** | **0.0065** | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |
| **Lead** | **0.0017** | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |
| **Selenium** | **0.0054** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **550** | | 10 | | mg/L | | | 05/01/20 02:12 | 1 |
| **Chloride** | **41** | | 2.0 | | mg/L | | | 05/05/20 22:01 | 1 |
| **Fluoride** | **0.24** | | 0.10 | | mg/L | | | 05/19/20 09:59 | 1 |
| **Sulfate** | **64** | | 25 | | mg/L | | | 05/04/20 12:01 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-08

**Date Collected: 04/28/20 14:38**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-10

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.026 | | 0.010 | | mg/L | | 04/29/20 17:08 | 04/30/20 09:31 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0026 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Barium | 0.095 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Boron | 0.74 | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 12:07 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Calcium | 110 | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Molybdenum | 0.011 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/05/20 10:05 | 05/06/20 09:12 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 660 | | 10 | | mg/L | | | 05/01/20 02:15 | 1 |
| Chloride | 120 | | 10 | | mg/L | | | 05/06/20 00:16 | 5 |
| Fluoride | 0.38 | | 0.10 | | mg/L | | | 05/19/20 10:06 | 1 |
| Sulfate | 58 | | 10 | | mg/L | | | 05/04/20 12:01 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-09

**Date Collected: 04/29/20 09:43**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-11

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/01/20 07:00 | 05/01/20 19:39 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.0012** | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| **Barium** | **0.031** | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| **Boron** | **2.0** | | 0.050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| **Calcium** | **71** | | 0.20 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| **Molybdenum** | **0.028** | | 0.0050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/05/20 10:05 | 05/06/20 09:18 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **510** | | 10 | | mg/L | | | 05/01/20 02:17 | 1 |
| **Chloride** | **34** | | 2.0 | | mg/L | | | 05/06/20 00:16 | 1 |
| **Fluoride** | **0.20** | | 0.10 | | mg/L | | | 05/19/20 10:13 | 1 |
| **Sulfate** | **140** | | 25 | | mg/L | | | 05/04/20 12:06 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-11

**Date Collected: 04/29/20 08:41**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-12

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/01/20 07:00 | 05/01/20 19:43 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.019** | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| **Barium** | **0.21** | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| **Boron** | **1.2** | | 0.050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| **Cobalt** | **0.0019** | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| **Molybdenum** | **0.024** | | 0.0050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/05/20 10:05 | 05/06/20 09:20 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **950** | | 10 | | mg/L | | | 05/01/20 02:20 | 1 |
| **Chloride** | **110** | | 10 | | mg/L | | | 05/06/20 00:18 | 5 |
| **Fluoride** | **0.62** | | 0.10 | | mg/L | | | 05/19/20 10:20 | 1 |
| **Sulfate** | **320** | | 50 | | mg/L | | | 05/04/20 12:06 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-12

**Date Collected: 04/29/20 10:58**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-13

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.012 | | 0.010 | | mg/L | | 05/01/20 07:00 | 05/01/20 19:47 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0029 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Barium | 0.034 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Boron | 0.34 | | 0.050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Calcium | 71 | | 0.20 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Molybdenum | 0.015 | | 0.0050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/05/20 10:05 | 05/06/20 09:21 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 980 | | 10 | | mg/L | | | 05/01/20 02:22 | 1 |
| Chloride | 150 | | 10 | | mg/L | | | 05/06/20 00:18 | 5 |
| Fluoride | 0.34 | | 0.10 | | mg/L | | | 05/19/20 10:27 | 1 |
| Sulfate | 360 | | 50 | | mg/L | | | 05/04/20 12:23 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-15

**Date Collected: 04/29/20 12:16**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-14

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.027 | | 0.010 | | mg/L | | 05/01/20 07:00 | 05/01/20 20:00 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0036 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Barium | 0.060 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Boron | 1.2 | | 0.050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Calcium | 160 | | 0.20 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Molybdenum | 0.023 | | 0.0050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/05/20 10:05 | 05/06/20 09:23 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1300 | | 10 | | mg/L | | | 05/01/20 02:25 | 1 |
| Chloride | 200 | | 10 | | mg/L | | | 05/06/20 00:19 | 5 |
| Fluoride | 0.58 | | 0.10 | | mg/L | | | 05/19/20 10:33 | 1 |
| Sulfate | 370 | | 50 | | mg/L | | | 05/04/20 12:23 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: Duplicate

**Date Collected: 04/29/20 00:00**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-15

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.027 | | 0.010 | | mg/L | | 05/01/20 07:00 | 05/01/20 20:04 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0027 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Barium | 0.061 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Boron | 1.2 | | 0.050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Calcium | 170 | | 0.20 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Molybdenum | 0.024 | | 0.0050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/05/20 10:05 | 05/06/20 09:24 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1300 | | 10 | | mg/L | | | 05/01/20 02:27 | 1 |
| Chloride | 200 | | 10 | | mg/L | | | 05/06/20 00:19 | 5 |
| Fluoride | 0.56 | | 0.10 | | mg/L | | | 05/19/20 10:38 | 1 |
| Sulfate | 370 | | 50 | | mg/L | | | 05/04/20 12:08 | 10 |

## Qualifiers

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 540154

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-181249-2 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-181249-3 | MW-19 | Total Recoverable | Water | 3005A | |
| MB 500-540154/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-540154/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 540335

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total Recoverable | Water | 6010C | 540154 |
| 500-181249-2 | MW-17 | Total Recoverable | Water | 6010C | 540154 |
| 500-181249-3 | MW-19 | Total Recoverable | Water | 6010C | 540154 |
| MB 500-540154/1-A | Method Blank | Total Recoverable | Water | 6010C | 540154 |
| LCS 500-540154/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 540154 |

### Prep Batch: 540361

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-4 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-181249-5 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-181249-6 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-181249-7 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-181249-8 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-181249-9 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-181249-10 | MW-08 | Total Recoverable | Water | 3005A | |
| MB 500-540361/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-540361/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 540533

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-4 | MW-01 | Total Recoverable | Water | 6010C | 540361 |
| 500-181249-10 | MW-08 | Total Recoverable | Water | 6010C | 540361 |
| MB 500-540361/1-A | Method Blank | Total Recoverable | Water | 6010C | 540361 |
| LCS 500-540361/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 540361 |

### Analysis Batch: 540544

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total Recoverable | Water | 6020A | 540154 |
| 500-181249-2 | MW-17 | Total Recoverable | Water | 6020A | 540154 |
| 500-181249-3 | MW-19 | Total Recoverable | Water | 6020A | 540154 |
| MB 500-540154/1-A | Method Blank | Total Recoverable | Water | 6020A | 540154 |
| LCS 500-540154/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 540154 |

### Prep Batch: 540624

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-11 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-181249-12 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-181249-13 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-181249-14 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-181249-15 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-540624/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-540624/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

## Metals

### Analysis Batch: 540772

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-11 | MW-09 | Total Recoverable | Water | 6010C | 540624 |
| 500-181249-12 | MW-11 | Total Recoverable | Water | 6010C | 540624 |
| 500-181249-13 | MW-12 | Total Recoverable | Water | 6010C | 540624 |
| 500-181249-14 | MW-15 | Total Recoverable | Water | 6010C | 540624 |
| 500-181249-15 | Duplicate | Total Recoverable | Water | 6010C | 540624 |
| MB 500-540624/1-A | Method Blank | Total Recoverable | Water | 6010C | 540624 |
| LCS 500-540624/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 540624 |

### Analysis Batch: 540865

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-11 | MW-09 | Total Recoverable | Water | 6020A | 540624 |
| 500-181249-12 | MW-11 | Total Recoverable | Water | 6020A | 540624 |
| 500-181249-13 | MW-12 | Total Recoverable | Water | 6020A | 540624 |
| 500-181249-14 | MW-15 | Total Recoverable | Water | 6020A | 540624 |
| 500-181249-15 | Duplicate | Total Recoverable | Water | 6020A | 540624 |
| MB 500-540624/1-A | Method Blank | Total Recoverable | Water | 6020A | 540624 |
| LCS 500-540624/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 540624 |

### Prep Batch: 540885

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | 7470A | |
| 500-181249-2 | MW-17 | Total/NA | Water | 7470A | |
| 500-181249-3 | MW-19 | Total/NA | Water | 7470A | |
| 500-181249-4 | MW-01 | Total/NA | Water | 7470A | |
| MB 500-540885/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-540885/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-181249-1 MS | MW-18 | Total/NA | Water | 7470A | |
| 500-181249-1 MSD | MW-18 | Total/NA | Water | 7470A | |
| 500-181249-1 DU | MW-18 | Total/NA | Water | 7470A | |

### Analysis Batch: 541048

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-4 | MW-01 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-5 | MW-02 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-6 | MW-03 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-7 | MW-04 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-8 | MW-05 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-9 | MW-10 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-10 | MW-08 | Total Recoverable | Water | 6020A | 540361 |
| MB 500-540361/1-A | Method Blank | Total Recoverable | Water | 6020A | 540361 |
| LCS 500-540361/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 540361 |

### Prep Batch: 541074

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-10 | MW-08 | Total/NA | Water | 7470A | |
| 500-181249-11 | MW-09 | Total/NA | Water | 7470A | |
| 500-181249-12 | MW-11 | Total/NA | Water | 7470A | |
| 500-181249-13 | MW-12 | Total/NA | Water | 7470A | |
| 500-181249-14 | MW-15 | Total/NA | Water | 7470A | |
| 500-181249-15 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-541074/12-A | Method Blank | Total/NA | Water | 7470A | |

## Metals (Continued)

### Prep Batch: 541074 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-541074/13-A | Lab Control Sample | Total/NA | Water | 7470A | |

### Analysis Batch: 541085

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | 7470A | 540885 |
| 500-181249-2 | MW-17 | Total/NA | Water | 7470A | 540885 |
| 500-181249-3 | MW-19 | Total/NA | Water | 7470A | 540885 |
| 500-181249-4 | MW-01 | Total/NA | Water | 7470A | 540885 |
| MB 500-540885/12-A | Method Blank | Total/NA | Water | 7470A | 540885 |
| LCS 500-540885/13-A | Lab Control Sample | Total/NA | Water | 7470A | 540885 |
| 500-181249-1 MS | MW-18 | Total/NA | Water | 7470A | 540885 |
| 500-181249-1 MSD | MW-18 | Total/NA | Water | 7470A | 540885 |
| 500-181249-1 DU | MW-18 | Total/NA | Water | 7470A | 540885 |

### Analysis Batch: 541102

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total Recoverable | Water | 6020A | 540154 |
| 500-181249-2 | MW-17 | Total Recoverable | Water | 6020A | 540154 |
| 500-181249-3 | MW-19 | Total Recoverable | Water | 6020A | 540154 |
| 500-181249-4 | MW-01 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-5 | MW-02 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-6 | MW-03 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-7 | MW-04 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-8 | MW-05 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-9 | MW-10 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-10 | MW-08 | Total Recoverable | Water | 6020A | 540361 |
| MB 500-540154/1-A | Method Blank | Total Recoverable | Water | 6020A | 540154 |
| MB 500-540361/1-A | Method Blank | Total Recoverable | Water | 6020A | 540361 |
| LCS 500-540154/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 540154 |
| LCS 500-540361/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 540361 |

### Analysis Batch: 541287

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-10 | MW-08 | Total/NA | Water | 7470A | 541074 |
| 500-181249-11 | MW-09 | Total/NA | Water | 7470A | 541074 |
| 500-181249-12 | MW-11 | Total/NA | Water | 7470A | 541074 |
| 500-181249-13 | MW-12 | Total/NA | Water | 7470A | 541074 |
| 500-181249-14 | MW-15 | Total/NA | Water | 7470A | 541074 |
| 500-181249-15 | Duplicate | Total/NA | Water | 7470A | 541074 |
| MB 500-541074/12-A | Method Blank | Total/NA | Water | 7470A | 541074 |
| LCS 500-541074/13-A | Lab Control Sample | Total/NA | Water | 7470A | 541074 |

## General Chemistry

### Analysis Batch: 487586

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-2 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-3 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-487586/5 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-487586/6 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

## General Chemistry (Continued)

### Analysis Batch: 487586 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCSD 400-487586/26 | Lab Control Sample Dup | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-487586/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 487903

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-4 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-5 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-6 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-7 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-8 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-9 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-10 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-11 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-12 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-13 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-14 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-15 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-487903/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-487903/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-487903/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-6 MS | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-6 MSD | MW-03 | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 540620

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-181249-2 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-181249-3 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-181249-4 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-181249-5 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-181249-6 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-181249-7 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-181249-8 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-181249-9 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-181249-10 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-181249-11 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-181249-12 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-181249-13 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-181249-14 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-181249-15 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-540620/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-540620/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-181249-1 DU | MW-18 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 540788

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-6 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-540788/50 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-540788/51 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

## General Chemistry

### Analysis Batch: 540918

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-3 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-4 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-5 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-540918/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-540918/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 541151

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-7 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-541151/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-541151/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 541164

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-2 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-8 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-9 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-10 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-11 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-12 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-13 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-14 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-15 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-541164/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-541164/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-8 MS | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-8 MSD | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-11 MS | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-11 MSD | MW-09 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 543368

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-181249-2 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-181249-3 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-181249-4 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-181249-5 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-181249-6 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-181249-7 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-181249-8 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-181249-9 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-181249-10 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-181249-11 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-181249-12 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-181249-13 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-181249-14 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-181249-15 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-543368/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-543368/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| 500-181249-1 MS | MW-18 | Total/NA | Water | SM 4500 F C | |

## General Chemistry (Continued)

### Analysis Batch: 543368 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 MSD | MW-18 | Total/NA | Water | SM 4500 F C | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-540154/1-A**
**Matrix: Water**
**Analysis Batch: 540335**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540154**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 04/28/20 17:57 | 04/29/20 10:07 | 1 |

**Lab Sample ID: LCS 500-540154/2-A**
**Matrix: Water**
**Analysis Batch: 540335**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540154**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.481 | | mg/L | | 96 | 80 - 120 |

**Lab Sample ID: MB 500-540361/1-A**
**Matrix: Water**
**Analysis Batch: 540533**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540361**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 04/29/20 17:08 | 04/30/20 09:18 | 1 |

**Lab Sample ID: LCS 500-540361/2-A**
**Matrix: Water**
**Analysis Batch: 540533**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540361**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.516 | | mg/L | | 103 | 80 - 120 |

**Lab Sample ID: MB 500-540624/1-A**
**Matrix: Water**
**Analysis Batch: 540772**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540624**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/01/20 07:00 | 05/01/20 19:31 | 1 |

**Lab Sample ID: LCS 500-540624/2-A**
**Matrix: Water**
**Analysis Batch: 540772**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540624**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.100 | 0.107 | | mg/L | | 107 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-540154/1-A**
**Matrix: Water**
**Analysis Batch: 540544**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540154**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-540154/1-A**
**Matrix: Water**
**Analysis Batch: 540544**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540154**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |

**Lab Sample ID: MB 500-540154/1-A**
**Matrix: Water**
**Analysis Batch: 541102**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540154**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 04/28/20 17:57 | 05/05/20 11:05 | 1 |

**Lab Sample ID: LCS 500-540154/2-A**
**Matrix: Water**
**Analysis Batch: 540544**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540154**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.100 | 0.0995 | | mg/L | | 100 | 80 - 120 |
| Barium | 2.00 | 2.01 | | mg/L | | 100 | 80 - 120 |
| Cadmium | 0.0500 | 0.0512 | | mg/L | | 102 | 80 - 120 |
| Calcium | 10.0 | 10.3 | | mg/L | | 103 | 80 - 120 |
| Cobalt | 0.500 | 0.529 | | mg/L | | 106 | 80 - 120 |
| Lead | 0.100 | 0.110 | | mg/L | | 110 | 80 - 120 |
| Molybdenum | 1.00 | 1.01 | | mg/L | | 101 | 80 - 120 |
| Selenium | 0.100 | 0.103 | | mg/L | | 103 | 80 - 120 |
| Thallium | 0.100 | 0.109 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: LCS 500-540154/2-A**
**Matrix: Water**
**Analysis Batch: 541102**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540154**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 1.00 | | mg/L | | 100 | 80 - 120 |

**Lab Sample ID: MB 500-540361/1-A**
**Matrix: Water**
**Analysis Batch: 541048**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540361**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-540361/1-A**
**Matrix: Water**
**Analysis Batch: 541102**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540361**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 11:23 | 1 |

**Lab Sample ID: LCS 500-540361/2-A**
**Matrix: Water**
**Analysis Batch: 541048**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540361**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.100 | 0.0954 | | mg/L | | 95 | 80 - 120 |
| Barium | 2.00 | 1.93 | | mg/L | | 96 | 80 - 120 |
| Cadmium | 0.0500 | 0.0472 | | mg/L | | 94 | 80 - 120 |
| Calcium | 10.0 | 10.0 | | mg/L | | 100 | 80 - 120 |
| Chromium | 0.200 | 0.198 | | mg/L | | 99 | 80 - 120 |
| Cobalt | 0.500 | 0.494 | | mg/L | | 99 | 80 - 120 |
| Lead | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |
| Molybdenum | 1.00 | 0.951 | | mg/L | | 95 | 80 - 120 |
| Selenium | 0.100 | 0.100 | | mg/L | | 100 | 80 - 120 |
| Thallium | 0.100 | 0.105 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: LCS 500-540361/2-A**
**Matrix: Water**
**Analysis Batch: 541102**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540361**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 0.992 | | mg/L | | 99 | 80 - 120 |

**Lab Sample ID: MB 500-540624/1-A**
**Matrix: Water**
**Analysis Batch: 540865**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540624**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Boron | <0.050 | | 0.050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |

**Lab Sample ID: LCS 500-540624/2-A**
**Matrix: Water**
**Analysis Batch: 540865**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540624**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.100 | 0.0943 | | mg/L | | 94 | 80 - 120 |
| Barium | 0.500 | 0.505 | | mg/L | | 101 | 80 - 120 |
| Boron | 1.00 | 0.932 | | mg/L | | 93 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-540624/2-A**
**Matrix: Water**
**Analysis Batch: 540865**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540624**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Cadmium | 0.0500 | 0.0481 | | mg/L | | 96 | 80 - 120 |
| Calcium | 10.0 | 10.2 | | mg/L | | 102 | 80 - 120 |
| Cobalt | 0.500 | 0.484 | | mg/L | | 97 | 80 - 120 |
| Lead | 0.100 | 0.106 | | mg/L | | 106 | 80 - 120 |
| Molybdenum | 1.00 | 0.960 | | mg/L | | 96 | 80 - 120 |
| Selenium | 0.100 | 0.0980 | | mg/L | | 98 | 80 - 120 |
| Thallium | 0.100 | 0.102 | | mg/L | | 102 | 80 - 120 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-540885/12-A**
**Matrix: Water**
**Analysis Batch: 541085**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 540885**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/04/20 10:40 | 05/05/20 08:49 | 1 |

**Lab Sample ID: LCS 500-540885/13-A**
**Matrix: Water**
**Analysis Batch: 541085**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 540885**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00199 | | mg/L | | 99 | 80 - 120 |

**Lab Sample ID: 500-181249-1 MS**
**Matrix: Water**
**Analysis Batch: 541085**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**
**Prep Batch: 540885**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00113 | | mg/L | | 113 | 75 - 125 |

**Lab Sample ID: 500-181249-1 MSD**
**Matrix: Water**
**Analysis Batch: 541085**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**
**Prep Batch: 540885**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00113 | | mg/L | | 113 | 75 - 125 | 0 | 20 |

**Lab Sample ID: 500-181249-1 DU**
**Matrix: Water**
**Analysis Batch: 541085**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**
**Prep Batch: 540885**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: MB 500-541074/12-A**
**Matrix: Water**
**Analysis Batch: 541287**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 541074**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/05/20 10:05 | 05/06/20 08:45 | 1 |

**Lab Sample ID: LCS 500-541074/13-A**
**Matrix: Water**
**Analysis Batch: 541287**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 541074**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00197 | | mg/L | | 98 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-540620/1**
**Matrix: Water**
**Analysis Batch: 540620**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 05/01/20 01:44 | 1 |

**Lab Sample ID: LCS 500-540620/2**
**Matrix: Water**
**Analysis Batch: 540620**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 266 | | mg/L | | 106 | 80 - 120 |

**Lab Sample ID: 500-181249-1 DU**
**Matrix: Water**
**Analysis Batch: 540620**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1000 | | 1010 | | mg/L | | 0.6 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-540788/50**
**Matrix: Water**
**Analysis Batch: 540788**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/02/20 12:42 | 1 |

**Lab Sample ID: LCS 500-540788/51**
**Matrix: Water**
**Analysis Batch: 540788**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 52.5 | | mg/L | | 105 | 85 - 115 |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: MB 500-540918/12**
**Matrix: Water**
**Analysis Batch: 540918**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/02/20 13:46 | 1 |

**Lab Sample ID: LCS 500-540918/13**
**Matrix: Water**
**Analysis Batch: 540918**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 53.8 | | mg/L | | 108 | 85 - 115 |

**Lab Sample ID: MB 500-541151/12**
**Matrix: Water**
**Analysis Batch: 541151**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/05/20 19:23 | 1 |

**Lab Sample ID: LCS 500-541151/13**
**Matrix: Water**
**Analysis Batch: 541151**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 51.6 | | mg/L | | 103 | 85 - 115 |

**Lab Sample ID: MB 500-541164/4**
**Matrix: Water**
**Analysis Batch: 541164**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/05/20 21:54 | 1 |

**Lab Sample ID: LCS 500-541164/5**
**Matrix: Water**
**Analysis Batch: 541164**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 52.7 | | mg/L | | 105 | 85 - 115 |

**Lab Sample ID: 500-181249-8 MS**
**Matrix: Water**
**Analysis Batch: 541164**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 56 | | 50.0 | 104 | | mg/L | | 94 | 75 - 125 |

**Lab Sample ID: 500-181249-8 MSD**
**Matrix: Water**
**Analysis Batch: 541164**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 56 | | 50.0 | 105 | | mg/L | | 98 | 75 - 125 | 2 | 20 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: 500-181249-11 MS**
**Matrix: Water**
**Analysis Batch: 541164**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 34 | | 50.0 | 85.8 | | mg/L | | 103 | 75 - 125 |

**Lab Sample ID: 500-181249-11 MSD**
**Matrix: Water**
**Analysis Batch: 541164**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 34 | | 50.0 | 83.7 | | mg/L | | 98 | 75 - 125 | 3 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-543368/3**
**Matrix: Water**
**Analysis Batch: 543368**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/19/20 08:29 | 1 |

**Lab Sample ID: LCS 500-543368/4**
**Matrix: Water**
**Analysis Batch: 543368**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 11.0 | | mg/L | | 110 | 80 - 120 |

**Lab Sample ID: 500-181249-1 MS**
**Matrix: Water**
**Analysis Batch: 543368**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.69 | | 5.00 | 6.14 | | mg/L | | 109 | 75 - 125 |

**Lab Sample ID: 500-181249-1 MSD**
**Matrix: Water**
**Analysis Batch: 543368**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.69 | | 5.00 | 6.14 | | mg/L | | 109 | 75 - 125 | 0 | 20 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-487586/5**
**Matrix: Water**
**Analysis Batch: 487586**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 04/30/20 12:12 | 1 |

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: LCS 400-487586/6**
**Matrix: Water**
**Analysis Batch: 487586**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 15.0 | 14.7 | | mg/L | | 98 | 90 - 110 |

**Lab Sample ID: MRL 400-487586/3**
**Matrix: Water**
**Analysis Batch: 487586**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 5.00 | <5.0 | | mg/L | | 97 | 50 - 150 |

**Lab Sample ID: MB 400-487903/6**
**Matrix: Water**
**Analysis Batch: 487903**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/04/20 11:20 | 1 |

**Lab Sample ID: LCS 400-487903/7**
**Matrix: Water**
**Analysis Batch: 487903**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 15.0 | 15.0 | | mg/L | | 100 | 90 - 110 |

**Lab Sample ID: MRL 400-487903/3**
**Matrix: Water**
**Analysis Batch: 487903**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 5.00 | 5.89 | | mg/L | | 118 | 50 - 150 |

**Lab Sample ID: 500-181249-6 MS**
**Matrix: Water**
**Analysis Batch: 487903**

**Client Sample ID: MW-03**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 79 | | 10.0 | 86.4 | 4 | mg/L | | 74 | 77 - 128 |

**Lab Sample ID: 500-181249-6 MSD**
**Matrix: Water**
**Analysis Batch: 487903**

**Client Sample ID: MW-03**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 79 | | 10.0 | 83.2 | 4 | mg/L | | 42 | 77 - 128 | 4 | 5 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-18

**Date Collected: 04/27/20 10:49**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540335 | 04/29/20 10:20 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540544 | 04/30/20 11:55 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 11:12 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 540885 | 05/04/20 10:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541085 | 05/05/20 09:18 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 01:49 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 541164 | 05/05/20 21:56 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 08:38 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 487586 | 04/30/20 13:01 | HES | TAL PEN |

## Client Sample ID: MW-17

**Date Collected: 04/27/20 11:32**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540335 | 04/29/20 10:24 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540544 | 04/30/20 11:59 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 541102 | 05/05/20 11:16 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 540885 | 05/04/20 10:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541085 | 05/05/20 09:24 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 01:54 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 541164 | 05/05/20 21:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 08:58 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 487586 | 04/30/20 13:04 | HES | TAL PEN |

## Client Sample ID: MW-19

**Date Collected: 04/27/20 12:19**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540335 | 04/29/20 10:29 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540544 | 04/30/20 12:03 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 541102 | 05/05/20 11:20 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 540885 | 05/04/20 10:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541085 | 05/05/20 09:26 | MJG | TAL CHI |

## Client Sample ID: MW-19
**Lab Sample ID: 500-181249-3**
**Date Collected: 04/27/20 12:19**
**Matrix: Water**
**Date Received: 04/28/20 09:35**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 01:56 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 540918 | 05/02/20 14:05 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 09:05 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 487586 | 04/30/20 13:04 | HES | TAL PEN |

## Client Sample ID: MW-01
**Lab Sample ID: 500-181249-4**
**Date Collected: 04/28/20 08:32**
**Matrix: Water**
**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540533 | 04/30/20 09:27 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541048 | 05/04/20 19:19 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 11:38 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 540885 | 05/04/20 10:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541085 | 05/05/20 09:32 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 01:59 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 540918 | 05/02/20 14:05 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 09:12 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 487903 | 05/04/20 11:53 | HES | TAL PEN |

## Client Sample ID: MW-02
**Lab Sample ID: 500-181249-5**
**Date Collected: 04/28/20 09:56**
**Matrix: Water**
**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541048 | 05/04/20 19:22 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 11:49 | FXG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:02 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 540918 | 05/02/20 14:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 09:19 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 487903 | 05/04/20 11:57 | HES | TAL PEN |

## Client Sample ID: MW-03
**Lab Sample ID: 500-181249-6**
**Date Collected: 04/28/20 10:46**
**Matrix: Water**
**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541048 | 05/04/20 19:26 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-03

**Lab Sample ID: 500-181249-6**

**Date Collected: 04/28/20 10:46**

**Matrix: Water**

**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 11:52 | FXG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:04 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 540788 | 05/02/20 13:03 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 09:25 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 487903 | 05/04/20 11:57 | HES | TAL PEN |

## Client Sample ID: MW-04

**Lab Sample ID: 500-181249-7**

**Date Collected: 04/28/20 11:43**

**Matrix: Water**

**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541048 | 05/04/20 19:30 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 11:56 | FXG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:07 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 541151 | 05/05/20 19:45 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 09:46 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 487903 | 05/04/20 12:01 | HES | TAL PEN |

## Client Sample ID: MW-05

**Lab Sample ID: 500-181249-8**

**Date Collected: 04/28/20 12:36**

**Matrix: Water**

**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541048 | 05/04/20 19:34 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 11:59 | FXG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:09 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 541164 | 05/05/20 21:58 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 09:53 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 487903 | 05/04/20 12:01 | HES | TAL PEN |

## Client Sample ID: MW-10

**Lab Sample ID: 500-181249-9**

**Date Collected: 04/28/20 13:39**

**Matrix: Water**

**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541048 | 05/04/20 19:37 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 12:03 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-10

**Date Collected: 04/28/20 13:39**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:12 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 541164 | 05/05/20 22:01 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 09:59 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 487903 | 05/04/20 12:01 | HES | TAL PEN |

## Client Sample ID: MW-08

**Date Collected: 04/28/20 14:38**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540533 | 04/30/20 09:31 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541048 | 05/04/20 19:41 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 12:07 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 541074 | 05/05/20 10:05 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541287 | 05/06/20 09:12 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:15 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 541164 | 05/06/20 00:16 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 10:06 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 487903 | 05/04/20 12:01 | HES | TAL PEN |

## Client Sample ID: MW-09

**Date Collected: 04/29/20 09:43**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-11

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540772 | 05/01/20 19:39 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540865 | 05/01/20 16:36 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 541074 | 05/05/20 10:05 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541287 | 05/06/20 09:18 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:17 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 541164 | 05/06/20 00:16 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 10:13 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 487903 | 05/04/20 12:06 | HES | TAL PEN |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-11

**Date Collected: 04/29/20 08:41**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-12

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540772 | 05/01/20 19:43 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540865 | 05/01/20 16:40 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 541074 | 05/05/20 10:05 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541287 | 05/06/20 09:20 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:20 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 541164 | 05/06/20 00:18 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 10:20 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 487903 | 05/04/20 12:06 | HES | TAL PEN |

## Client Sample ID: MW-12

**Date Collected: 04/29/20 10:58**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540772 | 05/01/20 19:47 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540865 | 05/01/20 16:43 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 541074 | 05/05/20 10:05 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541287 | 05/06/20 09:21 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:22 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 541164 | 05/06/20 00:18 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 10:27 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 487903 | 05/04/20 12:23 | HES | TAL PEN |

## Client Sample ID: MW-15

**Date Collected: 04/29/20 12:16**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540772 | 05/01/20 20:00 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540865 | 05/01/20 16:47 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 541074 | 05/05/20 10:05 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541287 | 05/06/20 09:23 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:25 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 541164 | 05/06/20 00:19 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 10:33 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 487903 | 05/04/20 12:23 | HES | TAL PEN |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: Duplicate

**Date Collected: 04/29/20 00:00**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540772 | 05/01/20 20:04 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540865 | 05/01/20 16:51 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 541074 | 05/05/20 10:05 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541287 | 05/06/20 09:24 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:27 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 541164 | 05/06/20 00:19 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 10:38 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 487903 | 05/04/20 12:08 | HES | TAL PEN |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-30-20 * |

## Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Alabama | State | 40150 | 07-01-20 |
| ANAB | ISO/IEC 17025 | L2471 | 02-23-23 |
| Arizona | State | AZ0710 | 01-13-21 |
| Arkansas DEQ | State | 88-0689 | 09-01-20 |
| California | State | 2510 | 07-01-20 |
| Florida | NELAP | E81010 | 06-30-20 |
| Georgia | State | E81010(FL) | 06-30-20 |
| Illinois | NELAP | 004586 | 10-09-20 |
| Iowa | State | 367 | 08-01-20 |
| Kansas | NELAP | E-10253 | 08-16-20 |
| Kentucky (UST) | State | 53 | 06-30-20 |
| Kentucky (WW) | State | KY98030 | 12-31-20 |
| Louisiana | NELAP | 30976 | 06-30-20 |
| Louisiana (DW) | State | LA017 | 12-31-20 |
| Maryland | State | 233 | 09-30-20 |
| Massachusetts | State | M-FL094 | 06-30-20 |
| Michigan | State | 9912 | 05-06-20 |
| Minnesota | NELAP | 012-999-481 | 12-31-20 |
| New Jersey | NELAP | FL006 | 06-30-20 |
| New York | NELAP | 12115 | 04-01-21 |
| North Carolina (WW/SW) | State | 314 | 12-31-20 |
| Oklahoma | State | 9810-186 | 08-31-20 |
| Pennsylvania | NELAP | 68-00467 | 01-31-21 |
| Rhode Island | State | LAO00307 | 12-30-20 |
| South Carolina | State | 96026002 | 06-30-20 |
| Tennessee | State | TN02907 | 06-30-20 |
| Texas | NELAP | T104704286 | 09-30-20 |
| US Fish & Wildlife | US Federal Programs | 058448 | 07-31-20 |
| USDA | US Federal Programs | P330-18-00148 | 05-17-21 |
| Virginia | NELAP | 460166 | 06-14-20 |
| Washington | State | C915 | 05-15-20 |
| West Virginia DEP | State | 136 | 06-30-20 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60
Phone: 708.534.5200 Fax: 708.53

500-181249 COC

(optional)

Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)

Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-181249

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 0.6→4.6

Client: KPRG
Client Project #: 12313.1
Project Name: Powerton CCR
Project Location/State: Pekin, IL
Lab Project #: 50011612
Sampler: M. Mitchel Dolan
Lab PM: Diana Mozkler

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | 3 | 3 | 8 | 8 | 8 | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Parameter | 4030, 904.0 | 6010C, 6020A, D7284 | [redacted] | Total Cl, Fl, TDS | Sulfate | | | | | |
| 1 | | MW-18 | 4/27 | 1049 | 6 | W | | X | X | | X | X | | | | | |
| 2 | | MW-17 | 4/27 | 1132 | 6 | W | | X | X | | X | X | | | | | |
| 3 | | MW-19 | 4/27 | 1219 | 6 | W | | X | X | | X | X | | | | | |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| Mitchel Dolan | KPRG | 4/27/20 | 1630 | FEDEX | | 4/27/20 | 1630 |
| | | | | Rhondeott | TA-CHI | 4/28/20 | 0935 |

Lab Courier
Shipped Fed Ex
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:



TAL-4124-500-1209L

5/19/2020

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing America

500-181249 COC

| Client Information | Sampler: Mitchel Dolan | Lab PM: Mockler, Diana J | Car | COC No: 500-80728-36997.1 |
|---|---|---|---|---|
| Client Contact: Mitchel Dolan | Phone: 262-622-1143 | E-Mail: diana.mockler@testamericainc.com | | Page: Page 1 of 1 |
| Company: KPRG and Associates, Inc. | | | | Job #: 500-181249 |
| Address: 14665 West Lisbon Road, Suite 1A | Due Date Requested: | | | |
| City: Brookfield | TAT Requested (days): | | | |
| State, Zip: WI, 53005 | | | | |
| Phone: 309-477-5240(Tel) | PO #: 4501908159 | | | |
| Email: mitcheld@kprginc.com | WO #: | | | |
| Project Name: Powerton CCR Event Desc: Quarterly Powerton CCR Samplling | Project #: 50011612 | | | |
| Site: Illinois | SSOW#: | | | |

**Analysis Requested**

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0, 904.0 | 6010C, 6020A, 7470A | 2540C, 4500_F_C, SM4500_Cl_E, SM4500_SO4_E | SM4500_SO4_E - Local Method | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | D | D | N | N | | |
| MW-01 | 4/28/20 | 0832 | G | Water | | | X | X | X | X | | |
| MW-02 | | 0956 | | Water | | | | | | | | |
| MW-03 | | 1046 | | Water | | | | | | | | |
| MW-04 | | 1143 | | Water | | | | | | | | |
| MW-05 | | 1236 | | Water | | | | | | | | |
| MW-10 | | 1339 | | Water | | | | | | | | |
| | | | | Water | | | | | | | | |

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: Powerton FAB App IV Parameters

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by | Date/Time | Company | Received by | Date/Time | Company |
|---|---|---|---|---|---|---|
| 1 | | 4/28/20 / 1600 | KPRG | FEDEX | 4/28/20 / 1600 | |
| 2 | | | | | 4/29/20 1130 | TA-CHI |
| 3 | | | | | 1130 | |

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 5.8 33

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-181249

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler:

Client: KPRG
Client Project #: 12313.1
Project Name: Powerton CCR
Project Location/State: Pekin, IL
Lab Project #: 500-11612
Sampler: Mitchel Dolan
Lab PM: Diana Mockler

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | 8 | 8 | 3 | 3 | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Parameter | Total TDS, Cl, Fl, SO4 | Total Sulfate | Total Metals | Rad 226/228 | | | | | | |
| 4 | | MW-01 | 4/28 | 0832 | 6 | W | | X | X | X | X | | | | | | |
| 10 | | MW-08 | 4/28 | 1438 | 6 | W | | X | X | X | X | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 4/28/20 | 1600 | FEDEX | | 4/28/20 | 1600 |
| | | | | [signature] | TA-CHI | 4/29/20 | 1130 |

Lab Courier
Shipped FXG
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments
Powerton ABB/ASB App. IV Parameters.
*One set of CCR samples collected for MW-01. Well falls under both ABB/ASB + FAB

Lab Comments:



TAL-4124-500 (1209)

5/19/2020

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information | Sampler: Mitchel Dolan | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-80729-36998.1 |
|---|---|---|---|---|
| Client Contact: Mitchel Dolan | Phone: 262-622-1143 | E-Mail: diana.mockler@testamericainc.com | | Page: Page 1 of 1 |
| Company: KPRG and Associates, Inc. | | | | Job #: 500-181249 |

| Address: 14665 West Lisbon Road, Suite 1A | Due Date Requested: | Analysis Requested | Preservation Codes: |
|---|---|---|---|
| City: Brookfield | TAT Requested (days): | | A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify) |
| State, Zip: WI, 53005 | | | |
| Phone: 309-477-5240(Tel) | PO #: 4501908159 | | |
| Email: mitcheld@kprginc.com | WO #: | | Other: |
| Project Name: Powerton CCR Event Desc: Quarterly Powerton CCR Samplling | Project #: 50011612 | | |
| Site: Illinois | SSOW#: | | |

500-181249 COC

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0, 904.0 | 6010C, 6020A, 7470A | 2540C, 4500_F_C, SM4500_Cl_E, SM4500_SO4_E | SM4500_SO4_E - Sulfate | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | D | D | N | N | | |
| 11 MW-09 | 4/29/20 | 0943 | G | Water | | | X | X | X | X | | |
| 12 MW-11 | 4/29/20 | 0841 | G | Water | | | X | X | X | X | | |
| 13 MW-12 | 4/29/20 | 1058 | G | Water | | | X | X | X | X | | |
| 14 MW-15 | 4/29/20 | 1216 | G | Water | | | X | X | X | X | | |
| 15 DUPLICATE | 4/29/20 | - | G | Water | | | X | X | X | X | | |
| MW-05 | | | | Water | | | | | | | | |
| MW-07 | | | | Water | | | | | | | | |
| MW-08 | | | | Water | | | | | | | | |
| MW-10 | | | | Water | | | | | | | | |
| | | | | Water | | | | | | | | |
| | | | | | | | | | | | | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by | Date/Time: | Company |
|---|---|---|---|---|---|
| Mitchel Dolan | 4/29/20 1500 | KPRG | FEDEX | 4/29/20 1500 | |
| Relinquished by: | Date/Time: | Company | Received by: Shari Knott | Date/Time: 4/30/20 0940 | Company TA-CHI |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∧ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.6→2.6, 2.4, 1.8→2.8 |
|---|---|---|


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 27APR20
ACTWGT: 41.05 LB
CAD: 6994780/SSFE2102
DIMS: 24x13x14 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 6048
500-181249 Wayb
(000) 000-0000
REF:
INV:
PO:
DEPT:
FedEx
Express
2 of 3
MPS# 0263 3922 9282 8776
Mstr# 3922 9282 8765
0201
TUE - 28 APR 3:00P
STANDARD OVERNIGHT
XH JOTA
60484
IL-US ORD
RT 519
ST 33
5
15:00
A
8776
04.28


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 29APR20
ACTWGT: 47.45 LB
CAD: 6994780/SSFE2102
DIMS: 25x14x13 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(000) 000-0000
REF:
INV:
PO:
DEPT:
500-181249 Wayt
FedEx
Express
1 of 4
TRK# 0201 3923 6795 1735
THU - 30 APR 3:00P
STANDARD OVERNIGHT
## MASTER ##
XH JOTA
AHS
60484
IL-US ORD
48qt.


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 29APR20
ACTWGT: 46.80 LB
CAD: 6994780/SSFE2102
DIMS: 25x14x13 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(000) 000-0000
REF:
INV:
PO:
DEPT:
FedEx
Express
3 of 4
MPS# 3923 6795 1757
Mstr# 3923 6795 1735
0263
0201
THU - 30 APR 3:00P
STANDARD OVERNIGHT
AHS
60484
IL-US ORD
XH JOTA
48qt.


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 29APR20
ACTWGT: 45.30 LB
CAD: 6994780/SSFE2102
DIMS: 25x14x13 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(000) 000-0000
REF:
INV:
PO:
DEPT:
FedEx
Express
4 of 4
MPS# 3923 6795 1768
Mstr# 3923 6795 1735
0263
0201
THU - 30 APR 3:00P
STANDARD OVERNIGHT
AHS
60484
IL-US ORD
XH JOTA
48qt

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134621.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 5/8/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-181249-4) | 4/28/20 | 08:32 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-02 (500-181249-5) | 4/28/20 | 09:56 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-181249-6) | 4/28/20 | 10:46 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-181249-7) | 4/28/20 | 11:43 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-181249-8) | 4/28/20 | 12:36 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-181249-9) | 4/28/20 | 13:39 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-08 (500-181249-10) | 4/28/20 | 14:38 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | Stephanie Hernandez | 4/29/20 1600 | TA-CHI | FED EX | | |
| 2 | FED EX | | | | 4/30/2020 0846 | ETA STL |
| 3 | | | | | | |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134666.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 5/8/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-09 (500-181249-11) | 4/29/20 | 09:43 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-11 (500-181249-12) | 4/29/20 | 08:41 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-12 (500-181249-13) | 4/29/20 | 10:58 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-15 (500-181249-14) | 4/29/20 | 12:16 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-181249-15) | 4/29/20 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | Stephanie Hernandez | 4/30/20 1630 | TA-CHI | FE | | |
| 2 | FE | | | | | |
| 3 | | | | | 5/1/2020 0834 | ETASTL |
| 4 | | | | | | |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134588.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 5/8/2020 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-18 (500-181249-1) | 4/27/20 | 10:49 Central | | Water | | | X | 1 | |
| MW-17 (500-181249-2) | 4/27/20 | 11:32 Central | | Water | | | X | 1 | |
| MW-19 (500-181249-3) | 4/27/20 | 12:19 Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Relinquished by: | 4/28-20 1630 | | | 4/28/20 9:04 | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.0°C IR3 |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134616.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 5/8/2020 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | Preservation Code: | | | | | | | |
| MW-01 (500-181249-4) | 4/28/20 | 08:32 Central | | Water | | | X | 1 | |
| MW-02 (500-181249-5) | 4/28/20 | 09:56 Central | | Water | | | X | 1 | |
| MW-03 (500-181249-6) | 4/28/20 | 10:46 Central | | Water | | | X | 1 | |
| MW-04 (500-181249-7) | 4/28/20 | 11:43 Central | | Water | | | X | 1 | |
| MW-05 (500-181249-8) | 4/28/20 | 12:36 Central | | Water | | | X | 1 | |
| MW-10 (500-181249-9) | 4/28/20 | 13:39 Central | | Water | | | X | 1 | |
| MW-08 (500-181249-10) | 4/28/20 | 14:38 Central | | Water | | | X | 1 | |
| | | | | | | | | | |
| | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Stephanie Hernandez | 4/29/20 1600 | TA-CHI | | | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: 4-30-20 9:27 | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.0° IR7 |
|---|---|---|

Ver: 01/16/2019

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5/19/2020

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134661.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 5/8/2020 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-09 (500-181249-11) | 4/29/20 | 09:43 Central | | Water | | | X | 1 | |
| MW-11 (500-181249-12) | 4/29/20 | 08:41 Central | | Water | | | X | 1 | |
| MW-12 (500-181249-13) | 4/29/20 | 10:58 Central | | Water | | | X | 1 | |
| MW-15 (500-181249-14) | 4/29/20 | 12:16 Central | | Water | | | X | 1 | |
| Duplicate (500-181249-15) | 4/29/20 | Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| ***Possible Hazard Identification*** | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** |
|---|---|
| *Unconfirmed* | ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | Stephanie Hernandez | 4/30/20 1630 | TA-CHI | Kathy R Auer | 5-1-20 856 | |
| 2 | | | | | | |
| 3 | | | | | | |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.0°C IR 8 |
|---|---|---|

Ver: 01/16/2019



5/19/2020

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-1

**Login Number: 181249**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.6,5.8,3.3,2.6,2.4,2.85 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-1

**Login Number: 181249**
**List Number: 2**
**Creator: Gore, Beija K**

**List Source: Eurofins TestAmerica, Pensacola**
**List Creation: 04/29/20 02:02 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | 1007369 |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.0 °C IR 8 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-1

**Login Number: 181249**
**List Number: 6**
**Creator: Conrady, Hank W**

**List Source: Eurofins TestAmerica, Pensacola**
**List Creation: 04/30/20 05:18 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.0°C IR-7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-1

**Login Number: 181249**
**List Number: 7**
**Creator: Avery, Kathy R**

**List Source: Eurofins TestAmerica, Pensacola**
**List Creation: 05/01/20 11:07 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.0°IR 8 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

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# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-181249-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

Diana Mockler

*Authorized for release by:*
*6/2/2020 3:32:37 PM*

Diana Mockler, Project Manager I
(219)252-7570
diana.mockler@testamericainc.com

LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-181249-2

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-181249-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 4/28/2020 9:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 1.6º C, 2.4º C, 2.6º C, 2.8º C, 3.3º C and 5.8º C.

**RAD**
Methods 903.0, 9315: Radium-226 Prep Batch 160-470017
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

MW-15 (500-181249-14), (LCS 160-470017/1-A), (MB 160-470017/22-A), (160-37998-J-1-A) and (160-37998-J-1-B DU)

Methods 903.0, 9315: Radium-226 Prep Batch 160-469993
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
MW-18 (500-181249-1), MW-17 (500-181249-2), MW-19 (500-181249-3), MW-01 (500-181249-4), MW-02 (500-181249-5), MW-03 (500-181249-6), MW-04 (500-181249-7), MW-05 (500-181249-8), MW-10 (500-181249-9), MW-08 (500-181249-10), MW-09 (500-181249-11), MW-11 (500-181249-12), MW-12 (500-181249-13), Duplicate (500-181249-15), (LCS 160-469993/1-A), (MB 160-469993/23-A) and (500-181249-D-1-B DU)

Methods 904.0, 9320: Ra-228 Prep Batch 160-470021
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

MW-15 (500-181249-14), (LCS 160-470021/1-A), (MB 160-470021/22-A), (160-37998-J-1-C) and (160-37998-J-1-D DU)

Methods 904.0, 9320: Radium-228 Prep Batch 160-469995
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
MW-18 (500-181249-1), MW-17 (500-181249-2), MW-19 (500-181249-3), MW-01 (500-181249-4), MW-02 (500-181249-5), MW-03 (500-181249-6), MW-04 (500-181249-7), MW-05 (500-181249-8), MW-10 (500-181249-9), MW-08 (500-181249-10), MW-09 (500-181249-11), MW-11 (500-181249-12), MW-12 (500-181249-13), Duplicate (500-181249-15), (LCS 160-469995/1-A), (MB 160-469995/23-A) and (500-181249-D-1-D DU)

Method PrecSep_0: Radium 228 Prep Batch 160-469995:

The following samples were prepared at a reduced aliquot due to discoloration and cloudy appearance: MW-10 (500-181249-9). Samples 500-181249-9 and 160-37961-1 have a yellow discoloration and cloudy appearance. Sample 160-37961-2 has a cloudy appearance.

Method PrecSep-21: Radium 226 Prep Batch 160-469993:

The following samples were prepared at a reduced aliquot due to discoloration and cloudy appearance: MW-10 (500-181249-9). Samples

## Job ID: 500-181249-2 (Continued)

### Laboratory: Eurofins TestAmerica, Chicago (Continued)

500-181249-9 and 160-37961-1 have a yellow discoloration and cloudy appearance. Sample 160-37961-2 has a cloudy appearance.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Water | 04/27/20 10:49 | 04/28/20 09:35 | |
| 500-181249-2 | MW-17 | Water | 04/27/20 11:32 | 04/28/20 09:35 | |
| 500-181249-3 | MW-19 | Water | 04/27/20 12:19 | 04/28/20 09:35 | |
| 500-181249-4 | MW-01 | Water | 04/28/20 08:32 | 04/29/20 11:30 | |
| 500-181249-5 | MW-02 | Water | 04/28/20 09:56 | 04/29/20 11:30 | |
| 500-181249-6 | MW-03 | Water | 04/28/20 10:46 | 04/29/20 11:30 | |
| 500-181249-7 | MW-04 | Water | 04/28/20 11:43 | 04/29/20 11:30 | |
| 500-181249-8 | MW-05 | Water | 04/28/20 12:36 | 04/29/20 11:30 | |
| 500-181249-9 | MW-10 | Water | 04/28/20 13:39 | 04/29/20 11:30 | |
| 500-181249-10 | MW-08 | Water | 04/28/20 14:38 | 04/29/20 11:30 | |
| 500-181249-11 | MW-09 | Water | 04/29/20 09:43 | 04/30/20 09:40 | |
| 500-181249-12 | MW-11 | Water | 04/29/20 08:41 | 04/30/20 09:40 | |
| 500-181249-13 | MW-12 | Water | 04/29/20 10:58 | 04/30/20 09:40 | |
| 500-181249-14 | MW-15 | Water | 04/29/20 12:16 | 04/30/20 09:40 | |
| 500-181249-15 | Duplicate | Water | 04/29/20 00:00 | 04/30/20 09:40 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-18

**Date Collected: 04/27/20 10:49**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.179 | | 0.113 | 0.115 | 1.00 | 0.158 | pCi/L | 05/11/20 10:44 | 06/02/20 06:04 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *78.0* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:04* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.157 | U | 0.310 | 0.310 | 1.00 | 0.526 | pCi/L | 05/11/20 11:12 | 05/27/20 10:59 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *78.0* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 10:59* | *1* |
| *Y Carrier* | *84.9* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 10:59* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.336 | U | 0.330 | 0.331 | 5.00 | 0.526 | pCi/L | | 06/02/20 12:48 | 1 |

## Client Sample ID: MW-17

**Date Collected: 04/27/20 11:32**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.155** | | 0.0862 | 0.0873 | 1.00 | 0.101 | pCi/L | 05/11/20 10:44 | 06/02/20 06:05 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.8* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:05* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.208 | U | 0.265 | 0.266 | 1.00 | 0.498 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.8* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *90.1* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | -0.0538 | U | 0.279 | 0.280 | 5.00 | 0.498 | pCi/L | | 06/02/20 12:48 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-19

**Date Collected: 04/27/20 12:19**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.146 | | 0.0847 | 0.0857 | 1.00 | 0.0995 | pCi/L | 05/11/20 10:44 | 06/02/20 06:05 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *80.7* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:05* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.484 | | 0.292 | 0.296 | 1.00 | 0.446 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *80.7* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *88.6* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.630 | | 0.304 | 0.308 | 5.00 | 0.446 | pCi/L | | 06/02/20 12:48 | 1 |

## Client Sample ID: MW-01

**Date Collected: 04/28/20 08:32**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.114 | | 0.0768 | 0.0775 | 1.00 | 0.0939 | pCi/L | 05/11/20 10:44 | 06/02/20 06:05 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *77.4* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:05* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.514 | | 0.304 | 0.308 | 1.00 | 0.462 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *77.4* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.628 | | 0.314 | 0.318 | 5.00 | 0.462 | pCi/L | | 06/02/20 12:48 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-02

**Date Collected: 04/28/20 09:56**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0240 | U | 0.0562 | 0.0563 | 1.00 | 0.107 | pCi/L | 05/11/20 10:44 | 06/02/20 06:05 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.6* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:05* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0440 | U | 0.308 | 0.308 | 1.00 | 0.540 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.6* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.0680 | U | 0.313 | 0.313 | 5.00 | 0.540 | pCi/L | | 06/02/20 12:48 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-03

**Date Collected: 04/28/20 10:46**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0127 | U | 0.0385 | 0.0385 | 1.00 | 0.0996 | pCi/L | 05/11/20 10:44 | 06/02/20 06:05 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *81.3* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:05* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.201 | U | 0.297 | 0.298 | 1.00 | 0.498 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *81.3* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *90.1* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.189 | U | 0.299 | 0.300 | 5.00 | 0.498 | pCi/L | | 06/02/20 12:48 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-04

**Date Collected: 04/28/20 11:43**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0695 | U | 0.0692 | 0.0695 | 1.00 | 0.105 | pCi/L | 05/11/20 10:44 | 06/02/20 06:05 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *78.3* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:05* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.145 | U | 0.274 | 0.274 | 1.00 | 0.465 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *78.3* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *90.8* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.215 | U | 0.283 | 0.283 | 5.00 | 0.465 | pCi/L | | 06/02/20 12:48 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

**Client Sample ID: MW-05**
**Date Collected: 04/28/20 12:36**
**Date Received: 04/29/20 11:30**

**Lab Sample ID: 500-181249-8**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.105 | U | 0.0812 | 0.0817 | 1.00 | 0.113 | pCi/L | 05/11/20 10:44 | 06/02/20 06:06 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *77.1* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:06* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.402 | U | 0.297 | 0.300 | 1.00 | 0.466 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *77.1* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *86.4* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.508** | | 0.308 | 0.311 | 5.00 | 0.466 | pCi/L | | 06/02/20 12:48 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-10

**Date Collected: 04/28/20 13:39**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.223** | | 0.126 | 0.128 | 1.00 | 0.164 | pCi/L | 05/11/20 10:44 | 06/02/20 06:06 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.0* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:06* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.416 | U | 0.348 | 0.350 | 1.00 | 0.557 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.0* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *88.6* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.639** | | 0.370 | 0.373 | 5.00 | 0.557 | pCi/L | | 06/02/20 12:48 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-08

**Date Collected: 04/28/20 14:38**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-10

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0660 | U | 0.0739 | 0.0742 | 1.00 | 0.118 | pCi/L | 05/11/20 10:44 | 06/02/20 06:06 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *81.0* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:06* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0805 | U | 0.259 | 0.259 | 1.00 | 0.450 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *81.0* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *91.2* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.147 | U | 0.269 | 0.269 | 5.00 | 0.450 | pCi/L | | 06/02/20 12:48 | 1 |

## Client Sample ID: MW-09

**Date Collected: 04/29/20 09:43**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-11

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0472 | U | 0.0631 | 0.0632 | 1.00 | 0.105 | pCi/L | 05/11/20 10:44 | 06/02/20 08:10 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *70.2* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 08:10* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.267 | U | 0.415 | 0.416 | 1.00 | 0.698 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *70.2* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *65.8* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.314 | U | 0.420 | 0.421 | 5.00 | 0.698 | pCi/L | | 06/02/20 12:27 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-11

**Date Collected: 04/29/20 08:41**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-12

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.253** | | 0.104 | 0.106 | 1.00 | 0.0964 | pCi/L | 05/11/20 10:44 | 06/02/20 08:10 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.7* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 08:10* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.218 | U | 0.266 | 0.267 | 1.00 | 0.440 | pCi/L | 05/11/20 11:12 | 05/27/20 11:01 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.7* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:01* | *1* |
| *Y Carrier* | *89.7* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:01* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.470** | | 0.286 | 0.287 | 5.00 | 0.440 | pCi/L | | 06/02/20 12:27 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-12

**Date Collected: 04/29/20 10:58**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-13

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0714 | U | 0.0906 | 0.0909 | 1.00 | 0.151 | pCi/L | 05/11/20 10:44 | 06/02/20 08:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *80.1* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 08:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.506** | | 0.285 | 0.289 | 1.00 | 0.429 | pCi/L | 05/11/20 11:12 | 05/27/20 11:01 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *80.1* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:01* | *1* |
| *Y Carrier* | *89.0* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:01* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.578** | | 0.299 | 0.303 | 5.00 | 0.429 | pCi/L | | 06/02/20 12:27 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-15

**Date Collected: 04/29/20 12:16**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-14

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.183 | | 0.0787 | 0.0804 | 1.00 | 0.0730 | pCi/L | 05/11/20 14:42 | 06/02/20 04:06 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.5* | | *40 - 110* | *05/11/20 14:42* | *06/02/20 04:06* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.156 | U | 0.261 | 0.261 | 1.00 | 0.441 | pCi/L | 05/11/20 15:09 | 05/21/20 12:21 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.5* | | *40 - 110* | *05/11/20 15:09* | *05/21/20 12:21* | *1* |
| *Y Carrier* | *92.0* | | *40 - 110* | *05/11/20 15:09* | *05/21/20 12:21* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.339 | U | 0.273 | 0.273 | 5.00 | 0.441 | pCi/L | | 06/02/20 12:27 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: Duplicate

**Date Collected: 04/29/20 00:00**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-15

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.124 | | 0.0880 | 0.0887 | 1.00 | 0.120 | pCi/L | 05/11/20 10:44 | 06/02/20 08:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *78.3* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 08:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.193 | U | 0.304 | 0.304 | 1.00 | 0.510 | pCi/L | 05/11/20 11:12 | 05/27/20 11:01 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *78.3* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:01* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:01* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.317 | U | 0.316 | 0.317 | 5.00 | 0.510 | pCi/L | | 06/02/20 12:28 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Rad

### Prep Batch: 469993

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-181249-2 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-181249-3 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-181249-4 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-181249-5 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-181249-6 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-181249-7 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-181249-8 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-181249-9 | MW-10 | Total/NA | Water | PrecSep-21 | |
| 500-181249-10 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-181249-11 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-181249-12 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-181249-13 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-181249-15 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-469993/23-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-469993/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-181249-1 DU | MW-18 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 469995

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-181249-2 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-181249-3 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-181249-4 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-181249-5 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-181249-6 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-181249-7 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-181249-8 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-181249-9 | MW-10 | Total/NA | Water | PrecSep_0 | |
| 500-181249-10 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-181249-11 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-181249-12 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-181249-13 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-181249-15 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-469995/23-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-469995/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-181249-1 DU | MW-18 | Total/NA | Water | PrecSep_0 | |

### Prep Batch: 470017

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-14 | MW-15 | Total/NA | Water | PrecSep-21 | |
| MB 160-470017/22-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-470017/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 470021

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-14 | MW-15 | Total/NA | Water | PrecSep_0 | |
| MB 160-470021/22-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-470021/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-469993/23-A**
**Matrix: Water**
**Analysis Batch: 471667**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 469993**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.04301 | U | 0.0527 | 0.0529 | 1.00 | 0.0852 | pCi/L | 05/11/20 10:44 | 06/02/20 08:12 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *86.4* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 08:12* | *1* |

**Lab Sample ID: LCS 160-469993/1-A**
**Matrix: Water**
**Analysis Batch: 471667**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 469993**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.3 | 9.701 | | 1.05 | 1.00 | 0.101 | pCi/L | 85 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *87.0* | | *40 - 110* |

**Lab Sample ID: 500-181249-1 DU**
**Matrix: Water**
**Analysis Batch: 471667**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**
**Prep Batch: 469993**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.179 | | | 0.1546 | | 0.0962 | 1.00 | 0.117 | pCi/L | | | 0.12 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *69.6* | | *40 - 110* |

**Lab Sample ID: MB 160-470017/22-A**
**Matrix: Water**
**Analysis Batch: 471667**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 470017**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.01108 | U | 0.0358 | 0.0358 | 1.00 | 0.0713 | pCi/L | 05/11/20 14:42 | 06/02/20 06:03 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.9* | | *40 - 110* | *05/11/20 14:42* | *06/02/20 06:03* | *1* |

**Lab Sample ID: LCS 160-470017/1-A**
**Matrix: Water**
**Analysis Batch: 471667**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 470017**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.3 | 10.89 | | 1.11 | 1.00 | 0.0668 | pCi/L | 96 | 75 - 125 | | |

## Method: 903.0 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: LCS 160-470017/1-A**
**Matrix: Water**
**Analysis Batch: 471667**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 470017**

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 96.1 | | 40 - 110 |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-469995/23-A**
**Matrix: Water**
**Analysis Batch: 471336**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 469995**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.02092 | U | 0.186 | 0.186 | 1.00 | 0.333 | pCi/L | 05/11/20 11:12 | 05/27/20 11:03 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 86.4 | | 40 - 110 | 05/11/20 11:12 | 05/27/20 11:03 | 1 |
| Y Carrier | 95.7 | | 40 - 110 | 05/11/20 11:12 | 05/27/20 11:03 | 1 |

**Lab Sample ID: LCS 160-469995/1-A**
**Matrix: Water**
**Analysis Batch: 471338**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 469995**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 8.80 | 9.582 | | 1.13 | 1.00 | 0.484 | pCi/L | 109 | 75 - 125 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 87.0 | | 40 - 110 |
| Y Carrier | 86.7 | | 40 - 110 |

**Lab Sample ID: 500-181249-1 DU**
**Matrix: Water**
**Analysis Batch: 471338**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**
**Prep Batch: 469995**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.157 | U | | 0.02472 | U | 0.347 | 1.00 | 0.608 | pCi/L | | | 0.20 | 1 |

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 69.6 | | 40 - 110 |
| Y Carrier | 89.0 | | 40 - 110 |

**Lab Sample ID: MB 160-470021/22-A**
**Matrix: Water**
**Analysis Batch: 471097**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 470021**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.01685 | U | 0.247 | 0.247 | 1.00 | 0.440 | pCi/L | 05/11/20 15:09 | 05/21/20 12:18 | 1 |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: MB 160-470021/22-A**
**Matrix: Water**
**Analysis Batch: 471097**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 470021**

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 94.9 | | 40 - 110 | 05/11/20 15:09 | 05/21/20 12:18 | 1 |
| Y Carrier | 93.5 | | 40 - 110 | 05/11/20 15:09 | 05/21/20 12:18 | 1 |

**Lab Sample ID: LCS 160-470021/1-A**
**Matrix: Water**
**Analysis Batch: 471096**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 470021**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 8.82 | 8.132 | | 0.976 | 1.00 | 0.400 | pCi/L | 92 | 75 - 125 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 96.1 | | 40 - 110 |
| Y Carrier | 89.7 | | 40 - 110 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-18
**Date Collected: 04/27/20 10:49**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:04 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 10:59 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-17
**Date Collected: 04/27/20 11:32**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:05 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-19
**Date Collected: 04/27/20 12:19**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:05 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-01
**Date Collected: 04/28/20 08:32**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:05 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-02
**Date Collected: 04/28/20 09:56**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-5
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:05 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 04/28/20 10:46**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-6
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:05 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-04
**Date Collected: 04/28/20 11:43**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-7
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:05 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-05
**Date Collected: 04/28/20 12:36**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-8
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:06 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-10

**Lab Sample ID: 500-181249-9**

**Date Collected: 04/28/20 13:39**

**Matrix: Water**

**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:06 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-08

**Lab Sample ID: 500-181249-10**

**Date Collected: 04/28/20 14:38**

**Matrix: Water**

**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:06 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-09

**Lab Sample ID: 500-181249-11**

**Date Collected: 04/29/20 09:43**

**Matrix: Water**

**Date Received: 04/30/20 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 08:10 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471690 | 06/02/20 12:27 | SMP | TAL SL |

## Client Sample ID: MW-11

**Lab Sample ID: 500-181249-12**

**Date Collected: 04/29/20 08:41**

**Matrix: Water**

**Date Received: 04/30/20 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 08:10 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:01 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471690 | 06/02/20 12:27 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-12

**Date Collected: 04/29/20 10:58**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 08:11 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:01 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471690 | 06/02/20 12:27 | SMP | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 04/29/20 12:16**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 470017 | 05/11/20 14:42 | MNH | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 04:06 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 470021 | 05/11/20 15:09 | MNH | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471096 | 05/21/20 12:21 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471690 | 06/02/20 12:27 | SMP | TAL SL |

## Client Sample ID: Duplicate

**Date Collected: 04/29/20 00:00**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 08:11 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:01 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471690 | 06/02/20 12:28 | SMP | TAL SL |

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-30-20 * |

## Laboratory: Eurofins TestAmerica, St. Louis

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | 004553 | 11-30-20 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60
Phone: 708.534.5200 Fax: 708.53

500-181249 COC

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-181249

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 0.6→4.6

Client: KPRG
Client Project #: 12313.1
Project Name: Powerton CCR
Project Location/State: Pekin, IL
Lab Project #: 50011612
Sampler: M. Mitchel Dolan
Lab PM: Diana Mozkler

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | 3 | 3 | 8 | 8 | 8 | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Parameter | 9030, 9040.0 | 6010C, 6020A, D420A | [redacted] | Total Cl, Fl, TDS | Sulfate | | | | | |
| 1 | | MW-18 | 4/27 | 1049 | 6 | W | | X | X | | X | X | | | | | |
| 2 | | MW-17 | 4/27 | 1132 | 6 | W | | X | X | | X | X | | | | | |
| 3 | | MW-19 | 4/27 | 1219 | 6 | W | | X | X | | X | X | | | | | |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| Mitchel Dolan | KPRG | 4/27/20 | 1630 | FEDEX | | 4/27/20 | 1630 |
| | | | | Rhondeott | TA-CHI | 4/28/20 | 0935 |

Lab Courier
Shipped Fed Ex
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:



TAL-4124-500 (1209)

6/2/2020

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing America

500-181249 COC

| Client Information | Sampler: Mitchel Dolan | Lab PM: Mockler, Diana J | Car | COC No: 500-80728-36997.1 |
|---|---|---|---|---|
| Client Contact: Mitchel Dolan | Phone: 262-622-1143 | E-Mail: diana.mockler@testamericainc.com | | Page: Page 1 of 1 |
| Company: KPRG and Associates, Inc. | | | | Job #: 500-181249 |
| Address: 14665 West Lisbon Road, Suite 1A | Due Date Requested: | | | |
| City: Brookfield | TAT Requested (days): | | | |
| State, Zip: WI, 53005 | | | | |
| Phone: 309-477-5240(Tel) | PO #: 4501908159 | | | |
| Email: mitcheld@kprginc.com | WO #: | | | |
| Project Name: Powerton CCR Event Desc: Quarterly Powerton CCR Samplling | Project #: 50011612 | | | |
| Site: Illinois | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0, 904.0 | 6010C, 6020A, 7470A | 2540C, 4500_F_C, SM4500_Cl_E, SM4500_SO4_E | SM4500_SO4_E - Local Method | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | D | D | N | N | | |
| MW-01 | 4/28/20 | 0832 | G | Water | | | X | X | X | X | | |
| MW-02 | | 0956 | | Water | | | | | | | | |
| MW-03 | | 1046 | | Water | | | | | | | | |
| MW-04 | | 1143 | | Water | | | | | | | | |
| MW-05 | | 1236 | | Water | | | | | | | | |
| MW-10 | | 1339 | | Water | | | | | | | | |
| | | | | Water | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

4 5 6 7 8 9

***Possible Hazard Identification***
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: Powerton FAB App IV Parameters

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by | Date/Time | Company | Received by | Date/Time | Company |
|---|---|---|---|---|---|
| [signature] | 4/28/20 / 1600 | KPRG | FEDEX | 4/28/20 / 1600 | |
| Relinquished by: | Date/Time: | Company | Received by: [signature] | 4/29/20 1130 | TA-CHI |
| Relinquished by | Date/Time. | Company | Received by: | Date/Time: 1130 | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 5.8 33 |
|---|---|---|

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

# Chain of Custody Record

Lab Job #: 500-181249

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler:

Client: KPRG
Client Project #: 12313.1
Project Name: Powerton CCR
Project Location/State: Pekin, IL
Lab Project #: 50011612
Sampler: Michael Dolan
Lab PM: Diana Mockler

Preservative: 8 | 8 | 3 | 3

Parameter: Total TDS, Cl, Fl, SO4 | Total Sulfate | Total Metals | Rad 226/228

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH. Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Total TDS, Cl, Fl, SO4 | Total Sulfate | Total Metals | Rad 226/228 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | | MW-01 | 4/28 | 0832 | 6 | W | X | X | X | X | |
| 10 | | MW-08 | 4/28 | 1438 | 6 | W | X | X | X | X | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 4/28/20 | 1600 | FEDEX | | 4/28/20 | 1600 |
| | | | | [signature] | TA-CHI | 4/29/20 | 1130 |

Lab Courier:
Shipped: FXG
Hand Delivered:

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments
Powerton ABB/ASB App. IV Parameters.
*One set of CCR samples collected for MW-01. Well falls under both ABB/ASB + FAB

Lab Comments:



TAL-4124-500 (1209)

6/2/2020

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information | Sampler: Mitchel Dolan | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-80729-36998.1 |
|---|---|---|---|---|
| Client Contact: Mitchel Dolan | Phone: 262-622-1143 | E-Mail: diana.mockler@testamericainc.com | | Page: Page 1 of 1 |
| Company: KPRG and Associates, Inc. | | | | Job #: 500-181249 |

| Address: 14665 West Lisbon Road, Suite 1A | Due Date Requested: | Analysis Requested | Preservation Codes: |
|---|---|---|---|
| City: Brookfield | TAT Requested (days): | | A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify) |
| State, Zip: WI, 53005 | | | |
| Phone: 309-477-5240(Tel) | PO #: 4501908159 | | |
| Email: mitcheld@kprginc.com | WO #: | | Other: |
| Project Name: Powerton CCR Event Desc: Quarterly Powerton CCR Samplling | Project #: 50011612 | | |
| Site: Illinois | SSOW#: | | |

500-181249 COC

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0, 904.0 | 6010C, 6020A, 7470A | 2540C, 4500_F_C, SM4500_Cl_E, SM4500_SO4_E | SM4500_SO4_E - Sulfate | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | D | D | N | N | | |
| 11 MW-09 | 4/29/20 | 0943 | G | Water | | | X | X | X | X | | |
| 12 MW-11 | 4/29/20 | 0841 | G | Water | | | X | X | X | X | | |
| 13 MW-12 | 4/29/20 | 1058 | G | Water | | | X | X | X | X | | |
| 14 MW-15 | 4/29/20 | 1216 | G | Water | | | X | X | X | X | | |
| 15 DUPLICATE | 4/29/20 | - | G | Water | | | X | X | X | X | | |
| MW-05 | | | | Water | | | | | | | | |
| MW-17 | | | | Water | | | | | | | | |
| MW-18 | | | | Water | | | | | | | | |
| MW-19 | | | | Water | | | | | | | | |
| | | | | Water | | | | | | | | |
| | | | | | | | | | | | | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by | Date/Time: | Company |
|---|---|---|---|---|---|
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Mitchel Dolan | 4/29/20 1500 | KPRG | FEDEX | 4/29/20 1500 | |
| | | | Shari Knott | 4/30/20 0940 | TA-CHI |

Custody Seals Intact: ∧ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.6→2.6, 2.4, 1.8→2.8


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 27APR20
ACTWGT: 41.05 LB
CAD: 6994780/SSFE2102
DIMS: 24x13x14 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 6048
500-181249 Wayb
(000) 000-0000
REF:
INV:
PO:
DEPT:
FedEx
Express
2 of 3
MPS# 0263 3922 9282 8776
Mstr# 3922 9282 8765
0201
TUE - 28 APR 3:00P
STANDARD OVERNIGHT
XH JOTA
60484
IL-US ORD
RT 519
ST 33
5
15:00
A
8776
04.28


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 29APR20
ACTWGT: 47.45 LB
CAD: 6994780/SSFE2102
DIMS: 25x14x13 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(000) 000-0000
REF:
INV:
PO:
DEPT:
500-181249 Wayt
FedEx
Express
1 of 4
TRK# 0201 3923 6795 1735
THU - 30 APR 3:00P
STANDARD OVERNIGHT
## MASTER ##
XH JOTA
AHS
60484
IL-US ORD
48qt.


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 29APR20
ACTWGT: 46.80 LB
CAD: 6994780/SSFE2102
DIMS: 25x14x13 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(000) 000-0000
REF:
INV:
PO:
DEPT:
FedEx
Express
3 of 4
MPS# 3923 6795 1757
Mstr# 3923 6795 1735
0263
0201
THU - 30 APR 3:00P
STANDARD OVERNIGHT
AHS
60484
IL-US ORD
XH JOTA
48qt.


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 29APR20
ACTWGT: 45.30 LB
CAD: 6994780/SSFE2102
DIMS: 25x14x13 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(000) 000-0000
REF:
INV:
PO:
DEPT:
FedEx
Express
4 of 4
MPS# 3923 6795 1768
Mstr# 3923 6795 1735
0263
0201
THU - 30 APR 3:00P
STANDARD OVERNIGHT
AHS
60484
IL-US ORD
XH JOTA
48qt

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134595.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 5/8/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-18 (500-181249-1) | 4/27/20 | 10:49 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-17 (500-181249-2) | 4/27/20 | 11:32 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-19 (500-181249-3) | 4/27/20 | 12:19 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification: Unconfirmed | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
|---|---|
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |
| Empty Kit Relinquished by: | Date: Time: Method of Shipment: |

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] FE | 4-28-20 1630 | TA | FE | | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| FE | | | [signature] | 4/29/2020 09:03 | ETA STL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134621.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 5/8/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-181249-4) | 4/28/20 | 08:32 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-02 (500-181249-5) | 4/28/20 | 09:56 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-181249-6) | 4/28/20 | 10:46 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-181249-7) | 4/28/20 | 11:43 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-181249-8) | 4/28/20 | 12:36 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-181249-9) | 4/28/20 | 13:39 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-08 (500-181249-10) | 4/28/20 | 14:38 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | Stephanie Hernandez | 4/29/20 1600 | TA-CHI | FED EX | | |
| 2 | FED EX | | | | 4/30/2020 0846 | ETA STL |
| 3 | | | | | | |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134666.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 5/8/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-09 (500-181249-11) | 4/29/20 | 09:43 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-11 (500-181249-12) | 4/29/20 | 08:41 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-12 (500-181249-13) | 4/29/20 | 10:58 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-15 (500-181249-14) | 4/29/20 | 12:16 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-181249-15) | 4/29/20 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
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Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | Stephanie Hernandez | 4/30/20 1630 | TA-CHI | FE | | |
| 2 | FE | | | | 5/1/2020 0834 | ETASTL |
| 3 | | | | | | |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-2

**Login Number: 181249**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.6,5.8,3.3,2.6,2.4,2.85 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-2

**Login Number: 181249**
**List Number: 3**
**Creator: Korrinhizer, Micha L**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 04/29/20 08:31 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-2

**Login Number: 181249**
**List Number: 4**
**Creator: Korrinhizer, Micha L**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 04/29/20 08:35 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-2

**Login Number: 181249**
**List Number: 5**
**Creator: Mazariegos, Leonel A**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 04/30/20 03:38 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-2

**Login Number: 181249**
**List Number: 8**
**Creator: Korrinhizer, Micha L**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 05/01/20 07:38 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| Lab Sample ID | Client Sample ID | Percent Yield (Acceptance Limits) Ba Carrier (40-110) |
|---|---|---|
| 500-181249-1 | MW-18 | 78.0 |
| 500-181249-1 DU | MW-18 | 69.6 |
| 500-181249-2 | MW-17 | 82.8 |
| 500-181249-3 | MW-19 | 80.7 |
| 500-181249-4 | MW-01 | 77.4 |
| 500-181249-5 | MW-02 | 75.6 |
| 500-181249-6 | MW-03 | 81.3 |
| 500-181249-7 | MW-04 | 78.3 |
| 500-181249-8 | MW-05 | 77.1 |
| 500-181249-9 | MW-10 | 94.0 |
| 500-181249-10 | MW-08 | 81.0 |
| 500-181249-11 | MW-09 | 70.2 |
| 500-181249-12 | MW-11 | 83.7 |
| 500-181249-13 | MW-12 | 80.1 |
| 500-181249-14 | MW-15 | 85.5 |
| 500-181249-15 | Duplicate | 78.3 |
| LCS 160-469993/1-A | Lab Control Sample | 87.0 |
| LCS 160-470017/1-A | Lab Control Sample | 96.1 |
| MB 160-469993/23-A | Method Blank | 86.4 |
| MB 160-470017/22-A | Method Blank | 94.9 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| Lab Sample ID | Client Sample ID | Percent Yield (Acceptance Limits) Ba Carrier (40-110) | Y Carrier (40-110) |
|---|---|---|---|
| 500-181249-1 | MW-18 | 78.0 | 84.9 |
| 500-181249-1 DU | MW-18 | 69.6 | 89.0 |
| 500-181249-2 | MW-17 | 82.8 | 90.1 |
| 500-181249-3 | MW-19 | 80.7 | 88.6 |
| 500-181249-4 | MW-01 | 77.4 | 87.1 |
| 500-181249-5 | MW-02 | 75.6 | 87.9 |
| 500-181249-6 | MW-03 | 81.3 | 90.1 |
| 500-181249-7 | MW-04 | 78.3 | 90.8 |
| 500-181249-8 | MW-05 | 77.1 | 86.4 |
| 500-181249-9 | MW-10 | 94.0 | 88.6 |
| 500-181249-10 | MW-08 | 81.0 | 91.2 |
| 500-181249-11 | MW-09 | 70.2 | 65.8 |
| 500-181249-12 | MW-11 | 83.7 | 89.7 |
| 500-181249-13 | MW-12 | 80.1 | 89.0 |
| 500-181249-14 | MW-15 | 85.5 | 92.0 |
| 500-181249-15 | Duplicate | 78.3 | 87.1 |
| LCS 160-469995/1-A | Lab Control Sample | 87.0 | 86.7 |
| LCS 160-470021/1-A | Lab Control Sample | 96.1 | 89.7 |
| MB 160-469995/23-A | Method Blank | 86.4 | 95.7 |
| MB 160-470021/22-A | Method Blank | 94.9 | 93.5 |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier
Y Carrier = Y Carrier

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-181249-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

Diana Mockler

*Authorized for release by:*
*5/19/2020 3:10:06 PM*

Diana Mockler, Project Manager I
(219)252-7570
diana.mockler@testamericainc.com

LINKS

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*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Job ID: 500-181249-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-181249-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 4/28/2020 9:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 1.6º C, 2.4º C, 2.6º C, 2.8º C, 3.3º C and 5.8º C.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**
Methods 375.4, SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-18 (500-181249-1), MW-17 (500-181249-2), MW-19 (500-181249-3), (500-180998-C-6), (500-180998-C-6 MS) and (500-180998-C-6 MSD). Elevated reporting limits (RLs) are provided.

Method SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 400-487586 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD was diluted after the spike. The spike amount was adjusted by the dilution factor.

(500-180998-C-6 MS) and (500-180998-C-6 MSD)

Method SM 4500 SO4 E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for analytical batch 400-487903 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Methods 375.4, SM 4500 SO4 E: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-01 (500-181249-4), MW-02 (500-181249-5), MW-03 (500-181249-6), MW-04 (500-181249-7), MW-05 (500-181249-8), MW-10 (500-181249-9), MW-08 (500-181249-10), MW-09 (500-181249-11), MW-11 (500-181249-12), MW-12 (500-181249-13), MW-15 (500-181249-14), Duplicate (500-181249-15), (500-181249-A-6 MS) and (500-181249-A-6 MSD). Elevated reporting limits (RLs) are provided.

Method SM 4500 SO4 E: Due to the concentration of sulfates in the parent sample the MS/MSD was diluted after the spike. Then spike amount was adjusted by the dilution factor.
(500-181249-A-6 MS) and (500-181249-A-6 MSD)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-18 — Lab Sample ID: 500-181249-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.016 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Barium | 0.12 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.60 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1000 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 170 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.69 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 180 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-181249-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.021 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.026 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.036 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 150 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00081 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.075 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 170 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.79 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 520 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-19 — Lab Sample ID: 500-181249-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.077 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.3 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.042 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 570 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 43 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.17 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 110 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-01 — Lab Sample ID: 500-181249-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.051 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-01 (Continued) — Lab Sample ID: 500-181249-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.33 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 470 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 46 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.19 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 41 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-02 — Lab Sample ID: 500-181249-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0016 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.060 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.33 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 90 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 430 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 50 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.20 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 41 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-181249-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.066 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.24 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 86 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0036 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 410 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 46 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 79 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-181249-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.025 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.55 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 76 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 380 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 52 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.27 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 47 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-05 — Lab Sample ID: 500-181249-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0010 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.052 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.49 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0074 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 620 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 56 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.37 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 130 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-181249-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0022 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.25 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.0 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0065 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0017 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0054 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 550 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 41 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.24 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 64 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08 — Lab Sample ID: 500-181249-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.026 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0026 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.095 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.74 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.011 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 660 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 120 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.38 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 58 | | 10 | | mg/L | 2 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-09 — Lab Sample ID: 500-181249-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0012 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.031 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.0 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 71 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.028 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 510 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 34 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.20 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 140 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-181249-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.019 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.21 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0019 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.024 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 950 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 110 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.62 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 320 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-181249-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.012 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0029 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.034 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.34 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 71 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.015 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 980 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 150 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.34 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 360 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-15 — Lab Sample ID: 500-181249-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.027 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0036 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.060 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 160 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.023 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.58 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 370 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-181249-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.027 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0027 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.061 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.2 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 170 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.024 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1300 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.56 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 370 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL PEN |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Water | 04/27/20 10:49 | 04/28/20 09:35 | |
| 500-181249-2 | MW-17 | Water | 04/27/20 11:32 | 04/28/20 09:35 | |
| 500-181249-3 | MW-19 | Water | 04/27/20 12:19 | 04/28/20 09:35 | |
| 500-181249-4 | MW-01 | Water | 04/28/20 08:32 | 04/29/20 11:30 | |
| 500-181249-5 | MW-02 | Water | 04/28/20 09:56 | 04/29/20 11:30 | |
| 500-181249-6 | MW-03 | Water | 04/28/20 10:46 | 04/29/20 11:30 | |
| 500-181249-7 | MW-04 | Water | 04/28/20 11:43 | 04/29/20 11:30 | |
| 500-181249-8 | MW-05 | Water | 04/28/20 12:36 | 04/29/20 11:30 | |
| 500-181249-9 | MW-10 | Water | 04/28/20 13:39 | 04/29/20 11:30 | |
| 500-181249-10 | MW-08 | Water | 04/28/20 14:38 | 04/29/20 11:30 | |
| 500-181249-11 | MW-09 | Water | 04/29/20 09:43 | 04/30/20 09:40 | |
| 500-181249-12 | MW-11 | Water | 04/29/20 08:41 | 04/30/20 09:40 | |
| 500-181249-13 | MW-12 | Water | 04/29/20 10:58 | 04/30/20 09:40 | |
| 500-181249-14 | MW-15 | Water | 04/29/20 12:16 | 04/30/20 09:40 | |
| 500-181249-15 | Duplicate | Water | 04/29/20 00:00 | 04/30/20 09:40 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-18

**Date Collected: 04/27/20 10:49**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.016** | | 0.010 | | mg/L | | 04/28/20 17:57 | 04/29/20 10:20 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| **Barium** | **0.12** | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| **Boron** | **0.60** | | 0.050 | | mg/L | | 04/28/20 17:57 | 05/05/20 11:12 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:55 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/04/20 10:40 | 05/05/20 09:18 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1000** | | 10 | | mg/L | | | 05/01/20 01:49 | 1 |
| **Chloride** | **170** | | 10 | | mg/L | | | 05/05/20 21:56 | 5 |
| **Fluoride** | **0.69** | | 0.10 | | mg/L | | | 05/19/20 08:38 | 1 |
| **Sulfate** | **180** | | 50 | | mg/L | | | 04/30/20 13:01 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-17

**Date Collected: 04/27/20 11:32**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-2

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lithium** | **0.021** | | 0.010 | | mg/L | | 04/28/20 17:57 | 04/29/20 10:24 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.026** | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| **Barium** | **0.036** | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| **Boron** | **1.2** | | 0.25 | | mg/L | | 04/28/20 17:57 | 05/05/20 11:16 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| **Calcium** | **150** | | 0.20 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| **Lead** | **0.00081** | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| **Molybdenum** | **0.075** | | 0.0050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:59 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/04/20 10:40 | 05/05/20 09:24 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **1300** | | 10 | | mg/L | | | 05/01/20 01:54 | 1 |
| **Chloride** | **170** | | 10 | | mg/L | | | 05/05/20 21:57 | 5 |
| **Fluoride** | **0.79** | | 0.10 | | mg/L | | | 05/19/20 08:58 | 1 |
| **Sulfate** | **520** | | 100 | | mg/L | | | 04/30/20 13:04 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-19

**Date Collected: 04/27/20 12:19**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-3

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 04/28/20 17:57 | 04/29/20 10:29 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| **Barium** | **0.077** | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| **Boron** | **2.3** | | 0.25 | | mg/L | | 04/28/20 17:57 | 05/05/20 11:20 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| **Molybdenum** | **0.042** | | 0.0050 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 04/28/20 17:57 | 04/30/20 12:03 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/04/20 10:40 | 05/05/20 09:26 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **570** | | 10 | | mg/L | | | 05/01/20 01:56 | 1 |
| **Chloride** | **43** | | 2.0 | | mg/L | | | 05/02/20 14:05 | 1 |
| **Fluoride** | **0.17** | | 0.10 | | mg/L | | | 05/19/20 09:05 | 1 |
| **Sulfate** | **110** | | 25 | | mg/L | | | 04/30/20 13:04 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-01

**Date Collected: 04/28/20 08:32**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-4

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 04/29/20 17:08 | 04/30/20 09:27 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| **Barium** | **0.051** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| **Boron** | **0.33** | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 11:38 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:19 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/04/20 10:40 | 05/05/20 09:32 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **470** | | 10 | | mg/L | | | 05/01/20 01:59 | 1 |
| **Chloride** | **46** | | 2.0 | | mg/L | | | 05/02/20 14:05 | 1 |
| **Fluoride** | **0.19** | | 0.10 | | mg/L | | | 05/19/20 09:12 | 1 |
| **Sulfate** | **41** | | 10 | | mg/L | | | 05/04/20 11:53 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-02

**Date Collected: 04/28/20 09:56**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-5

**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.0016** | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |
| **Barium** | **0.060** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |
| **Boron** | **0.33** | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 11:49 | 1 |
| **Calcium** | **90** | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:22 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **430** | | 10 | | mg/L | | | 05/01/20 02:02 | 1 |
| **Chloride** | **50** | | 2.0 | | mg/L | | | 05/02/20 14:06 | 1 |
| **Fluoride** | **0.20** | | 0.10 | | mg/L | | | 05/19/20 09:19 | 1 |
| **Sulfate** | **41** | | 10 | | mg/L | | | 05/04/20 11:57 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-03

**Date Collected: 04/28/20 10:46**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-6

**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |
| **Barium** | **0.066** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |
| **Boron** | **0.24** | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 11:52 | 1 |
| **Calcium** | **86** | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |
| **Selenium** | **0.0036** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:26 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **410** | | 10 | | mg/L | | | 05/01/20 02:04 | 1 |
| **Chloride** | **46** | | 2.0 | | mg/L | | | 05/02/20 13:03 | 1 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 05/19/20 09:25 | 1 |
| **Sulfate** | **79** | | 25 | | mg/L | | | 05/04/20 11:57 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-04

**Date Collected: 04/28/20 11:43**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-7

**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |
| **Barium** | **0.025** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |
| **Boron** | **0.55** | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 11:56 | 1 |
| **Calcium** | **76** | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:30 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **380** | | 10 | | mg/L | | | 05/01/20 02:07 | 1 |
| **Chloride** | **52** | | 2.0 | | mg/L | | | 05/05/20 19:45 | 1 |
| **Fluoride** | **0.27** | | 0.10 | | mg/L | | | 05/19/20 09:46 | 1 |
| **Sulfate** | **47** | | 25 | | mg/L | | | 05/04/20 12:01 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-05

**Date Collected: 04/28/20 12:36**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-8

**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.0010** | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |
| **Barium** | **0.052** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |
| **Boron** | **0.49** | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 11:59 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |
| **Molybdenum** | **0.0074** | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:34 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **620** | | 10 | | mg/L | | | 05/01/20 02:09 | 1 |
| **Chloride** | **56** | | 2.0 | | mg/L | | | 05/05/20 21:58 | 1 |
| **Fluoride** | **0.37** | | 0.10 | | mg/L | | | 05/19/20 09:53 | 1 |
| **Sulfate** | **130** | | 25 | | mg/L | | | 05/04/20 12:01 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-10

**Date Collected: 04/28/20 13:39**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-9

**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.0022** | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |
| **Barium** | **0.25** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |
| **Boron** | **1.0** | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 12:03 | 1 |
| **Calcium** | **110** | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |
| **Cobalt** | **0.0065** | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |
| **Lead** | **0.0017** | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |
| **Selenium** | **0.0054** | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:37 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **550** | | 10 | | mg/L | | | 05/01/20 02:12 | 1 |
| **Chloride** | **41** | | 2.0 | | mg/L | | | 05/05/20 22:01 | 1 |
| **Fluoride** | **0.24** | | 0.10 | | mg/L | | | 05/19/20 09:59 | 1 |
| **Sulfate** | **64** | | 25 | | mg/L | | | 05/04/20 12:01 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-08

**Date Collected: 04/28/20 14:38**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-10

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.026 | | 0.010 | | mg/L | | 04/29/20 17:08 | 04/30/20 09:31 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0026 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Barium | 0.095 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Boron | 0.74 | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 12:07 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Calcium | 110 | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Molybdenum | 0.011 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 04/29/20 17:08 | 05/04/20 19:41 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/05/20 10:05 | 05/06/20 09:12 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 660 | | 10 | | mg/L | | | 05/01/20 02:15 | 1 |
| Chloride | 120 | | 10 | | mg/L | | | 05/06/20 00:16 | 5 |
| Fluoride | 0.38 | | 0.10 | | mg/L | | | 05/19/20 10:06 | 1 |
| Sulfate | 58 | | 10 | | mg/L | | | 05/04/20 12:01 | 2 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-09

**Date Collected: 04/29/20 09:43**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-11

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/01/20 07:00 | 05/01/20 19:39 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.0012** | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| **Barium** | **0.031** | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| **Boron** | **2.0** | | 0.050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| **Calcium** | **71** | | 0.20 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| **Molybdenum** | **0.028** | | 0.0050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:36 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/05/20 10:05 | 05/06/20 09:18 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **510** | | 10 | | mg/L | | | 05/01/20 02:17 | 1 |
| **Chloride** | **34** | | 2.0 | | mg/L | | | 05/06/20 00:16 | 1 |
| **Fluoride** | **0.20** | | 0.10 | | mg/L | | | 05/19/20 10:13 | 1 |
| **Sulfate** | **140** | | 25 | | mg/L | | | 05/04/20 12:06 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-11

**Date Collected: 04/29/20 08:41**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-12

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/01/20 07:00 | 05/01/20 19:43 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.019** | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| **Barium** | **0.21** | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| **Boron** | **1.2** | | 0.050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| **Cobalt** | **0.0019** | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| **Molybdenum** | **0.024** | | 0.0050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:40 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/05/20 10:05 | 05/06/20 09:20 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **950** | | 10 | | mg/L | | | 05/01/20 02:20 | 1 |
| **Chloride** | **110** | | 10 | | mg/L | | | 05/06/20 00:18 | 5 |
| **Fluoride** | **0.62** | | 0.10 | | mg/L | | | 05/19/20 10:20 | 1 |
| **Sulfate** | **320** | | 50 | | mg/L | | | 05/04/20 12:06 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-12

**Date Collected: 04/29/20 10:58**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-13

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.012 | | 0.010 | | mg/L | | 05/01/20 07:00 | 05/01/20 19:47 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0029 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Barium | 0.034 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Boron | 0.34 | | 0.050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Calcium | 71 | | 0.20 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Molybdenum | 0.015 | | 0.0050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:43 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/05/20 10:05 | 05/06/20 09:21 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 980 | | 10 | | mg/L | | | 05/01/20 02:22 | 1 |
| Chloride | 150 | | 10 | | mg/L | | | 05/06/20 00:18 | 5 |
| Fluoride | 0.34 | | 0.10 | | mg/L | | | 05/19/20 10:27 | 1 |
| Sulfate | 360 | | 50 | | mg/L | | | 05/04/20 12:23 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-15

**Date Collected: 04/29/20 12:16**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-14

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.027 | | 0.010 | | mg/L | | 05/01/20 07:00 | 05/01/20 20:00 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0036 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Barium | 0.060 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Boron | 1.2 | | 0.050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Calcium | 160 | | 0.20 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Molybdenum | 0.023 | | 0.0050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:47 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/05/20 10:05 | 05/06/20 09:23 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1300 | | 10 | | mg/L | | | 05/01/20 02:25 | 1 |
| Chloride | 200 | | 10 | | mg/L | | | 05/06/20 00:19 | 5 |
| Fluoride | 0.58 | | 0.10 | | mg/L | | | 05/19/20 10:33 | 1 |
| Sulfate | 370 | | 50 | | mg/L | | | 05/04/20 12:23 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: Duplicate

**Date Collected: 04/29/20 00:00**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-15

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.027 | | 0.010 | | mg/L | | 05/01/20 07:00 | 05/01/20 20:04 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0027 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Barium | 0.061 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Boron | 1.2 | | 0.050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Calcium | 170 | | 0.20 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Molybdenum | 0.024 | | 0.0050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:51 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/05/20 10:05 | 05/06/20 09:24 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1300 | | 10 | | mg/L | | | 05/01/20 02:27 | 1 |
| Chloride | 200 | | 10 | | mg/L | | | 05/06/20 00:19 | 5 |
| Fluoride | 0.56 | | 0.10 | | mg/L | | | 05/19/20 10:38 | 1 |
| Sulfate | 370 | | 50 | | mg/L | | | 05/04/20 12:08 | 10 |

## Qualifiers

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Metals

### Prep Batch: 540154

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-181249-2 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-181249-3 | MW-19 | Total Recoverable | Water | 3005A | |
| MB 500-540154/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-540154/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 540335

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total Recoverable | Water | 6010C | 540154 |
| 500-181249-2 | MW-17 | Total Recoverable | Water | 6010C | 540154 |
| 500-181249-3 | MW-19 | Total Recoverable | Water | 6010C | 540154 |
| MB 500-540154/1-A | Method Blank | Total Recoverable | Water | 6010C | 540154 |
| LCS 500-540154/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 540154 |

### Prep Batch: 540361

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-4 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-181249-5 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-181249-6 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-181249-7 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-181249-8 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-181249-9 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-181249-10 | MW-08 | Total Recoverable | Water | 3005A | |
| MB 500-540361/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-540361/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 540533

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-4 | MW-01 | Total Recoverable | Water | 6010C | 540361 |
| 500-181249-10 | MW-08 | Total Recoverable | Water | 6010C | 540361 |
| MB 500-540361/1-A | Method Blank | Total Recoverable | Water | 6010C | 540361 |
| LCS 500-540361/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 540361 |

### Analysis Batch: 540544

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total Recoverable | Water | 6020A | 540154 |
| 500-181249-2 | MW-17 | Total Recoverable | Water | 6020A | 540154 |
| 500-181249-3 | MW-19 | Total Recoverable | Water | 6020A | 540154 |
| MB 500-540154/1-A | Method Blank | Total Recoverable | Water | 6020A | 540154 |
| LCS 500-540154/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 540154 |

### Prep Batch: 540624

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-11 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-181249-12 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-181249-13 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-181249-14 | MW-15 | Total Recoverable | Water | 3005A | |
| 500-181249-15 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-540624/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-540624/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

## Metals

### Analysis Batch: 540772

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-11 | MW-09 | Total Recoverable | Water | 6010C | 540624 |
| 500-181249-12 | MW-11 | Total Recoverable | Water | 6010C | 540624 |
| 500-181249-13 | MW-12 | Total Recoverable | Water | 6010C | 540624 |
| 500-181249-14 | MW-15 | Total Recoverable | Water | 6010C | 540624 |
| 500-181249-15 | Duplicate | Total Recoverable | Water | 6010C | 540624 |
| MB 500-540624/1-A | Method Blank | Total Recoverable | Water | 6010C | 540624 |
| LCS 500-540624/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 540624 |

### Analysis Batch: 540865

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-11 | MW-09 | Total Recoverable | Water | 6020A | 540624 |
| 500-181249-12 | MW-11 | Total Recoverable | Water | 6020A | 540624 |
| 500-181249-13 | MW-12 | Total Recoverable | Water | 6020A | 540624 |
| 500-181249-14 | MW-15 | Total Recoverable | Water | 6020A | 540624 |
| 500-181249-15 | Duplicate | Total Recoverable | Water | 6020A | 540624 |
| MB 500-540624/1-A | Method Blank | Total Recoverable | Water | 6020A | 540624 |
| LCS 500-540624/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 540624 |

### Prep Batch: 540885

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | 7470A | |
| 500-181249-2 | MW-17 | Total/NA | Water | 7470A | |
| 500-181249-3 | MW-19 | Total/NA | Water | 7470A | |
| 500-181249-4 | MW-01 | Total/NA | Water | 7470A | |
| MB 500-540885/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-540885/13-A | Lab Control Sample | Total/NA | Water | 7470A | |
| 500-181249-1 MS | MW-18 | Total/NA | Water | 7470A | |
| 500-181249-1 MSD | MW-18 | Total/NA | Water | 7470A | |
| 500-181249-1 DU | MW-18 | Total/NA | Water | 7470A | |

### Analysis Batch: 541048

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-4 | MW-01 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-5 | MW-02 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-6 | MW-03 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-7 | MW-04 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-8 | MW-05 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-9 | MW-10 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-10 | MW-08 | Total Recoverable | Water | 6020A | 540361 |
| MB 500-540361/1-A | Method Blank | Total Recoverable | Water | 6020A | 540361 |
| LCS 500-540361/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 540361 |

### Prep Batch: 541074

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-10 | MW-08 | Total/NA | Water | 7470A | |
| 500-181249-11 | MW-09 | Total/NA | Water | 7470A | |
| 500-181249-12 | MW-11 | Total/NA | Water | 7470A | |
| 500-181249-13 | MW-12 | Total/NA | Water | 7470A | |
| 500-181249-14 | MW-15 | Total/NA | Water | 7470A | |
| 500-181249-15 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-541074/12-A | Method Blank | Total/NA | Water | 7470A | |

## Metals (Continued)

### Prep Batch: 541074 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-541074/13-A | Lab Control Sample | Total/NA | Water | 7470A | |

### Analysis Batch: 541085

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | 7470A | 540885 |
| 500-181249-2 | MW-17 | Total/NA | Water | 7470A | 540885 |
| 500-181249-3 | MW-19 | Total/NA | Water | 7470A | 540885 |
| 500-181249-4 | MW-01 | Total/NA | Water | 7470A | 540885 |
| MB 500-540885/12-A | Method Blank | Total/NA | Water | 7470A | 540885 |
| LCS 500-540885/13-A | Lab Control Sample | Total/NA | Water | 7470A | 540885 |
| 500-181249-1 MS | MW-18 | Total/NA | Water | 7470A | 540885 |
| 500-181249-1 MSD | MW-18 | Total/NA | Water | 7470A | 540885 |
| 500-181249-1 DU | MW-18 | Total/NA | Water | 7470A | 540885 |

### Analysis Batch: 541102

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total Recoverable | Water | 6020A | 540154 |
| 500-181249-2 | MW-17 | Total Recoverable | Water | 6020A | 540154 |
| 500-181249-3 | MW-19 | Total Recoverable | Water | 6020A | 540154 |
| 500-181249-4 | MW-01 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-5 | MW-02 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-6 | MW-03 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-7 | MW-04 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-8 | MW-05 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-9 | MW-10 | Total Recoverable | Water | 6020A | 540361 |
| 500-181249-10 | MW-08 | Total Recoverable | Water | 6020A | 540361 |
| MB 500-540154/1-A | Method Blank | Total Recoverable | Water | 6020A | 540154 |
| MB 500-540361/1-A | Method Blank | Total Recoverable | Water | 6020A | 540361 |
| LCS 500-540154/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 540154 |
| LCS 500-540361/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 540361 |

### Analysis Batch: 541287

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-10 | MW-08 | Total/NA | Water | 7470A | 541074 |
| 500-181249-11 | MW-09 | Total/NA | Water | 7470A | 541074 |
| 500-181249-12 | MW-11 | Total/NA | Water | 7470A | 541074 |
| 500-181249-13 | MW-12 | Total/NA | Water | 7470A | 541074 |
| 500-181249-14 | MW-15 | Total/NA | Water | 7470A | 541074 |
| 500-181249-15 | Duplicate | Total/NA | Water | 7470A | 541074 |
| MB 500-541074/12-A | Method Blank | Total/NA | Water | 7470A | 541074 |
| LCS 500-541074/13-A | Lab Control Sample | Total/NA | Water | 7470A | 541074 |

## General Chemistry

### Analysis Batch: 487586

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-2 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-3 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-487586/5 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-487586/6 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

## General Chemistry (Continued)

### Analysis Batch: 487586 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCSD 400-487586/26 | Lab Control Sample Dup | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-487586/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 487903

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-4 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-5 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-6 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-7 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-8 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-9 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-10 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-11 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-12 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-13 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-14 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-15 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| MB 400-487903/6 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 400-487903/7 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| MRL 400-487903/3 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-6 MS | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-181249-6 MSD | MW-03 | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 540620

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-181249-2 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-181249-3 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-181249-4 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-181249-5 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-181249-6 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-181249-7 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-181249-8 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-181249-9 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-181249-10 | MW-08 | Total/NA | Water | SM 2540C | |
| 500-181249-11 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-181249-12 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-181249-13 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-181249-14 | MW-15 | Total/NA | Water | SM 2540C | |
| 500-181249-15 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-540620/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-540620/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-181249-1 DU | MW-18 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 540788

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-6 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-540788/50 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-540788/51 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

## General Chemistry

### Analysis Batch: 540918

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-3 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-4 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-5 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-540918/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-540918/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 541151

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-7 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-541151/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-541151/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 541164

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-2 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-8 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-9 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-10 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-11 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-12 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-13 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-14 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-15 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-541164/4 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-541164/5 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-8 MS | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-8 MSD | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-11 MS | MW-09 | Total/NA | Water | SM 4500 Cl- E | |
| 500-181249-11 MSD | MW-09 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 543368

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-181249-2 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-181249-3 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-181249-4 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-181249-5 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-181249-6 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-181249-7 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-181249-8 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-181249-9 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-181249-10 | MW-08 | Total/NA | Water | SM 4500 F C | |
| 500-181249-11 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-181249-12 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-181249-13 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-181249-14 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-181249-15 | Duplicate | Total/NA | Water | SM 4500 F C | |
| MB 500-543368/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-543368/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| 500-181249-1 MS | MW-18 | Total/NA | Water | SM 4500 F C | |

## General Chemistry (Continued)

### Analysis Batch: 543368 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 MSD | MW-18 | Total/NA | Water | SM 4500 F C | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-540154/1-A**
**Matrix: Water**
**Analysis Batch: 540335**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540154**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 04/28/20 17:57 | 04/29/20 10:07 | 1 |

**Lab Sample ID: LCS 500-540154/2-A**
**Matrix: Water**
**Analysis Batch: 540335**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540154**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.481 | | mg/L | | 96 | 80 - 120 |

**Lab Sample ID: MB 500-540361/1-A**
**Matrix: Water**
**Analysis Batch: 540533**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540361**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 04/29/20 17:08 | 04/30/20 09:18 | 1 |

**Lab Sample ID: LCS 500-540361/2-A**
**Matrix: Water**
**Analysis Batch: 540533**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540361**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.516 | | mg/L | | 103 | 80 - 120 |

**Lab Sample ID: MB 500-540624/1-A**
**Matrix: Water**
**Analysis Batch: 540772**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540624**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 05/01/20 07:00 | 05/01/20 19:31 | 1 |

**Lab Sample ID: LCS 500-540624/2-A**
**Matrix: Water**
**Analysis Batch: 540772**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540624**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.100 | 0.107 | | mg/L | | 107 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-540154/1-A**
**Matrix: Water**
**Analysis Batch: 540544**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540154**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-540154/1-A**
**Matrix: Water**
**Analysis Batch: 540544**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540154**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 04/28/20 17:57 | 04/30/20 11:48 | 1 |

**Lab Sample ID: MB 500-540154/1-A**
**Matrix: Water**
**Analysis Batch: 541102**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540154**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 04/28/20 17:57 | 05/05/20 11:05 | 1 |

**Lab Sample ID: LCS 500-540154/2-A**
**Matrix: Water**
**Analysis Batch: 540544**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540154**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.100 | 0.0995 | | mg/L | | 100 | 80 - 120 |
| Barium | 2.00 | 2.01 | | mg/L | | 100 | 80 - 120 |
| Cadmium | 0.0500 | 0.0512 | | mg/L | | 102 | 80 - 120 |
| Calcium | 10.0 | 10.3 | | mg/L | | 103 | 80 - 120 |
| Cobalt | 0.500 | 0.529 | | mg/L | | 106 | 80 - 120 |
| Lead | 0.100 | 0.110 | | mg/L | | 110 | 80 - 120 |
| Molybdenum | 1.00 | 1.01 | | mg/L | | 101 | 80 - 120 |
| Selenium | 0.100 | 0.103 | | mg/L | | 103 | 80 - 120 |
| Thallium | 0.100 | 0.109 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: LCS 500-540154/2-A**
**Matrix: Water**
**Analysis Batch: 541102**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540154**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 1.00 | | mg/L | | 100 | 80 - 120 |

**Lab Sample ID: MB 500-540361/1-A**
**Matrix: Water**
**Analysis Batch: 541048**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540361**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 04/29/20 17:08 | 05/04/20 18:34 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-540361/1-A**
**Matrix: Water**
**Analysis Batch: 541102**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540361**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 04/29/20 17:08 | 05/05/20 11:23 | 1 |

**Lab Sample ID: LCS 500-540361/2-A**
**Matrix: Water**
**Analysis Batch: 541048**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540361**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.100 | 0.0954 | | mg/L | | 95 | 80 - 120 |
| Barium | 2.00 | 1.93 | | mg/L | | 96 | 80 - 120 |
| Cadmium | 0.0500 | 0.0472 | | mg/L | | 94 | 80 - 120 |
| Calcium | 10.0 | 10.0 | | mg/L | | 100 | 80 - 120 |
| Chromium | 0.200 | 0.198 | | mg/L | | 99 | 80 - 120 |
| Cobalt | 0.500 | 0.494 | | mg/L | | 99 | 80 - 120 |
| Lead | 0.100 | 0.104 | | mg/L | | 104 | 80 - 120 |
| Molybdenum | 1.00 | 0.951 | | mg/L | | 95 | 80 - 120 |
| Selenium | 0.100 | 0.100 | | mg/L | | 100 | 80 - 120 |
| Thallium | 0.100 | 0.105 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: LCS 500-540361/2-A**
**Matrix: Water**
**Analysis Batch: 541102**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540361**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 0.992 | | mg/L | | 99 | 80 - 120 |

**Lab Sample ID: MB 500-540624/1-A**
**Matrix: Water**
**Analysis Batch: 540865**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 540624**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Boron | <0.050 | | 0.050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 05/01/20 07:00 | 05/01/20 16:28 | 1 |

**Lab Sample ID: LCS 500-540624/2-A**
**Matrix: Water**
**Analysis Batch: 540865**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540624**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.100 | 0.0943 | | mg/L | | 94 | 80 - 120 |
| Barium | 0.500 | 0.505 | | mg/L | | 101 | 80 - 120 |
| Boron | 1.00 | 0.932 | | mg/L | | 93 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-540624/2-A**
**Matrix: Water**
**Analysis Batch: 540865**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 540624**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Cadmium | 0.0500 | 0.0481 | | mg/L | | 96 | 80 - 120 |
| Calcium | 10.0 | 10.2 | | mg/L | | 102 | 80 - 120 |
| Cobalt | 0.500 | 0.484 | | mg/L | | 97 | 80 - 120 |
| Lead | 0.100 | 0.106 | | mg/L | | 106 | 80 - 120 |
| Molybdenum | 1.00 | 0.960 | | mg/L | | 96 | 80 - 120 |
| Selenium | 0.100 | 0.0980 | | mg/L | | 98 | 80 - 120 |
| Thallium | 0.100 | 0.102 | | mg/L | | 102 | 80 - 120 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-540885/12-A**
**Matrix: Water**
**Analysis Batch: 541085**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 540885**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/04/20 10:40 | 05/05/20 08:49 | 1 |

**Lab Sample ID: LCS 500-540885/13-A**
**Matrix: Water**
**Analysis Batch: 541085**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 540885**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00199 | | mg/L | | 99 | 80 - 120 |

**Lab Sample ID: 500-181249-1 MS**
**Matrix: Water**
**Analysis Batch: 541085**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**
**Prep Batch: 540885**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00113 | | mg/L | | 113 | 75 - 125 |

**Lab Sample ID: 500-181249-1 MSD**
**Matrix: Water**
**Analysis Batch: 541085**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**
**Prep Batch: 540885**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00100 | 0.00113 | | mg/L | | 113 | 75 - 125 | 0 | 20 |

**Lab Sample ID: 500-181249-1 DU**
**Matrix: Water**
**Analysis Batch: 541085**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**
**Prep Batch: 540885**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | <0.00020 | | mg/L | | NC | 20 |

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: MB 500-541074/12-A**
**Matrix: Water**
**Analysis Batch: 541287**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 541074**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 05/05/20 10:05 | 05/06/20 08:45 | 1 |

**Lab Sample ID: LCS 500-541074/13-A**
**Matrix: Water**
**Analysis Batch: 541287**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 541074**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00197 | | mg/L | | 98 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-540620/1**
**Matrix: Water**
**Analysis Batch: 540620**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 05/01/20 01:44 | 1 |

**Lab Sample ID: LCS 500-540620/2**
**Matrix: Water**
**Analysis Batch: 540620**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 266 | | mg/L | | 106 | 80 - 120 |

**Lab Sample ID: 500-181249-1 DU**
**Matrix: Water**
**Analysis Batch: 540620**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1000 | | 1010 | | mg/L | | 0.6 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-540788/50**
**Matrix: Water**
**Analysis Batch: 540788**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/02/20 12:42 | 1 |

**Lab Sample ID: LCS 500-540788/51**
**Matrix: Water**
**Analysis Batch: 540788**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 52.5 | | mg/L | | 105 | 85 - 115 |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: MB 500-540918/12**
**Matrix: Water**
**Analysis Batch: 540918**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/02/20 13:46 | 1 |

**Lab Sample ID: LCS 500-540918/13**
**Matrix: Water**
**Analysis Batch: 540918**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 53.8 | | mg/L | | 108 | 85 - 115 |

**Lab Sample ID: MB 500-541151/12**
**Matrix: Water**
**Analysis Batch: 541151**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/05/20 19:23 | 1 |

**Lab Sample ID: LCS 500-541151/13**
**Matrix: Water**
**Analysis Batch: 541151**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 51.6 | | mg/L | | 103 | 85 - 115 |

**Lab Sample ID: MB 500-541164/4**
**Matrix: Water**
**Analysis Batch: 541164**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 05/05/20 21:54 | 1 |

**Lab Sample ID: LCS 500-541164/5**
**Matrix: Water**
**Analysis Batch: 541164**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 52.7 | | mg/L | | 105 | 85 - 115 |

**Lab Sample ID: 500-181249-8 MS**
**Matrix: Water**
**Analysis Batch: 541164**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 56 | | 50.0 | 104 | | mg/L | | 94 | 75 - 125 |

**Lab Sample ID: 500-181249-8 MSD**
**Matrix: Water**
**Analysis Batch: 541164**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 56 | | 50.0 | 105 | | mg/L | | 98 | 75 - 125 | 2 | 20 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: 500-181249-11 MS**
**Matrix: Water**
**Analysis Batch: 541164**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 34 | | 50.0 | 85.8 | | mg/L | | 103 | 75 - 125 |

**Lab Sample ID: 500-181249-11 MSD**
**Matrix: Water**
**Analysis Batch: 541164**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 34 | | 50.0 | 83.7 | | mg/L | | 98 | 75 - 125 | 3 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-543368/3**
**Matrix: Water**
**Analysis Batch: 543368**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 05/19/20 08:29 | 1 |

**Lab Sample ID: LCS 500-543368/4**
**Matrix: Water**
**Analysis Batch: 543368**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 11.0 | | mg/L | | 110 | 80 - 120 |

**Lab Sample ID: 500-181249-1 MS**
**Matrix: Water**
**Analysis Batch: 543368**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.69 | | 5.00 | 6.14 | | mg/L | | 109 | 75 - 125 |

**Lab Sample ID: 500-181249-1 MSD**
**Matrix: Water**
**Analysis Batch: 543368**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.69 | | 5.00 | 6.14 | | mg/L | | 109 | 75 - 125 | 0 | 20 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 400-487586/5**
**Matrix: Water**
**Analysis Batch: 487586**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 04/30/20 12:12 | 1 |

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: LCS 400-487586/6**
**Matrix: Water**
**Analysis Batch: 487586**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 15.0 | 14.7 | | mg/L | | 98 | 90 - 110 |

**Lab Sample ID: MRL 400-487586/3**
**Matrix: Water**
**Analysis Batch: 487586**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 5.00 | <5.0 | | mg/L | | 97 | 50 - 150 |

**Lab Sample ID: MB 400-487903/6**
**Matrix: Water**
**Analysis Batch: 487903**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 05/04/20 11:20 | 1 |

**Lab Sample ID: LCS 400-487903/7**
**Matrix: Water**
**Analysis Batch: 487903**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 15.0 | 15.0 | | mg/L | | 100 | 90 - 110 |

**Lab Sample ID: MRL 400-487903/3**
**Matrix: Water**
**Analysis Batch: 487903**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 5.00 | 5.89 | | mg/L | | 118 | 50 - 150 |

**Lab Sample ID: 500-181249-6 MS**
**Matrix: Water**
**Analysis Batch: 487903**

**Client Sample ID: MW-03**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 79 | | 10.0 | 86.4 | 4 | mg/L | | 74 | 77 - 128 |

**Lab Sample ID: 500-181249-6 MSD**
**Matrix: Water**
**Analysis Batch: 487903**

**Client Sample ID: MW-03**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 79 | | 10.0 | 83.2 | 4 | mg/L | | 42 | 77 - 128 | 4 | 5 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-18

**Date Collected: 04/27/20 10:49**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540335 | 04/29/20 10:20 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540544 | 04/30/20 11:55 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 11:12 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 540885 | 05/04/20 10:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541085 | 05/05/20 09:18 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 01:49 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 541164 | 05/05/20 21:56 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 08:38 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 487586 | 04/30/20 13:01 | HES | TAL PEN |

## Client Sample ID: MW-17

**Date Collected: 04/27/20 11:32**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540335 | 04/29/20 10:24 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540544 | 04/30/20 11:59 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 541102 | 05/05/20 11:16 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 540885 | 05/04/20 10:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541085 | 05/05/20 09:24 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 01:54 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 541164 | 05/05/20 21:57 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 08:58 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 487586 | 04/30/20 13:04 | HES | TAL PEN |

## Client Sample ID: MW-19

**Date Collected: 04/27/20 12:19**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540335 | 04/29/20 10:29 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540544 | 04/30/20 12:03 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540154 | 04/28/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 541102 | 05/05/20 11:20 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 540885 | 05/04/20 10:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541085 | 05/05/20 09:26 | MJG | TAL CHI |

## Client Sample ID: MW-19
**Lab Sample ID: 500-181249-3**
**Date Collected: 04/27/20 12:19**
**Matrix: Water**
**Date Received: 04/28/20 09:35**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 01:56 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 540918 | 05/02/20 14:05 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 09:05 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 487586 | 04/30/20 13:04 | HES | TAL PEN |

## Client Sample ID: MW-01
**Lab Sample ID: 500-181249-4**
**Date Collected: 04/28/20 08:32**
**Matrix: Water**
**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540533 | 04/30/20 09:27 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541048 | 05/04/20 19:19 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 11:38 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 540885 | 05/04/20 10:40 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541085 | 05/05/20 09:32 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 01:59 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 540918 | 05/02/20 14:05 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 09:12 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 487903 | 05/04/20 11:53 | HES | TAL PEN |

## Client Sample ID: MW-02
**Lab Sample ID: 500-181249-5**
**Date Collected: 04/28/20 09:56**
**Matrix: Water**
**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541048 | 05/04/20 19:22 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 11:49 | FXG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:02 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 540918 | 05/02/20 14:06 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 09:19 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 487903 | 05/04/20 11:57 | HES | TAL PEN |

## Client Sample ID: MW-03
**Lab Sample ID: 500-181249-6**
**Date Collected: 04/28/20 10:46**
**Matrix: Water**
**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541048 | 05/04/20 19:26 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-03

**Lab Sample ID: 500-181249-6**

**Date Collected: 04/28/20 10:46**

**Matrix: Water**

**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 11:52 | FXG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:04 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 540788 | 05/02/20 13:03 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 09:25 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 487903 | 05/04/20 11:57 | HES | TAL PEN |

## Client Sample ID: MW-04

**Lab Sample ID: 500-181249-7**

**Date Collected: 04/28/20 11:43**

**Matrix: Water**

**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541048 | 05/04/20 19:30 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 11:56 | FXG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:07 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 541151 | 05/05/20 19:45 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 09:46 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 487903 | 05/04/20 12:01 | HES | TAL PEN |

## Client Sample ID: MW-05

**Lab Sample ID: 500-181249-8**

**Date Collected: 04/28/20 12:36**

**Matrix: Water**

**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541048 | 05/04/20 19:34 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 11:59 | FXG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:09 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 541164 | 05/05/20 21:58 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 09:53 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 487903 | 05/04/20 12:01 | HES | TAL PEN |

## Client Sample ID: MW-10

**Lab Sample ID: 500-181249-9**

**Date Collected: 04/28/20 13:39**

**Matrix: Water**

**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541048 | 05/04/20 19:37 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 12:03 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-10

**Date Collected: 04/28/20 13:39**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:12 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 541164 | 05/05/20 22:01 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 09:59 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 487903 | 05/04/20 12:01 | HES | TAL PEN |

## Client Sample ID: MW-08

**Date Collected: 04/28/20 14:38**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-10

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540533 | 04/30/20 09:31 | JEF | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541048 | 05/04/20 19:41 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540361 | 04/29/20 17:08 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 541102 | 05/05/20 12:07 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 541074 | 05/05/20 10:05 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541287 | 05/06/20 09:12 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:15 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 541164 | 05/06/20 00:16 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 10:06 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 2 | 487903 | 05/04/20 12:01 | HES | TAL PEN |

## Client Sample ID: MW-09

**Date Collected: 04/29/20 09:43**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-11

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540772 | 05/01/20 19:39 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540865 | 05/01/20 16:36 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 541074 | 05/05/20 10:05 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541287 | 05/06/20 09:18 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:17 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 541164 | 05/06/20 00:16 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 10:13 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 487903 | 05/04/20 12:06 | HES | TAL PEN |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: MW-11

**Date Collected: 04/29/20 08:41**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-12

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540772 | 05/01/20 19:43 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540865 | 05/01/20 16:40 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 541074 | 05/05/20 10:05 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541287 | 05/06/20 09:20 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:20 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 541164 | 05/06/20 00:18 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 10:20 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 487903 | 05/04/20 12:06 | HES | TAL PEN |

## Client Sample ID: MW-12

**Date Collected: 04/29/20 10:58**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540772 | 05/01/20 19:47 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540865 | 05/01/20 16:43 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 541074 | 05/05/20 10:05 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541287 | 05/06/20 09:21 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:22 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 541164 | 05/06/20 00:18 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 10:27 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 487903 | 05/04/20 12:23 | HES | TAL PEN |

## Client Sample ID: MW-15

**Date Collected: 04/29/20 12:16**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540772 | 05/01/20 20:00 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540865 | 05/01/20 16:47 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 541074 | 05/05/20 10:05 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541287 | 05/06/20 09:23 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:25 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 541164 | 05/06/20 00:19 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 10:33 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 487903 | 05/04/20 12:23 | HES | TAL PEN |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Client Sample ID: Duplicate

**Date Collected: 04/29/20 00:00**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 540772 | 05/01/20 20:04 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 540624 | 05/01/20 07:00 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 540865 | 05/01/20 16:51 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 541074 | 05/05/20 10:05 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 541287 | 05/06/20 09:24 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 540620 | 05/01/20 02:27 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 541164 | 05/06/20 00:19 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 543368 | 05/19/20 10:38 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 487903 | 05/04/20 12:08 | HES | TAL PEN |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PEN = Eurofins TestAmerica, Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-30-20 * |

## Laboratory: Eurofins TestAmerica, Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Alabama | State | 40150 | 07-01-20 |
| ANAB | ISO/IEC 17025 | L2471 | 02-23-23 |
| Arizona | State | AZ0710 | 01-13-21 |
| Arkansas DEQ | State | 88-0689 | 09-01-20 |
| California | State | 2510 | 07-01-20 |
| Florida | NELAP | E81010 | 06-30-20 |
| Georgia | State | E81010(FL) | 06-30-20 |
| Illinois | NELAP | 004586 | 10-09-20 |
| Iowa | State | 367 | 08-01-20 |
| Kansas | NELAP | E-10253 | 08-16-20 |
| Kentucky (UST) | State | 53 | 06-30-20 |
| Kentucky (WW) | State | KY98030 | 12-31-20 |
| Louisiana | NELAP | 30976 | 06-30-20 |
| Louisiana (DW) | State | LA017 | 12-31-20 |
| Maryland | State | 233 | 09-30-20 |
| Massachusetts | State | M-FL094 | 06-30-20 |
| Michigan | State | 9912 | 05-06-20 |
| Minnesota | NELAP | 012-999-481 | 12-31-20 |
| New Jersey | NELAP | FL006 | 06-30-20 |
| New York | NELAP | 12115 | 04-01-21 |
| North Carolina (WW/SW) | State | 314 | 12-31-20 |
| Oklahoma | State | 9810-186 | 08-31-20 |
| Pennsylvania | NELAP | 68-00467 | 01-31-21 |
| Rhode Island | State | LAO00307 | 12-30-20 |
| South Carolina | State | 96026002 | 06-30-20 |
| Tennessee | State | TN02907 | 06-30-20 |
| Texas | NELAP | T104704286 | 09-30-20 |
| US Fish & Wildlife | US Federal Programs | 058448 | 07-31-20 |
| USDA | US Federal Programs | P330-18-00148 | 05-17-21 |
| Virginia | NELAP | 460166 | 06-14-20 |
| Washington | State | C915 | 05-15-20 |
| West Virginia DEP | State | 136 | 06-30-20 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60
Phone: 708.534.5200 Fax: 708.53

500-181249 COC

(optional)

Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)

Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-181249

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 0.6→4.6

Client: KPRG
Client Project #: 12313.1
Project Name: Powerton CCR
Project Location/State: Pekin, IL
Lab Project #: 50011612
Sampler: M. Mitchel Dolan
Lab PM: Diana Mozkler

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | 3 | 3 | 8 | 8 | 8 | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Parameter | 4030, 904.0 | 6010C, 6020A, D7284 | [redacted] | Total Cl, Fl, TDS | Sulfate | | | | | |
| 1 | | MW-18 | 4/27 | 1049 | 6 | W | | X | X | | X | X | | | | | |
| 2 | | MW-17 | 4/27 | 1132 | 6 | W | | X | X | | X | X | | | | | |
| 3 | | MW-19 | 4/27 | 1219 | 6 | W | | X | X | | X | X | | | | | |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| Mitchel Dolan | KPRG | 4/27/20 | 1630 | FEDEX | | 4/27/20 | 1630 |
| | | | | Rhondeott | TA-CHI | 4/28/20 | 0935 |

Lab Courier
Shipped Fed Ex
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:



TAL-4124-500-1209L

5/19/2020

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing America

500-181249 COC

| Client Information | Sampler: Mitchel Dolan | Lab PM: Mockler, Diana J | Car | COC No: 500-80728-36997.1 |
|---|---|---|---|---|
| Client Contact: Mitchel Dolan | Phone: 262-622-1143 | E-Mail: diana.mockler@testamericainc.com | | Page: Page 1 of 1 |
| Company: KPRG and Associates, Inc. | | | | Job #: 500-181249 |
| Address: 14665 West Lisbon Road, Suite 1A | Due Date Requested: | | | |
| City: Brookfield | TAT Requested (days): | | | |
| State, Zip: WI, 53005 | | | | |
| Phone: 309-477-5240(Tel) | PO #: 4501908159 | | | |
| Email: mitcheld@kprginc.com | WO #: | | | |
| Project Name: Powerton CCR Event Desc: Quarterly Powerton CCR Samplling | Project #: 50011612 | | | |
| Site: Illinois | SSOW#: | | | |

**Analysis Requested**

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0, 904.0 | 6010C, 6020A, 7470A | 2540C, 4500_F_C, SM4500_Cl_E, SM4500_SO4_E | SM4500_SO4_E - Local Method | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | D | D | N | N | | |
| MW-01 | 4/28/20 | 0832 | G | Water | | | X | X | X | X | | |
| MW-02 | | 0956 | | Water | | | | | | | | |
| MW-03 | | 1046 | | Water | | | | | | | | |
| MW-04 | | 1143 | | Water | | | | | | | | |
| MW-05 | | 1236 | | Water | | | | | | | | |
| MW-10 | | 1339 | | Water | | | | | | | | |
| | | | | Water | | | | | | | | |

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: Powerton FAB App IV Parameters

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by | Date/Time | Company | Received by | Date/Time | Company |
|---|---|---|---|---|---|---|
| 1 | | 4/28/20 / 1600 | KPRG | FEDEX | 4/28/20 / 1600 | |
| 2 | | | | | 4/29/20 1130 | TA-CHI |
| 3 | | | | | 1130 | |

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 5.8 33

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-181249

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler:

Client: KPRG
Client Project #: 12313.1
Project Name: Powerton CCR
Project Location/State: Pekin, IL
Lab Project #: 500-11612
Sampler: Mitchel Dolan
Lab PM: Diana Mockler

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | 8 | 8 | 3 | 3 | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Parameter | Total TDS, Cl, Fl, SO4 | Total Sulfate | Total Metals | Rad 226/228 | | | | | | |
| 4 | | MW-01 | 4/28 | 0832 | 6 | W | | X | X | X | X | | | | | | |
| 10 | | MW-08 | 4/28 | 1438 | 6 | W | | X | X | X | X | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 4/28/20 | 1600 | FEDEX | | 4/28/20 | 1600 |
| | | | | [signature] | TA-CHI | 4/29/20 | 1130 |

Lab Courier
Shipped FXG
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments
Powerton ABB/ASB App. IV Parameters.
*One set of CCR samples collected for MW-01. Well falls under both ABB/ASB + FAB

Lab Comments:



TAL-4124-500 (1209)

5/19/2020

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information | Sampler: Mitchel Dolan | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-80729-36998.1 |
|---|---|---|---|---|
| Client Contact: Mitchel Dolan | Phone: 262-622-1143 | E-Mail: diana.mockler@testamericainc.com | | Page: Page 1 of 1 |
| Company: KPRG and Associates, Inc. | | | | Job #: 500-181249 |

| Address: 14665 West Lisbon Road, Suite 1A | Due Date Requested: | Analysis Requested | Preservation Codes: |
|---|---|---|---|
| City: Brookfield | TAT Requested (days): | | A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify) |
| State, Zip: WI, 53005 | | | |
| Phone: 309-477-5240(Tel) | PO #: 4501908159 | | |
| Email: mitcheld@kprginc.com | WO #: | | Other: |
| Project Name: Powerton CCR Event Desc: Quarterly Powerton CCR Samplling | Project #: 50011612 | | |
| Site: Illinois | SSOW#: | | |

500-181249 COC

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0, 904.0 | 6010C, 6020A, 7470A | 2540C, 4500_F_C, SM4500_Cl_E, SM4500_SO4_E | SM4500_SO4_E - Sulfate | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | D | D | N | N | | |
| 11 MW-09 | 4/29/20 | 0943 | G | Water | | | X | X | X | X | | |
| 12 MW-11 | 4/29/20 | 0841 | G | Water | | | X | X | X | X | | |
| 13 MW-12 | 4/29/20 | 1058 | G | Water | | | X | X | X | X | | |
| 14 MW-15 | 4/29/20 | 1216 | G | Water | | | X | X | X | X | | |
| 15 DUPLICATE | 4/29/20 | - | G | Water | | | X | X | X | X | | |
| MW-05 | | | | Water | | | | | | | | |
| MW-07 | | | | Water | | | | | | | | |
| MW-08 | | | | Water | | | | | | | | |
| MW-10 | | | | Water | | | | | | | | |
| | | | | Water | | | | | | | | |
| | | | | | | | | | | | | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by | Date/Time: | Company |
|---|---|---|---|---|---|
| Mitchel Dolan | 4/29/20 1500 | KPRG | FEDEX | 4/29/20 1500 | |
| Relinquished by: | Date/Time: | Company | Received by: Shari Knott | Date/Time: 4/30/20 0940 | Company TA-CHI |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∧ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.6→2.6, 2.4, 1.8→2.8 |
|---|---|---|


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 27APR20
ACTWGT: 41.05 LB
CAD: 6994780/SSFE2102
DIMS: 24x13x14 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 6048
500-181249 Wayb
(000) 000-0000
REF:
INV:
PO:
DEPT:
FedEx
Express
2 of 3
MPS# 0263 3922 9282 8776
Mstr# 3922 9282 8765
0201
TUE - 28 APR 3:00P
STANDARD OVERNIGHT
XH JOTA
60484
IL-US ORD
RT 519
ST 33
5
15:00
A
8776
04.28


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 29APR20
ACTWGT: 47.45 LB
CAD: 6994780/SSFE2102
DIMS: 25x14x13 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(000) 000-0000
REF:
INV:
PO:
DEPT:
500-181249 Wayt
FedEx
Express
1 of 4
TRK# 0201 3923 6795 1735
THU - 30 APR 3:00P
STANDARD OVERNIGHT
## MASTER ##
XH JOTA
AHS
60484
IL-US ORD
48qt.


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 29APR20
ACTWGT: 46.80 LB
CAD: 6994780/SSFE2102
DIMS: 25x14x13 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(000) 000-0000
REF:
INV:
PO:
DEPT:
FedEx
Express
3 of 4
MPS# 3923 6795 1757
Mstr# 3923 6795 1735
0263
0201
THU - 30 APR 3:00P
STANDARD OVERNIGHT
AHS
60484
IL-US ORD
XH JOTA
48qt.


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 29APR20
ACTWGT: 45.30 LB
CAD: 6994780/SSFE2102
DIMS: 25x14x13 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(000) 000-0000
REF:
INV:
PO:
DEPT:
FedEx
Express
4 of 4
MPS# 3923 6795 1768
Mstr# 3923 6795 1735
0263
0201
THU - 30 APR 3:00P
STANDARD OVERNIGHT
AHS
60484
IL-US ORD
XH JOTA
48qt

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134621.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 5/8/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-181249-4) | 4/28/20 | 08:32 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-02 (500-181249-5) | 4/28/20 | 09:56 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-181249-6) | 4/28/20 | 10:46 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-181249-7) | 4/28/20 | 11:43 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-181249-8) | 4/28/20 | 12:36 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-181249-9) | 4/28/20 | 13:39 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-08 (500-181249-10) | 4/28/20 | 14:38 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | Stephanie Hernandez | 4/29/20 1600 | TA-CHI | FED EX | | |
| 2 | FED EX | | | | 4/30/2020 0846 | ETA STL |
| 3 | | | | | | |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134666.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 5/8/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-09 (500-181249-11) | 4/29/20 | 09:43 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-11 (500-181249-12) | 4/29/20 | 08:41 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-12 (500-181249-13) | 4/29/20 | 10:58 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-15 (500-181249-14) | 4/29/20 | 12:16 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-181249-15) | 4/29/20 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | Stephanie Hernandez | 4/30/20 1630 | TA-CHI | FE | | |
| 2 | FE | | | | | |
| 3 | | | | | 5/1/2020 0834 | ETASTL |
| 4 | | | | | | |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134588.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 5/8/2020 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-18 (500-181249-1) | 4/27/20 | 10:49 Central | | Water | | | X | 1 | |
| MW-17 (500-181249-2) | 4/27/20 | 11:32 Central | | Water | | | X | 1 | |
| MW-19 (500-181249-3) | 4/27/20 | 12:19 Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Relinquished by: | 4/28-20 1630 | | | 4/28/20 9:04 | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.0°C IR3 |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134616.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 5/8/2020 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | Preservation Code: | | | | | | | |
| MW-01 (500-181249-4) | 4/28/20 | 08:32 Central | | Water | | | X | 1 | |
| MW-02 (500-181249-5) | 4/28/20 | 09:56 Central | | Water | | | X | 1 | |
| MW-03 (500-181249-6) | 4/28/20 | 10:46 Central | | Water | | | X | 1 | |
| MW-04 (500-181249-7) | 4/28/20 | 11:43 Central | | Water | | | X | 1 | |
| MW-05 (500-181249-8) | 4/28/20 | 12:36 Central | | Water | | | X | 1 | |
| MW-10 (500-181249-9) | 4/28/20 | 13:39 Central | | Water | | | X | 1 | |
| MW-08 (500-181249-10) | 4/28/20 | 14:38 Central | | Water | | | X | 1 | |
| | | | | | | | | | |
| | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| Stephanie Hernandez | 4/29/20 1600 | TA-CHI | | | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: 4-30-20 9:27 | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.0° IR7 |
|---|---|---|

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**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134661.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-1 |
| Address: 3355 McLemore Drive, , | Due Date Requested: 5/8/2020 | | | |
| City: Pensacola | TAT Requested (days): | | | |
| State, Zip: FL, 32514 | | | | |
| Phone: 850-474-1001(Tel) 850-478-2671(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SM4500_SO4_E | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | |
| MW-09 (500-181249-11) | 4/29/20 | 09:43 Central | | Water | | | X | 1 | |
| MW-11 (500-181249-12) | 4/29/20 | 08:41 Central | | Water | | | X | 1 | |
| MW-12 (500-181249-13) | 4/29/20 | 10:58 Central | | Water | | | X | 1 | |
| MW-15 (500-181249-14) | 4/29/20 | 12:16 Central | | Water | | | X | 1 | |
| Duplicate (500-181249-15) | 4/29/20 | Central | | Water | | | X | 1 | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| ***Possible Hazard Identification*** | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** |
|---|---|
| *Unconfirmed* | ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | Stephanie Hernandez | 4/30/20 1630 | TA-CHI | Kathy R Auer | 5-1-20 856 | |
| 2 | | | | | | |
| 3 | | | | | | |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.0°C IR 8 |
|---|---|---|

Ver: 01/16/2019



5/19/2020

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-1

**Login Number: 181249**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.6,5.8,3.3,2.6,2.4,2.85 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-1

**Login Number: 181249**
**List Number: 2**
**Creator: Gore, Beija K**

**List Source: Eurofins TestAmerica, Pensacola**
**List Creation: 04/29/20 02:02 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | 1007369 |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.0 °C IR 8 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-1

**Login Number: 181249**
**List Number: 6**
**Creator: Conrady, Hank W**

**List Source: Eurofins TestAmerica, Pensacola**
**List Creation: 04/30/20 05:18 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.0°C IR-7 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-1

**Login Number: 181249**
**List Number: 7**
**Creator: Avery, Kathy R**

**List Source: Eurofins TestAmerica, Pensacola**
**List Creation: 05/01/20 11:07 AM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 0.0°IR 8 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-181249-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

Diana Mockler

*Authorized for release by:*
*6/2/2020 3:32:37 PM*

Diana Mockler, Project Manager I
(219)252-7570
diana.mockler@testamericainc.com

LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-181249-2

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-181249-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 4/28/2020 9:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 1.6º C, 2.4º C, 2.6º C, 2.8º C, 3.3º C and 5.8º C.

**RAD**
Methods 903.0, 9315: Radium-226 Prep Batch 160-470017
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

MW-15 (500-181249-14), (LCS 160-470017/1-A), (MB 160-470017/22-A), (160-37998-J-1-A) and (160-37998-J-1-B DU)

Methods 903.0, 9315: Radium-226 Prep Batch 160-469993
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
MW-18 (500-181249-1), MW-17 (500-181249-2), MW-19 (500-181249-3), MW-01 (500-181249-4), MW-02 (500-181249-5), MW-03 (500-181249-6), MW-04 (500-181249-7), MW-05 (500-181249-8), MW-10 (500-181249-9), MW-08 (500-181249-10), MW-09 (500-181249-11), MW-11 (500-181249-12), MW-12 (500-181249-13), Duplicate (500-181249-15), (LCS 160-469993/1-A), (MB 160-469993/23-A) and (500-181249-D-1-B DU)

Methods 904.0, 9320: Ra-228 Prep Batch 160-470021
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

MW-15 (500-181249-14), (LCS 160-470021/1-A), (MB 160-470021/22-A), (160-37998-J-1-C) and (160-37998-J-1-D DU)

Methods 904.0, 9320: Radium-228 Prep Batch 160-469995
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
MW-18 (500-181249-1), MW-17 (500-181249-2), MW-19 (500-181249-3), MW-01 (500-181249-4), MW-02 (500-181249-5), MW-03 (500-181249-6), MW-04 (500-181249-7), MW-05 (500-181249-8), MW-10 (500-181249-9), MW-08 (500-181249-10), MW-09 (500-181249-11), MW-11 (500-181249-12), MW-12 (500-181249-13), Duplicate (500-181249-15), (LCS 160-469995/1-A), (MB 160-469995/23-A) and (500-181249-D-1-D DU)

Method PrecSep_0: Radium 228 Prep Batch 160-469995:

The following samples were prepared at a reduced aliquot due to discoloration and cloudy appearance: MW-10 (500-181249-9). Samples 500-181249-9 and 160-37961-1 have a yellow discoloration and cloudy appearance. Sample 160-37961-2 has a cloudy appearance.

Method PrecSep-21: Radium 226 Prep Batch 160-469993:

The following samples were prepared at a reduced aliquot due to discoloration and cloudy appearance: MW-10 (500-181249-9). Samples

## Job ID: 500-181249-2 (Continued)

### Laboratory: Eurofins TestAmerica, Chicago (Continued)

500-181249-9 and 160-37961-1 have a yellow discoloration and cloudy appearance. Sample 160-37961-2 has a cloudy appearance.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Water | 04/27/20 10:49 | 04/28/20 09:35 | |
| 500-181249-2 | MW-17 | Water | 04/27/20 11:32 | 04/28/20 09:35 | |
| 500-181249-3 | MW-19 | Water | 04/27/20 12:19 | 04/28/20 09:35 | |
| 500-181249-4 | MW-01 | Water | 04/28/20 08:32 | 04/29/20 11:30 | |
| 500-181249-5 | MW-02 | Water | 04/28/20 09:56 | 04/29/20 11:30 | |
| 500-181249-6 | MW-03 | Water | 04/28/20 10:46 | 04/29/20 11:30 | |
| 500-181249-7 | MW-04 | Water | 04/28/20 11:43 | 04/29/20 11:30 | |
| 500-181249-8 | MW-05 | Water | 04/28/20 12:36 | 04/29/20 11:30 | |
| 500-181249-9 | MW-10 | Water | 04/28/20 13:39 | 04/29/20 11:30 | |
| 500-181249-10 | MW-08 | Water | 04/28/20 14:38 | 04/29/20 11:30 | |
| 500-181249-11 | MW-09 | Water | 04/29/20 09:43 | 04/30/20 09:40 | |
| 500-181249-12 | MW-11 | Water | 04/29/20 08:41 | 04/30/20 09:40 | |
| 500-181249-13 | MW-12 | Water | 04/29/20 10:58 | 04/30/20 09:40 | |
| 500-181249-14 | MW-15 | Water | 04/29/20 12:16 | 04/30/20 09:40 | |
| 500-181249-15 | Duplicate | Water | 04/29/20 00:00 | 04/30/20 09:40 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-18

**Date Collected: 04/27/20 10:49**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.179 | | 0.113 | 0.115 | 1.00 | 0.158 | pCi/L | 05/11/20 10:44 | 06/02/20 06:04 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *78.0* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:04* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.157 | U | 0.310 | 0.310 | 1.00 | 0.526 | pCi/L | 05/11/20 11:12 | 05/27/20 10:59 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *78.0* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 10:59* | *1* |
| *Y Carrier* | *84.9* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 10:59* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.336 | U | 0.330 | 0.331 | 5.00 | 0.526 | pCi/L | | 06/02/20 12:48 | 1 |

## Client Sample ID: MW-17

**Date Collected: 04/27/20 11:32**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.155** | | 0.0862 | 0.0873 | 1.00 | 0.101 | pCi/L | 05/11/20 10:44 | 06/02/20 06:05 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.8* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:05* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.208 | U | 0.265 | 0.266 | 1.00 | 0.498 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.8* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *90.1* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | -0.0538 | U | 0.279 | 0.280 | 5.00 | 0.498 | pCi/L | | 06/02/20 12:48 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-19

**Date Collected: 04/27/20 12:19**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.146 | | 0.0847 | 0.0857 | 1.00 | 0.0995 | pCi/L | 05/11/20 10:44 | 06/02/20 06:05 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *80.7* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:05* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.484 | | 0.292 | 0.296 | 1.00 | 0.446 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *80.7* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *88.6* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.630 | | 0.304 | 0.308 | 5.00 | 0.446 | pCi/L | | 06/02/20 12:48 | 1 |

## Client Sample ID: MW-01

**Date Collected: 04/28/20 08:32**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.114 | | 0.0768 | 0.0775 | 1.00 | 0.0939 | pCi/L | 05/11/20 10:44 | 06/02/20 06:05 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *77.4* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:05* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.514 | | 0.304 | 0.308 | 1.00 | 0.462 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *77.4* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.628 | | 0.314 | 0.318 | 5.00 | 0.462 | pCi/L | | 06/02/20 12:48 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-02

**Date Collected: 04/28/20 09:56**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0240 | U | 0.0562 | 0.0563 | 1.00 | 0.107 | pCi/L | 05/11/20 10:44 | 06/02/20 06:05 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.6* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:05* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0440 | U | 0.308 | 0.308 | 1.00 | 0.540 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.6* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *87.9* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.0680 | U | 0.313 | 0.313 | 5.00 | 0.540 | pCi/L | | 06/02/20 12:48 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-03

**Date Collected: 04/28/20 10:46**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0127 | U | 0.0385 | 0.0385 | 1.00 | 0.0996 | pCi/L | 05/11/20 10:44 | 06/02/20 06:05 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *81.3* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:05* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.201 | U | 0.297 | 0.298 | 1.00 | 0.498 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *81.3* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *90.1* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.189 | U | 0.299 | 0.300 | 5.00 | 0.498 | pCi/L | | 06/02/20 12:48 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-04

**Date Collected: 04/28/20 11:43**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0695 | U | 0.0692 | 0.0695 | 1.00 | 0.105 | pCi/L | 05/11/20 10:44 | 06/02/20 06:05 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *78.3* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:05* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.145 | U | 0.274 | 0.274 | 1.00 | 0.465 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *78.3* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *90.8* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.215 | U | 0.283 | 0.283 | 5.00 | 0.465 | pCi/L | | 06/02/20 12:48 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

**Client Sample ID: MW-05**
**Date Collected: 04/28/20 12:36**
**Date Received: 04/29/20 11:30**

**Lab Sample ID: 500-181249-8**
**Matrix: Water**

## Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.105 | U | 0.0812 | 0.0817 | 1.00 | 0.113 | pCi/L | 05/11/20 10:44 | 06/02/20 06:06 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *77.1* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:06* | *1* |

## Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.402 | U | 0.297 | 0.300 | 1.00 | 0.466 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *77.1* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *86.4* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

## Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.508** | | 0.308 | 0.311 | 5.00 | 0.466 | pCi/L | | 06/02/20 12:48 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-10

**Date Collected: 04/28/20 13:39**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.223** | | 0.126 | 0.128 | 1.00 | 0.164 | pCi/L | 05/11/20 10:44 | 06/02/20 06:06 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.0* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:06* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.416 | U | 0.348 | 0.350 | 1.00 | 0.557 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.0* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *88.6* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.639** | | 0.370 | 0.373 | 5.00 | 0.557 | pCi/L | | 06/02/20 12:48 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-08

**Date Collected: 04/28/20 14:38**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-10

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0660 | U | 0.0739 | 0.0742 | 1.00 | 0.118 | pCi/L | 05/11/20 10:44 | 06/02/20 06:06 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *81.0* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 06:06* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0805 | U | 0.259 | 0.259 | 1.00 | 0.450 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *81.0* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *91.2* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.147 | U | 0.269 | 0.269 | 5.00 | 0.450 | pCi/L | | 06/02/20 12:48 | 1 |

## Client Sample ID: MW-09

**Date Collected: 04/29/20 09:43**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-11

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0472 | U | 0.0631 | 0.0632 | 1.00 | 0.105 | pCi/L | 05/11/20 10:44 | 06/02/20 08:10 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *70.2* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 08:10* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.267 | U | 0.415 | 0.416 | 1.00 | 0.698 | pCi/L | 05/11/20 11:12 | 05/27/20 11:00 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *70.2* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |
| *Y Carrier* | *65.8* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:00* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.314 | U | 0.420 | 0.421 | 5.00 | 0.698 | pCi/L | | 06/02/20 12:27 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-11

**Date Collected: 04/29/20 08:41**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-12

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-226** | **0.253** | | 0.104 | 0.106 | 1.00 | 0.0964 | pCi/L | 05/11/20 10:44 | 06/02/20 08:10 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.7* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 08:10* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.218 | U | 0.266 | 0.267 | 1.00 | 0.440 | pCi/L | 05/11/20 11:12 | 05/27/20 11:01 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.7* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:01* | *1* |
| *Y Carrier* | *89.7* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:01* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.470** | | 0.286 | 0.287 | 5.00 | 0.440 | pCi/L | | 06/02/20 12:27 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-12

**Date Collected: 04/29/20 10:58**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-13

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0714 | U | 0.0906 | 0.0909 | 1.00 | 0.151 | pCi/L | 05/11/20 10:44 | 06/02/20 08:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *80.1* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 08:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.506** | | 0.285 | 0.289 | 1.00 | 0.429 | pCi/L | 05/11/20 11:12 | 05/27/20 11:01 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *80.1* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:01* | *1* |
| *Y Carrier* | *89.0* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:01* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.578** | | 0.299 | 0.303 | 5.00 | 0.429 | pCi/L | | 06/02/20 12:27 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-15

**Date Collected: 04/29/20 12:16**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-14

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.183 | | 0.0787 | 0.0804 | 1.00 | 0.0730 | pCi/L | 05/11/20 14:42 | 06/02/20 04:06 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.5* | | *40 - 110* | *05/11/20 14:42* | *06/02/20 04:06* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.156 | U | 0.261 | 0.261 | 1.00 | 0.441 | pCi/L | 05/11/20 15:09 | 05/21/20 12:21 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.5* | | *40 - 110* | *05/11/20 15:09* | *05/21/20 12:21* | *1* |
| *Y Carrier* | *92.0* | | *40 - 110* | *05/11/20 15:09* | *05/21/20 12:21* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.339 | U | 0.273 | 0.273 | 5.00 | 0.441 | pCi/L | | 06/02/20 12:27 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: Duplicate

**Date Collected: 04/29/20 00:00**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-15

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.124 | | 0.0880 | 0.0887 | 1.00 | 0.120 | pCi/L | 05/11/20 10:44 | 06/02/20 08:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *78.3* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 08:11* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.193 | U | 0.304 | 0.304 | 1.00 | 0.510 | pCi/L | 05/11/20 11:12 | 05/27/20 11:01 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *78.3* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:01* | *1* |
| *Y Carrier* | *87.1* | | *40 - 110* | *05/11/20 11:12* | *05/27/20 11:01* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.317 | U | 0.316 | 0.317 | 5.00 | 0.510 | pCi/L | | 06/02/20 12:28 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Rad

### Prep Batch: 469993

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-181249-2 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-181249-3 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-181249-4 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-181249-5 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-181249-6 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-181249-7 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-181249-8 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-181249-9 | MW-10 | Total/NA | Water | PrecSep-21 | |
| 500-181249-10 | MW-08 | Total/NA | Water | PrecSep-21 | |
| 500-181249-11 | MW-09 | Total/NA | Water | PrecSep-21 | |
| 500-181249-12 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-181249-13 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-181249-15 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-469993/23-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-469993/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-181249-1 DU | MW-18 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 469995

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-1 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-181249-2 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-181249-3 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-181249-4 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-181249-5 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-181249-6 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-181249-7 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-181249-8 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-181249-9 | MW-10 | Total/NA | Water | PrecSep_0 | |
| 500-181249-10 | MW-08 | Total/NA | Water | PrecSep_0 | |
| 500-181249-11 | MW-09 | Total/NA | Water | PrecSep_0 | |
| 500-181249-12 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-181249-13 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-181249-15 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-469995/23-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-469995/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-181249-1 DU | MW-18 | Total/NA | Water | PrecSep_0 | |

### Prep Batch: 470017

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-14 | MW-15 | Total/NA | Water | PrecSep-21 | |
| MB 160-470017/22-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-470017/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 470021

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-181249-14 | MW-15 | Total/NA | Water | PrecSep_0 | |
| MB 160-470021/22-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-470021/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-469993/23-A**
**Matrix: Water**
**Analysis Batch: 471667**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 469993**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.04301 | U | 0.0527 | 0.0529 | 1.00 | 0.0852 | pCi/L | 05/11/20 10:44 | 06/02/20 08:12 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *86.4* | | *40 - 110* | *05/11/20 10:44* | *06/02/20 08:12* | *1* |

**Lab Sample ID: LCS 160-469993/1-A**
**Matrix: Water**
**Analysis Batch: 471667**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 469993**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.3 | 9.701 | | 1.05 | 1.00 | 0.101 | pCi/L | 85 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *87.0* | | *40 - 110* |

**Lab Sample ID: 500-181249-1 DU**
**Matrix: Water**
**Analysis Batch: 471667**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**
**Prep Batch: 469993**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.179 | | | 0.1546 | | 0.0962 | 1.00 | 0.117 | pCi/L | | | 0.12 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *69.6* | | *40 - 110* |

**Lab Sample ID: MB 160-470017/22-A**
**Matrix: Water**
**Analysis Batch: 471667**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 470017**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.01108 | U | 0.0358 | 0.0358 | 1.00 | 0.0713 | pCi/L | 05/11/20 14:42 | 06/02/20 06:03 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.9* | | *40 - 110* | *05/11/20 14:42* | *06/02/20 06:03* | *1* |

**Lab Sample ID: LCS 160-470017/1-A**
**Matrix: Water**
**Analysis Batch: 471667**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 470017**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.3 | 10.89 | | 1.11 | 1.00 | 0.0668 | pCi/L | 96 | 75 - 125 | | |

## Method: 903.0 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: LCS 160-470017/1-A**
**Matrix: Water**
**Analysis Batch: 471667**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 470017**

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 96.1 | | 40 - 110 |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-469995/23-A**
**Matrix: Water**
**Analysis Batch: 471336**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 469995**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.02092 | U | 0.186 | 0.186 | 1.00 | 0.333 | pCi/L | 05/11/20 11:12 | 05/27/20 11:03 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 86.4 | | 40 - 110 | 05/11/20 11:12 | 05/27/20 11:03 | 1 |
| Y Carrier | 95.7 | | 40 - 110 | 05/11/20 11:12 | 05/27/20 11:03 | 1 |

**Lab Sample ID: LCS 160-469995/1-A**
**Matrix: Water**
**Analysis Batch: 471338**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 469995**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 8.80 | 9.582 | | 1.13 | 1.00 | 0.484 | pCi/L | 109 | 75 - 125 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 87.0 | | 40 - 110 |
| Y Carrier | 86.7 | | 40 - 110 |

**Lab Sample ID: 500-181249-1 DU**
**Matrix: Water**
**Analysis Batch: 471338**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**
**Prep Batch: 469995**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.157 | U | | 0.02472 | U | 0.347 | 1.00 | 0.608 | pCi/L | | | 0.20 | 1 |

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 69.6 | | 40 - 110 |
| Y Carrier | 89.0 | | 40 - 110 |

**Lab Sample ID: MB 160-470021/22-A**
**Matrix: Water**
**Analysis Batch: 471097**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 470021**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.01685 | U | 0.247 | 0.247 | 1.00 | 0.440 | pCi/L | 05/11/20 15:09 | 05/21/20 12:18 | 1 |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: MB 160-470021/22-A**
**Matrix: Water**
**Analysis Batch: 471097**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 470021**

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 94.9 | | 40 - 110 | 05/11/20 15:09 | 05/21/20 12:18 | 1 |
| Y Carrier | 93.5 | | 40 - 110 | 05/11/20 15:09 | 05/21/20 12:18 | 1 |

**Lab Sample ID: LCS 160-470021/1-A**
**Matrix: Water**
**Analysis Batch: 471096**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 470021**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 8.82 | 8.132 | | 0.976 | 1.00 | 0.400 | pCi/L | 92 | 75 - 125 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 96.1 | | 40 - 110 |
| Y Carrier | 89.7 | | 40 - 110 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-18
**Date Collected: 04/27/20 10:49**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:04 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 10:59 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-17
**Date Collected: 04/27/20 11:32**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:05 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-19
**Date Collected: 04/27/20 12:19**
**Date Received: 04/28/20 09:35**

## Lab Sample ID: 500-181249-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:05 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-01
**Date Collected: 04/28/20 08:32**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:05 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-02
**Date Collected: 04/28/20 09:56**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-5
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:05 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 04/28/20 10:46**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-6
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:05 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-04
**Date Collected: 04/28/20 11:43**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-7
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:05 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-05
**Date Collected: 04/28/20 12:36**
**Date Received: 04/29/20 11:30**

## Lab Sample ID: 500-181249-8
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:06 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-10

**Lab Sample ID: 500-181249-9**

**Date Collected: 04/28/20 13:39**

**Matrix: Water**

**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:06 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-08

**Lab Sample ID: 500-181249-10**

**Date Collected: 04/28/20 14:38**

**Matrix: Water**

**Date Received: 04/29/20 11:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 06:06 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471698 | 06/02/20 12:48 | SMP | TAL SL |

## Client Sample ID: MW-09

**Lab Sample ID: 500-181249-11**

**Date Collected: 04/29/20 09:43**

**Matrix: Water**

**Date Received: 04/30/20 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 08:10 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:00 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471690 | 06/02/20 12:27 | SMP | TAL SL |

## Client Sample ID: MW-11

**Lab Sample ID: 500-181249-12**

**Date Collected: 04/29/20 08:41**

**Matrix: Water**

**Date Received: 04/30/20 09:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 08:10 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:01 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471690 | 06/02/20 12:27 | SMP | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Client Sample ID: MW-12

**Date Collected: 04/29/20 10:58**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-13

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 08:11 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:01 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471690 | 06/02/20 12:27 | SMP | TAL SL |

## Client Sample ID: MW-15

**Date Collected: 04/29/20 12:16**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-14

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 470017 | 05/11/20 14:42 | MNH | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 04:06 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 470021 | 05/11/20 15:09 | MNH | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471096 | 05/21/20 12:21 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471690 | 06/02/20 12:27 | SMP | TAL SL |

## Client Sample ID: Duplicate

**Date Collected: 04/29/20 00:00**
**Date Received: 04/30/20 09:40**

## Lab Sample ID: 500-181249-15

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 469993 | 05/11/20 10:44 | RBR | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 471667 | 06/02/20 08:11 | KLS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 469995 | 05/11/20 11:12 | RBR | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 471338 | 05/27/20 11:01 | AJD | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 471690 | 06/02/20 12:28 | SMP | TAL SL |

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-30-20 * |

## Laboratory: Eurofins TestAmerica, St. Louis

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | 004553 | 11-30-20 |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60
Phone: 708.534.5200 Fax: 708.53

500-181249 COC

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-181249

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 0.6→4.6

Client: KPRG
Client Project #: 12313.1
Project Name: Powerton CCR
Project Location/State: Pekin, IL
Lab Project #: 50011612
Sampler: M. Mitchel Dolan
Lab PM: Diana Mozkler

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | 3 | 3 | 8 | 8 | 8 | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Parameter | 9030, 9040.0 | 6010C, 6020A, D420A | [redacted] | Total Cl, Fl, TDS | Sulfate | | | | | |
| 1 | | MW-18 | 4/27 | 1049 | 6 | W | | X | X | | X | X | | | | | |
| 2 | | MW-17 | 4/27 | 1132 | 6 | W | | X | X | | X | X | | | | | |
| 3 | | MW-19 | 4/27 | 1219 | 6 | W | | X | X | | X | X | | | | | |

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| Mitchel Dolan | KPRG | 4/27/20 | 1630 | FEDEX | | 4/27/20 | 1630 |
| | | | | Rhondeott | TA-CHI | 4/28/20 | 0935 |

Lab Courier
Shipped Fed Ex
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:



TAL-4124-500 (1209)

6/2/2020

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing America

500-181249 COC

| Client Information | Sampler: Mitchel Dolan | Lab PM: Mockler, Diana J | Car | COC No: 500-80728-36997.1 |
|---|---|---|---|---|
| Client Contact: Mitchel Dolan | Phone: 262-622-1143 | E-Mail: diana.mockler@testamericainc.com | | Page: Page 1 of 1 |
| Company: KPRG and Associates, Inc. | | | | Job #: 500-181249 |
| Address: 14665 West Lisbon Road, Suite 1A | Due Date Requested: | | | |
| City: Brookfield | TAT Requested (days): | | | |
| State, Zip: WI, 53005 | | | | |
| Phone: 309-477-5240(Tel) | PO #: 4501908159 | | | |
| Email: mitcheld@kprginc.com | WO #: | | | |
| Project Name: Powerton CCR Event Desc: Quarterly Powerton CCR Samplling | Project #: 50011612 | | | |
| Site: Illinois | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0, 904.0 | 6010C, 6020A, 7470A | 2540C, 4500_F_C, SM4500_Cl_E, SM4500_SO4_E | SM4500_SO4_E - Local Method | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | D | D | N | N | | |
| MW-01 | 4/28/20 | 0832 | G | Water | | | X | X | X | X | | |
| MW-02 | | 0956 | | Water | | | | | | | | |
| MW-03 | | 1046 | | Water | | | | | | | | |
| MW-04 | | 1143 | | Water | | | | | | | | |
| MW-05 | | 1236 | | Water | | | | | | | | |
| MW-10 | | 1339 | | Water | | | | | | | | |
| | | | | Water | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

4 5 6 7 8 9

***Possible Hazard Identification***
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)***
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: Powerton FAB App IV Parameters

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by | Date/Time | Company | Received by | Date/Time | Company |
|---|---|---|---|---|---|
| [signature] | 4/28/20 / 1600 | KPRG | FEDEX | 4/28/20 / 1600 | |
| Relinquished by: | Date/Time: | Company | Received by: [signature] | 4/29/20 1130 | TA-CHI |
| Relinquished by | Date/Time. | Company | Received by: | Date/Time: 1130 | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 5.8 33 |
|---|---|---|

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact:
Company:
Address:
Address:
Phone:
Fax:
E-Mail:

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

# Chain of Custody Record

Lab Job #: 500-181249

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler:

Client: KPRG
Client Project #: 12313.1
Project Name: Powerton CCR
Project Location/State: Pekin, IL
Lab Project #: 50011612
Sampler: Michael Dolan
Lab PM: Diana Mockler

Preservative: 8 | 8 | 3 | 3

Parameter: Total TDS, Cl, Fl, SO4 | Total Sulfate | Total Metals | Rad 226/228

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH. Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Total TDS, Cl, Fl, SO4 | Total Sulfate | Total Metals | Rad 226/228 | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | | MW-01 | 4/28 | 0832 | 6 | W | X | X | X | X | |
| 10 | | MW-08 | 4/28 | 1438 | 6 | W | X | X | X | X | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days ___ 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| [signature] | KPRG | 4/28/20 | 1600 | FEDEX | | 4/28/20 | 1600 |
| | | | | [signature] | TA-CHI | 4/29/20 | 1130 |

Lab Courier:
Shipped: FXG
Hand Delivered:

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments
Powerton ABB/ASB App. IV Parameters.
*One set of CCR samples collected for MW-01. Well falls under both ABB/ASB + FAB

Lab Comments:



TAL-4124-500 (1209)

6/2/2020

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information | Sampler: Mitchel Dolan | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-80729-36998.1 |
|---|---|---|---|---|
| Client Contact: Mitchel Dolan | Phone: 262-622-1143 | E-Mail: diana.mockler@testamericainc.com | | Page: Page 1 of 1 |
| Company: KPRG and Associates, Inc. | | | | Job #: 500-181249 |

| Address: 14665 West Lisbon Road, Suite 1A | Due Date Requested: | Analysis Requested | Preservation Codes: |
|---|---|---|---|
| City: Brookfield | TAT Requested (days): | | A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify) |
| State, Zip: WI, 53005 | | | |
| Phone: 309-477-5240(Tel) | PO #: 4501908159 | | |
| Email: mitcheld@kprginc.com | WO #: | | Other: |
| Project Name: Powerton CCR Event Desc: Quarterly Powerton CCR Samplling | Project #: 50011612 | | |
| Site: Illinois | SSOW#: | | |

500-181249 COC

| Sample Identification | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0, 904.0 | 6010C, 6020A, 7470A | 2540C, 4500_F_C, SM4500_Cl_E, SM4500_SO4_E | SM4500_SO4_E - Sulfate | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | D | D | N | N | | |
| 11 MW-09 | 4/29/20 | 0943 | G | Water | | | X | X | X | X | | |
| 12 MW-11 | 4/29/20 | 0841 | G | Water | | | X | X | X | X | | |
| 13 MW-12 | 4/29/20 | 1058 | G | Water | | | X | X | X | X | | |
| 14 MW-15 | 4/29/20 | 1216 | G | Water | | | X | X | X | X | | |
| 15 DUPLICATE | 4/29/20 | - | G | Water | | | X | X | X | X | | |
| MW-05 | | | | Water | | | | | | | | |
| MW-17 | | | | Water | | | | | | | | |
| MW-18 | | | | Water | | | | | | | | |
| MW-19 | | | | Water | | | | | | | | |
| | | | | Water | | | | | | | | |
| | | | | | | | | | | | | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| Relinquished by: | Date/Time: | Company | Received by | Date/Time: | Company |
|---|---|---|---|---|---|
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Mitchel Dolan | 4/29/20 1500 | KPRG | FEDEX | 4/29/20 1500 | |
| | | | Shari Knott | 4/30/20 0940 | TA-CHI |

Custody Seals Intact: ∧ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.6→2.6, 2.4, 1.8→2.8


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 27APR20
ACTWGT: 41.05 LB
CAD: 6994780/SSFE2102
DIMS: 24x13x14 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 6048
500-181249 Wayb
(000) 000-0000
REF:
INV:
PO:
DEPT:
FedEx
Express
2 of 3
MPS# 0263 3922 9282 8776
Mstr# 3922 9282 8765
0201
TUE - 28 APR 3:00P
STANDARD OVERNIGHT
XH JOTA
60484
IL-US ORD
RT 519
ST 33
5
15:00
A
8776
04.28


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 29APR20
ACTWGT: 47.45 LB
CAD: 6994780/SSFE2102
DIMS: 25x14x13 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(000) 000-0000
REF:
INV:
PO:
DEPT:
500-181249 Wayt
FedEx
Express
1 of 4
TRK# 0201 3923 6795 1735
THU - 30 APR 3:00P
STANDARD OVERNIGHT
## MASTER ##
XH JOTA
AHS
60484
IL-US ORD
48qt.


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 29APR20
ACTWGT: 46.80 LB
CAD: 6994780/SSFE2102
DIMS: 25x14x13 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(000) 000-0000
REF:
INV:
PO:
DEPT:
FedEx
Express
3 of 4
MPS# 3923 6795 1757
Mstr# 3923 6795 1735
0263
0201
THU - 30 APR 3:00P
STANDARD OVERNIGHT
AHS
60484
IL-US ORD
XH JOTA
48qt.


ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN
KPRG
414 PLAZA DR STE 106
WESTMONT, IL 60559
UNITED STATES US
SHIP DATE: 29APR20
ACTWGT: 45.30 LB
CAD: 6994780/SSFE2102
DIMS: 25x14x13 IN
BILL THIRD PARTY
TO EUROFINS TEST AMERICA
EUROFINS TEST AMERICA
2417 BOND ST
UNIVERSITY PARK IL 60484
(000) 000-0000
REF:
INV:
PO:
DEPT:
FedEx
Express
4 of 4
MPS# 3923 6795 1768
Mstr# 3923 6795 1735
0263
0201
THU - 30 APR 3:00P
STANDARD OVERNIGHT
AHS
60484
IL-US ORD
XH JOTA
48qt

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134595.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 5/8/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-18 (500-181249-1) | 4/27/20 | 10:49 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-17 (500-181249-2) | 4/27/20 | 11:32 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-19 (500-181249-3) | 4/27/20 | 12:19 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification: Unconfirmed | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
|---|---|
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |
| Empty Kit Relinquished by: | Date: Time: Method of Shipment: |

| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|
| [signature] FE | 4-28-20 1630 | TA | FE | | |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| FE | | | [signature] | 4/29/2020 09:03 | ETA STL |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134621.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 5/8/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-181249-4) | 4/28/20 | 08:32 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-02 (500-181249-5) | 4/28/20 | 09:56 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-181249-6) | 4/28/20 | 10:46 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-181249-7) | 4/28/20 | 11:43 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-181249-8) | 4/28/20 | 12:36 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-10 (500-181249-9) | 4/28/20 | 13:39 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-08 (500-181249-10) | 4/28/20 | 14:38 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | Stephanie Hernandez | 4/29/20 1600 | TA-CHI | FED EX | | |
| 2 | FED EX | | | | 4/30/2020 0846 | ETA STL |
| 3 | | | | | | |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing TestAmerica

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-134666.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: diana.mockler@testamericainc.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-181249-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 5/8/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-09 (500-181249-11) | 4/29/20 | 09:43 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-11 (500-181249-12) | 4/29/20 | 08:41 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-12 (500-181249-13) | 4/29/20 | 10:58 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-15 (500-181249-14) | 4/29/20 | 12:16 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-181249-15) | 4/29/20 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | Stephanie Hernandez | 4/30/20 1630 | TA-CHI | FE | | |
| 2 | FE | | | | 5/1/2020 0834 | ETASTL |
| 3 | | | | | | |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-2

**Login Number: 181249**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 1.6,5.8,3.3,2.6,2.4,2.85 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-2

**Login Number: 181249**
**List Number: 3**
**Creator: Korrinhizer, Micha L**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 04/29/20 08:31 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-2

**Login Number: 181249**
**List Number: 4**
**Creator: Korrinhizer, Micha L**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 04/29/20 08:35 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-2

**Login Number: 181249**
**List Number: 5**
**Creator: Mazariegos, Leonel A**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 04/30/20 03:38 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-181249-2

**Login Number: 181249**
**List Number: 8**
**Creator: Korrinhizer, Micha L**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 05/01/20 07:38 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| Lab Sample ID | Client Sample ID | Percent Yield (Acceptance Limits) Ba Carrier (40-110) |
|---|---|---|
| 500-181249-1 | MW-18 | 78.0 |
| 500-181249-1 DU | MW-18 | 69.6 |
| 500-181249-2 | MW-17 | 82.8 |
| 500-181249-3 | MW-19 | 80.7 |
| 500-181249-4 | MW-01 | 77.4 |
| 500-181249-5 | MW-02 | 75.6 |
| 500-181249-6 | MW-03 | 81.3 |
| 500-181249-7 | MW-04 | 78.3 |
| 500-181249-8 | MW-05 | 77.1 |
| 500-181249-9 | MW-10 | 94.0 |
| 500-181249-10 | MW-08 | 81.0 |
| 500-181249-11 | MW-09 | 70.2 |
| 500-181249-12 | MW-11 | 83.7 |
| 500-181249-13 | MW-12 | 80.1 |
| 500-181249-14 | MW-15 | 85.5 |
| 500-181249-15 | Duplicate | 78.3 |
| LCS 160-469993/1-A | Lab Control Sample | 87.0 |
| LCS 160-470017/1-A | Lab Control Sample | 96.1 |
| MB 160-469993/23-A | Method Blank | 86.4 |
| MB 160-470017/22-A | Method Blank | 94.9 |

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| Lab Sample ID | Client Sample ID | Percent Yield (Acceptance Limits) Ba Carrier (40-110) | Y Carrier (40-110) |
|---|---|---|---|
| 500-181249-1 | MW-18 | 78.0 | 84.9 |
| 500-181249-1 DU | MW-18 | 69.6 | 89.0 |
| 500-181249-2 | MW-17 | 82.8 | 90.1 |
| 500-181249-3 | MW-19 | 80.7 | 88.6 |
| 500-181249-4 | MW-01 | 77.4 | 87.1 |
| 500-181249-5 | MW-02 | 75.6 | 87.9 |
| 500-181249-6 | MW-03 | 81.3 | 90.1 |
| 500-181249-7 | MW-04 | 78.3 | 90.8 |
| 500-181249-8 | MW-05 | 77.1 | 86.4 |
| 500-181249-9 | MW-10 | 94.0 | 88.6 |
| 500-181249-10 | MW-08 | 81.0 | 91.2 |
| 500-181249-11 | MW-09 | 70.2 | 65.8 |
| 500-181249-12 | MW-11 | 83.7 | 89.7 |
| 500-181249-13 | MW-12 | 80.1 | 89.0 |
| 500-181249-14 | MW-15 | 85.5 | 92.0 |
| 500-181249-15 | Duplicate | 78.3 | 87.1 |
| LCS 160-469995/1-A | Lab Control Sample | 87.0 | 86.7 |
| LCS 160-470021/1-A | Lab Control Sample | 96.1 | 89.7 |
| MB 160-469995/23-A | Method Blank | 86.4 | 95.7 |
| MB 160-470021/22-A | Method Blank | 94.9 | 93.5 |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-181249-2

**Tracer/Carrier Legend**

Ba Carrier = Ba Carrier
Y Carrier = Y Carrier

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-192070-1
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

Diana Mockler

*Authorized for release by:*
*12/18/2020 5:54:34 PM*

Diana Mockler, Project Manager I
(219)252-7570
Diana.Mockler@Eurofinset.com

LINKS

Review your project results through TotalAccess

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www.eurofinsus.com/Env

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-192070-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-192070-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 12/8/2020 10:05 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 7 coolers at receipt time were -0.7º C, -0.4º C, -0.3º C, -0.1º C, -0.1º C, 0.3º C and 0.3º C.

**Metals**
Method 6010C: The interference check standard solution (ICSA) associated with Analytical batch 500-576167 had results for Lithium above the reporting limit (RL). Associated samples MW-19 (500-192070-1), MW-01 (500-192070-4) and Duplicate (500-192070-5) were non-detects for Lithium, therefore the data has been reported.

Method 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-576644. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

Method 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-577089. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: MW-19 — Lab Sample ID: 500-192070-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.062 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.3 | | 1.0 | | mg/L | 20 | | 6020A | Total Recoverable |
| Calcium | 74 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.053 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 420 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 34 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.19 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 76 | F1 | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-17 — Lab Sample ID: 500-192070-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.022 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.080 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.050 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.3 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Cadmium | 0.0010 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 140 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0011 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.056 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1100 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 160 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.80 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 430 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-18 — Lab Sample ID: 500-192070-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0032 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.11 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.75 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 110 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.061 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 910 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 150 | F1 | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.70 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 160 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-192070-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.058 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.60 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00055 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0051 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 490 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 54 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.25 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 55 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: Duplicate — Lab Sample ID: 500-192070-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.062 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 3.5 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 74 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.051 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 380 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 35 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.18 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 78 | | 15 | | mg/L | 3 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-09 — Lab Sample ID: 500-192070-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0013 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.042 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.6 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 65 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.025 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 400 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 34 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.22 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 63 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-11 — Lab Sample ID: 500-192070-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.027 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.26 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-11 (Continued) — Lab Sample ID: 500-192070-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.73 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 86 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0021 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.030 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 650 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 94 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.67 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 200 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-12 — Lab Sample ID: 500-192070-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.012 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.025 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.069 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.61 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 92 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.027 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 990 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 160 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.56 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 320 | | 50 | | mg/L | 10 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-15 — Lab Sample ID: 500-192070-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.035 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.020 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.10 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 1.5 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Cadmium | 0.00059 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 170 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0012 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.020 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.012 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 1400 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 200 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.55 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-15 (Continued)

## Lab Sample ID: 500-192070-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 540 | | 100 | | mg/L | 20 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-08

## Lab Sample ID: 500-192070-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.030 | | 0.010 | | mg/L | 1 | | 6010C | Total Recoverable |
| Arsenic | 0.0024 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.11 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.73 | | 0.25 | | mg/L | 5 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.00093 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.012 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 530 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 150 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.38 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 92 | | 20 | | mg/L | 4 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Water | 12/07/20 10:45 | 12/08/20 10:05 | |
| 500-192070-2 | MW-17 | Water | 12/07/20 11:30 | 12/08/20 10:05 | |
| 500-192070-3 | MW-18 | Water | 12/07/20 12:16 | 12/08/20 10:05 | |
| 500-192070-4 | MW-01 | Water | 12/07/20 12:57 | 12/08/20 10:05 | |
| 500-192070-5 | Duplicate | Water | 12/07/20 00:00 | 12/08/20 10:05 | |
| 500-192070-6 | MW-09 | Water | 12/08/20 08:42 | 12/09/20 10:30 | |
| 500-192070-7 | MW-11 | Water | 12/08/20 09:51 | 12/09/20 10:30 | |
| 500-192070-8 | MW-12 | Water | 12/08/20 11:00 | 12/09/20 10:30 | |
| 500-192070-9 | MW-15 | Water | 12/08/20 12:03 | 12/09/20 10:30 | |
| 500-192070-10 | MW-08 | Water | 12/14/20 10:20 | 12/15/20 14:40 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: MW-19

**Date Collected: 12/07/20 10:45**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | ^ | 0.010 | | mg/L | | 12/08/20 17:57 | 12/09/20 12:40 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:33 | 1 |
| **Barium** | **0.062** | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:36 | 1 |
| **Boron** | **3.3** | | 1.0 | | mg/L | | 12/08/20 17:57 | 12/15/20 15:20 | 20 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:36 | 1 |
| **Calcium** | **74** | | 0.20 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:36 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:36 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:36 | 1 |
| **Molybdenum** | **0.053** | | 0.0050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:36 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:33 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:36 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/10/20 08:20 | 12/11/20 07:35 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **420** | | 10 | | mg/L | | | 12/09/20 03:06 | 1 |
| **Chloride** | **34** | | 2.0 | | mg/L | | | 12/11/20 14:58 | 1 |
| **Fluoride** | **0.19** | | 0.10 | | mg/L | | | 12/16/20 14:01 | 1 |
| **Sulfate** | **76** | **F1** | 25 | | mg/L | | | 12/15/20 14:07 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: MW-17

**Date Collected: 12/07/20 11:30**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-2

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.022 | | 0.010 | | mg/L | | 12/08/20 17:57 | 12/10/20 10:34 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.080 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:42 | 1 |
| Barium | 0.050 | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:54 | 1 |
| Boron | 1.3 | | 0.25 | | mg/L | | 12/08/20 17:57 | 12/15/20 15:46 | 5 |
| Cadmium | 0.0010 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:54 | 1 |
| Calcium | 140 | | 0.20 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:54 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:54 | 1 |
| Lead | 0.0011 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:54 | 1 |
| Molybdenum | 0.056 | | 0.0050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:54 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:42 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:54 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/10/20 08:20 | 12/11/20 07:37 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1100 | | 10 | | mg/L | | | 12/09/20 03:09 | 1 |
| Chloride | 160 | | 10 | | mg/L | | | 12/11/20 15:36 | 5 |
| Fluoride | 0.80 | | 0.10 | | mg/L | | | 12/16/20 14:15 | 1 |
| Sulfate | 430 | | 100 | | mg/L | | | 12/15/20 14:08 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: MW-18

**Date Collected: 12/07/20 12:16**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-3

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.014 | | 0.010 | | mg/L | | 12/08/20 17:57 | 12/10/20 10:37 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0032 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:44 | 1 |
| Barium | 0.11 | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:57 | 1 |
| Boron | 0.75 | | 0.050 | | mg/L | | 12/08/20 17:57 | 12/15/20 15:49 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:57 | 1 |
| Calcium | 110 | | 0.20 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:57 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:57 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:57 | 1 |
| Molybdenum | 0.061 | | 0.0050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:57 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:44 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:57 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/10/20 08:20 | 12/11/20 07:43 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 910 | | 10 | | mg/L | | | 12/09/20 03:11 | 1 |
| Chloride | 150 | F1 | 10 | | mg/L | | | 12/11/20 15:36 | 5 |
| Fluoride | 0.70 | | 0.10 | | mg/L | | | 12/16/20 14:21 | 1 |
| Sulfate | 160 | | 25 | | mg/L | | | 12/15/20 14:08 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: MW-01

**Date Collected: 12/07/20 12:57**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-4

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | ^ | 0.010 | | mg/L | | 12/08/20 17:57 | 12/09/20 13:09 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:50 | 1 |
| **Barium** | **0.058** | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:00 | 1 |
| **Boron** | **0.60** | | 0.050 | | mg/L | | 12/08/20 17:57 | 12/15/20 15:53 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:00 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:00 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:00 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:00 | 1 |
| **Lead** | **0.00055** | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:00 | 1 |
| **Molybdenum** | **0.0051** | | 0.0050 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:00 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:50 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:00 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/10/20 08:20 | 12/11/20 07:45 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **490** | | 10 | | mg/L | | | 12/09/20 03:14 | 1 |
| **Chloride** | **54** | | 2.0 | | mg/L | | | 12/11/20 15:02 | 1 |
| **Fluoride** | **0.25** | | 0.10 | | mg/L | | | 12/16/20 14:26 | 1 |
| **Sulfate** | **55** | | 25 | | mg/L | | | 12/15/20 14:14 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: Duplicate

**Date Collected: 12/07/20 00:00**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-5

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | ^ | 0.010 | | mg/L | | 12/08/20 17:57 | 12/09/20 13:13 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:52 | 1 |
| **Barium** | **0.062** | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:11 | 1 |
| **Boron** | **3.5** | | 0.50 | | mg/L | | 12/08/20 17:57 | 12/15/20 15:56 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:11 | 1 |
| **Calcium** | **74** | | 0.20 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:11 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:11 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:11 | 1 |
| **Molybdenum** | **0.051** | | 0.0050 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:11 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:52 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:11 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/10/20 08:20 | 12/11/20 07:47 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **380** | | 10 | | mg/L | | | 12/09/20 03:17 | 1 |
| **Chloride** | **35** | | 2.0 | | mg/L | | | 12/11/20 15:08 | 1 |
| **Fluoride** | **0.18** | | 0.10 | | mg/L | | | 12/16/20 14:32 | 1 |
| **Sulfate** | **78** | | 15 | | mg/L | | | 12/15/20 14:29 | 3 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: MW-09

**Date Collected: 12/08/20 08:42**
**Date Received: 12/09/20 10:30**

## Lab Sample ID: 500-192070-6

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/10/20 07:37 | 12/12/20 00:16 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.0013** | | 0.0010 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:11 | 1 |
| **Barium** | **0.042** | | 0.0025 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:11 | 1 |
| **Boron** | **2.6** | | 0.50 | | mg/L | | 12/10/20 07:37 | 12/15/20 17:14 | 10 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:41 | 1 |
| **Calcium** | **65** | | 0.20 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:11 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/10/20 07:37 | 12/15/20 18:48 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:41 | 1 |
| **Molybdenum** | **0.025** | | 0.0050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:41 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:11 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:41 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/11/20 09:10 | 12/14/20 07:32 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **400** | | 10 | | mg/L | | | 12/10/20 02:41 | 1 |
| **Chloride** | **34** | | 2.0 | | mg/L | | | 12/11/20 15:09 | 1 |
| **Fluoride** | **0.22** | | 0.10 | | mg/L | | | 12/16/20 14:37 | 1 |
| **Sulfate** | **63** | | 25 | | mg/L | | | 12/15/20 14:09 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: MW-11

**Date Collected: 12/08/20 09:51**
**Date Received: 12/09/20 10:30**

## Lab Sample ID: 500-192070-7

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/10/20 07:37 | 12/12/20 00:19 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.027** | | 0.0010 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:13 | 1 |
| **Barium** | **0.26** | | 0.0025 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:13 | 1 |
| **Boron** | **0.73** | | 0.25 | | mg/L | | 12/10/20 07:37 | 12/15/20 17:18 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:45 | 1 |
| **Calcium** | **86** | | 0.20 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:13 | 1 |
| **Cobalt** | **0.0021** | | 0.0010 | | mg/L | | 12/10/20 07:37 | 12/15/20 18:52 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:45 | 1 |
| **Molybdenum** | **0.030** | | 0.0050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:45 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:13 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:45 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/11/20 09:10 | 12/14/20 07:34 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **650** | | 10 | | mg/L | | | 12/10/20 02:43 | 1 |
| **Chloride** | **94** | | 10 | | mg/L | | | 12/11/20 15:38 | 5 |
| **Fluoride** | **0.67** | | 0.10 | | mg/L | | | 12/16/20 14:52 | 1 |
| **Sulfate** | **200** | | 50 | | mg/L | | | 12/15/20 14:10 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: MW-12

**Date Collected: 12/08/20 11:00**
**Date Received: 12/09/20 10:30**

## Lab Sample ID: 500-192070-8

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.012 | | 0.010 | | mg/L | | 12/10/20 07:37 | 12/12/20 00:22 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.025 | | 0.0010 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:15 | 1 |
| Barium | 0.069 | | 0.0025 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:15 | 1 |
| Boron | 0.61 | | 0.050 | | mg/L | | 12/10/20 07:37 | 12/15/20 17:21 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:48 | 1 |
| Calcium | 92 | | 0.20 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:15 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/10/20 07:37 | 12/15/20 17:21 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:48 | 1 |
| Molybdenum | 0.027 | | 0.0050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:48 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:15 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:48 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/11/20 09:10 | 12/14/20 07:36 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 990 | | 10 | | mg/L | | | 12/10/20 02:46 | 1 |
| Chloride | 160 | | 10 | | mg/L | | | 12/11/20 15:38 | 5 |
| Fluoride | 0.56 | | 0.10 | | mg/L | | | 12/16/20 14:54 | 1 |
| Sulfate | 320 | | 50 | | mg/L | | | 12/15/20 14:11 | 10 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: MW-15

**Date Collected: 12/08/20 12:03**
**Date Received: 12/09/20 10:30**

## Lab Sample ID: 500-192070-9

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.035 | | 0.010 | | mg/L | | 12/10/20 07:37 | 12/12/20 00:26 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.020 | | 0.0010 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:17 | 1 |
| Barium | 0.10 | | 0.0025 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:17 | 1 |
| Boron | 1.5 | | 0.25 | | mg/L | | 12/10/20 07:37 | 12/15/20 17:25 | 5 |
| Cadmium | 0.00059 | | 0.00050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:52 | 1 |
| Calcium | 170 | | 0.20 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:17 | 1 |
| Cobalt | 0.0012 | | 0.0010 | | mg/L | | 12/10/20 07:37 | 12/15/20 18:55 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:52 | 1 |
| Molybdenum | 0.020 | | 0.0050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:52 | 1 |
| Selenium | 0.012 | | 0.0025 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:17 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:52 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/11/20 09:10 | 12/14/20 07:38 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 1400 | | 10 | | mg/L | | | 12/10/20 02:48 | 1 |
| Chloride | 200 | | 10 | | mg/L | | | 12/11/20 15:39 | 5 |
| Fluoride | 0.55 | | 0.10 | | mg/L | | | 12/16/20 15:00 | 1 |
| Sulfate | 540 | | 100 | | mg/L | | | 12/15/20 14:31 | 20 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: MW-08

**Date Collected: 12/14/20 10:20**
**Date Received: 12/15/20 14:40**

## Lab Sample ID: 500-192070-10

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.030 | | 0.010 | | mg/L | | 12/15/20 17:29 | 12/16/20 10:41 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0024 | | 0.0010 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:51 | 1 |
| Barium | 0.11 | | 0.0025 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:51 | 1 |
| Boron | 0.73 | | 0.25 | | mg/L | | 12/15/20 17:29 | 12/16/20 18:35 | 5 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:51 | 1 |
| Calcium | 120 | | 0.20 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:51 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:51 | 1 |
| Lead | 0.00093 | | 0.00050 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:51 | 1 |
| Molybdenum | 0.012 | | 0.0050 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:51 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:51 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:51 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/16/20 09:20 | 12/17/20 08:44 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 530 | | 10 | | mg/L | | | 12/17/20 01:43 | 1 |
| Chloride | 150 | | 10 | | mg/L | | | 12/16/20 11:38 | 5 |
| Fluoride | 0.38 | | 0.10 | | mg/L | | | 12/16/20 15:03 | 1 |
| Sulfate | 92 | | 20 | | mg/L | | | 12/17/20 14:47 | 4 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| ^ | ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits. |
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |

### General Chemistry

| Qualifier | Qualifier Description |
|---|---|
| F1 | MS and/or MSD recovery exceeds control limits. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

## Metals

### Prep Batch: 575895

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Total Recoverable | Water | 3005A | |
| 500-192070-2 | MW-17 | Total Recoverable | Water | 3005A | |
| 500-192070-3 | MW-18 | Total Recoverable | Water | 3005A | |
| 500-192070-4 | MW-01 | Total Recoverable | Water | 3005A | |
| 500-192070-5 | Duplicate | Total Recoverable | Water | 3005A | |
| MB 500-575895/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-575895/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |
| 500-192070-1 MS | MW-19 | Total Recoverable | Water | 3005A | |
| 500-192070-1 MSD | MW-19 | Total Recoverable | Water | 3005A | |
| 500-192070-1 DU | MW-19 | Total Recoverable | Water | 3005A | |

### Prep Batch: 576150

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-6 | MW-09 | Total Recoverable | Water | 3005A | |
| 500-192070-7 | MW-11 | Total Recoverable | Water | 3005A | |
| 500-192070-8 | MW-12 | Total Recoverable | Water | 3005A | |
| 500-192070-9 | MW-15 | Total Recoverable | Water | 3005A | |
| MB 500-576150/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-576150/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 576167

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Total Recoverable | Water | 6010C | 575895 |
| 500-192070-4 | MW-01 | Total Recoverable | Water | 6010C | 575895 |
| 500-192070-5 | Duplicate | Total Recoverable | Water | 6010C | 575895 |
| MB 500-575895/1-A | Method Blank | Total Recoverable | Water | 6010C | 575895 |
| LCS 500-575895/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 575895 |
| 500-192070-1 MS | MW-19 | Total Recoverable | Water | 6010C | 575895 |
| 500-192070-1 MSD | MW-19 | Total Recoverable | Water | 6010C | 575895 |
| 500-192070-1 DU | MW-19 | Total Recoverable | Water | 6010C | 575895 |

### Prep Batch: 576172

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Total/NA | Water | 7470A | |
| 500-192070-2 | MW-17 | Total/NA | Water | 7470A | |
| 500-192070-3 | MW-18 | Total/NA | Water | 7470A | |
| 500-192070-4 | MW-01 | Total/NA | Water | 7470A | |
| 500-192070-5 | Duplicate | Total/NA | Water | 7470A | |
| MB 500-576172/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-576172/13-A | Lab Control Sample | Total/NA | Water | 7470A | |

### Analysis Batch: 576224

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-2 | MW-17 | Total Recoverable | Water | 6010C | 575895 |
| 500-192070-3 | MW-18 | Total Recoverable | Water | 6010C | 575895 |

### Prep Batch: 576393

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-6 | MW-09 | Total/NA | Water | 7470A | |
| 500-192070-7 | MW-11 | Total/NA | Water | 7470A | |
| 500-192070-8 | MW-12 | Total/NA | Water | 7470A | |

## Metals (Continued)

### Prep Batch: 576393 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-9 | MW-15 | Total/NA | Water | 7470A | |
| MB 500-576393/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-576393/13-A | Lab Control Sample | Total/NA | Water | 7470A | |

### Analysis Batch: 576405

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Total/NA | Water | 7470A | 576172 |
| 500-192070-2 | MW-17 | Total/NA | Water | 7470A | 576172 |
| 500-192070-3 | MW-18 | Total/NA | Water | 7470A | 576172 |
| 500-192070-4 | MW-01 | Total/NA | Water | 7470A | 576172 |
| 500-192070-5 | Duplicate | Total/NA | Water | 7470A | 576172 |
| MB 500-576172/12-A | Method Blank | Total/NA | Water | 7470A | 576172 |
| LCS 500-576172/13-A | Lab Control Sample | Total/NA | Water | 7470A | 576172 |

### Analysis Batch: 576582

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-6 | MW-09 | Total Recoverable | Water | 6010C | 576150 |
| 500-192070-7 | MW-11 | Total Recoverable | Water | 6010C | 576150 |
| 500-192070-8 | MW-12 | Total Recoverable | Water | 6010C | 576150 |
| 500-192070-9 | MW-15 | Total Recoverable | Water | 6010C | 576150 |
| MB 500-576150/1-A | Method Blank | Total Recoverable | Water | 6010C | 576150 |
| LCS 500-576150/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 576150 |

### Analysis Batch: 576644

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-2 | MW-17 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-3 | MW-18 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-4 | MW-01 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-5 | Duplicate | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-6 | MW-09 | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-7 | MW-11 | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-8 | MW-12 | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-9 | MW-15 | Total Recoverable | Water | 6020A | 576150 |
| MB 500-575895/1-A | Method Blank | Total Recoverable | Water | 6020A | 575895 |
| MB 500-576150/1-A | Method Blank | Total Recoverable | Water | 6020A | 576150 |
| LCS 500-575895/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 575895 |
| LCS 500-576150/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-1 MS | MW-19 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-1 MSD | MW-19 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-1 DU | MW-19 | Total Recoverable | Water | 6020A | 575895 |

### Analysis Batch: 576653

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-6 | MW-09 | Total/NA | Water | 7470A | 576393 |
| 500-192070-7 | MW-11 | Total/NA | Water | 7470A | 576393 |
| 500-192070-8 | MW-12 | Total/NA | Water | 7470A | 576393 |
| 500-192070-9 | MW-15 | Total/NA | Water | 7470A | 576393 |
| MB 500-576393/12-A | Method Blank | Total/NA | Water | 7470A | 576393 |
| LCS 500-576393/13-A | Lab Control Sample | Total/NA | Water | 7470A | 576393 |

## Metals

### Analysis Batch: 576866

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-2 | MW-17 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-3 | MW-18 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-4 | MW-01 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-5 | Duplicate | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-6 | MW-09 | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-7 | MW-11 | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-8 | MW-12 | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-9 | MW-15 | Total Recoverable | Water | 6020A | 576150 |
| MB 500-575895/1-A | Method Blank | Total Recoverable | Water | 6020A | 575895 |
| MB 500-576150/1-A | Method Blank | Total Recoverable | Water | 6020A | 576150 |
| LCS 500-575895/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 575895 |
| LCS 500-576150/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-1 MS | MW-19 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-1 MSD | MW-19 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-1 DU | MW-19 | Total Recoverable | Water | 6020A | 575895 |

### Prep Batch: 576951

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-10 | MW-08 | Total Recoverable | Water | 3005A | |
| MB 500-576951/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-576951/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Prep Batch: 577085

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-10 | MW-08 | Total/NA | Water | 7470A | |
| MB 500-577085/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-577085/13-A | Lab Control Sample | Total/NA | Water | 7470A | |

### Analysis Batch: 577089

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-2 | MW-17 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-3 | MW-18 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-4 | MW-01 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-5 | Duplicate | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-6 | MW-09 | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-6 | MW-09 | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-7 | MW-11 | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-7 | MW-11 | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-8 | MW-12 | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-9 | MW-15 | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-9 | MW-15 | Total Recoverable | Water | 6020A | 576150 |
| MB 500-575895/1-A | Method Blank | Total Recoverable | Water | 6020A | 575895 |
| MB 500-576150/1-A | Method Blank | Total Recoverable | Water | 6020A | 576150 |
| LCS 500-575895/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 575895 |
| LCS 500-576150/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 576150 |
| 500-192070-1 MS | MW-19 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-1 MSD | MW-19 | Total Recoverable | Water | 6020A | 575895 |
| 500-192070-1 DU | MW-19 | Total Recoverable | Water | 6020A | 575895 |

## Metals

### Analysis Batch: 577113

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-10 | MW-08 | Total Recoverable | Water | 6010C | 576951 |
| MB 500-576951/1-A | Method Blank | Total Recoverable | Water | 6010C | 576951 |
| LCS 500-576951/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 576951 |

### Analysis Batch: 577145

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-10 | MW-08 | Total Recoverable | Water | 6020A | 576951 |
| MB 500-576951/1-A | Method Blank | Total Recoverable | Water | 6020A | 576951 |
| LCS 500-576951/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 576951 |

### Analysis Batch: 577277

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-10 | MW-08 | Total Recoverable | Water | 6020A | 576951 |
| MB 500-576951/1-A | Method Blank | Total Recoverable | Water | 6020A | 576951 |
| LCS 500-576951/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 576951 |

### Analysis Batch: 577293

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-10 | MW-08 | Total/NA | Water | 7470A | 577085 |
| MB 500-577085/12-A | Method Blank | Total/NA | Water | 7470A | 577085 |
| LCS 500-577085/13-A | Lab Control Sample | Total/NA | Water | 7470A | 577085 |

## General Chemistry

### Analysis Batch: 575962

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Total/NA | Water | SM 2540C | |
| 500-192070-2 | MW-17 | Total/NA | Water | SM 2540C | |
| 500-192070-3 | MW-18 | Total/NA | Water | SM 2540C | |
| 500-192070-4 | MW-01 | Total/NA | Water | SM 2540C | |
| 500-192070-5 | Duplicate | Total/NA | Water | SM 2540C | |
| MB 500-575962/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-575962/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 576132

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-6 | MW-09 | Total/NA | Water | SM 2540C | |
| 500-192070-7 | MW-11 | Total/NA | Water | SM 2540C | |
| 500-192070-8 | MW-12 | Total/NA | Water | SM 2540C | |
| 500-192070-9 | MW-15 | Total/NA | Water | SM 2540C | |
| MB 500-576132/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-576132/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 576457

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192070-2 | MW-17 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192070-3 | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192070-4 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192070-5 | Duplicate | Total/NA | Water | SM 4500 Cl- E | |
| 500-192070-6 | MW-09 | Total/NA | Water | SM 4500 Cl- E | |

## General Chemistry (Continued)

### Analysis Batch: 576457 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-7 | MW-11 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192070-8 | MW-12 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192070-9 | MW-15 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-576457/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-576457/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-192070-3 MS | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192070-3 MSD | MW-18 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192070-4 MS | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192070-4 MSD | MW-01 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 576921

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-192070-2 | MW-17 | Total/NA | Water | SM 4500 SO4 E | |
| 500-192070-3 | MW-18 | Total/NA | Water | SM 4500 SO4 E | |
| 500-192070-4 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-192070-5 | Duplicate | Total/NA | Water | SM 4500 SO4 E | |
| 500-192070-6 | MW-09 | Total/NA | Water | SM 4500 SO4 E | |
| 500-192070-7 | MW-11 | Total/NA | Water | SM 4500 SO4 E | |
| 500-192070-8 | MW-12 | Total/NA | Water | SM 4500 SO4 E | |
| 500-192070-9 | MW-15 | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-576921/15 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-576921/16 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |
| 500-192070-1 MS | MW-19 | Total/NA | Water | SM 4500 SO4 E | |
| 500-192070-1 MSD | MW-19 | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 577109

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-10 | MW-08 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-577109/39 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-577109/40 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 577212

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-10 | MW-08 | Total/NA | Water | SM 2540C | |
| MB 500-577212/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-577212/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 577245

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-192070-2 | MW-17 | Total/NA | Water | SM 4500 F C | |
| 500-192070-3 | MW-18 | Total/NA | Water | SM 4500 F C | |
| 500-192070-4 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-192070-5 | Duplicate | Total/NA | Water | SM 4500 F C | |
| 500-192070-6 | MW-09 | Total/NA | Water | SM 4500 F C | |
| 500-192070-7 | MW-11 | Total/NA | Water | SM 4500 F C | |
| 500-192070-8 | MW-12 | Total/NA | Water | SM 4500 F C | |
| 500-192070-9 | MW-15 | Total/NA | Water | SM 4500 F C | |
| 500-192070-10 | MW-08 | Total/NA | Water | SM 4500 F C | |
| MB 500-577245/3 | Method Blank | Total/NA | Water | SM 4500 F C | |

## General Chemistry (Continued)

### Analysis Batch: 577245 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LCS 500-577245/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |
| 500-192070-1 MS | MW-19 | Total/NA | Water | SM 4500 F C | |
| 500-192070-1 MSD | MW-19 | Total/NA | Water | SM 4500 F C | |

### Analysis Batch: 577347

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-10 | MW-08 | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-577347/40 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-577347/43 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-575895/1-A**
**Matrix: Water**
**Analysis Batch: 576167**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | ^ | 0.010 | | mg/L | | 12/08/20 17:57 | 12/09/20 12:33 | 1 |

**Lab Sample ID: LCS 500-575895/2-A**
**Matrix: Water**
**Analysis Batch: 576167**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.506 | ^ | mg/L | | 101 | 80 - 120 |

**Lab Sample ID: 500-192070-1 MS**
**Matrix: Water**
**Analysis Batch: 576167**

**Client Sample ID: MW-19**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | ^ | 0.500 | 0.542 | ^ | mg/L | | 107 | 75 - 125 |

**Lab Sample ID: 500-192070-1 MSD**
**Matrix: Water**
**Analysis Batch: 576167**

**Client Sample ID: MW-19**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | ^ | 0.500 | 0.561 | ^ | mg/L | | 111 | 75 - 125 | 3 | 20 |

**Lab Sample ID: 500-192070-1 DU**
**Matrix: Water**
**Analysis Batch: 576167**

**Client Sample ID: MW-19**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | ^ | <0.010 | ^ | mg/L | | NC | 20 |

**Lab Sample ID: MB 500-576150/1-A**
**Matrix: Water**
**Analysis Batch: 576582**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 576150**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/10/20 07:37 | 12/11/20 23:59 | 1 |

**Lab Sample ID: LCS 500-576150/2-A**
**Matrix: Water**
**Analysis Batch: 576582**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 576150**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.527 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: MB 500-576951/1-A**
**Matrix: Water**
**Analysis Batch: 577113**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 576951**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/15/20 17:29 | 12/16/20 10:05 | 1 |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: LCS 500-576951/2-A**
**Matrix: Water**
**Analysis Batch: 577113**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 576951**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.515 | | mg/L | | 103 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-575895/1-A**
**Matrix: Water**
**Analysis Batch: 576644**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Barium | <0.0025 | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |

**Lab Sample ID: MB 500-575895/1-A**
**Matrix: Water**
**Analysis Batch: 576866**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:27 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:27 | 1 |

**Lab Sample ID: MB 500-575895/1-A**
**Matrix: Water**
**Analysis Batch: 577089**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 12/08/20 17:57 | 12/15/20 15:13 | 1 |

**Lab Sample ID: LCS 500-575895/2-A**
**Matrix: Water**
**Analysis Batch: 576644**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Barium | 2.00 | 2.05 | | mg/L | | 103 | 80 - 120 |
| Cadmium | 0.0500 | 0.0489 | | mg/L | | 98 | 80 - 120 |
| Calcium | 10.0 | 10.3 | | mg/L | | 103 | 80 - 120 |
| Chromium | 0.200 | 0.200 | | mg/L | | 100 | 80 - 120 |
| Cobalt | 0.500 | 0.488 | | mg/L | | 98 | 80 - 120 |
| Lead | 0.100 | 0.101 | | mg/L | | 101 | 80 - 120 |
| Molybdenum | 1.00 | 0.992 | | mg/L | | 99 | 80 - 120 |
| Thallium | 0.100 | 0.109 | | mg/L | | 109 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-575895/2-A**
**Matrix: Water**
**Analysis Batch: 576866**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.100 | 0.0998 | | mg/L | | 100 | 80 - 120 |
| Selenium | 0.100 | 0.0971 | | mg/L | | 97 | 80 - 120 |

**Lab Sample ID: LCS 500-575895/2-A**
**Matrix: Water**
**Analysis Batch: 577089**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 1.07 | | mg/L | | 107 | 80 - 120 |

**Lab Sample ID: 500-192070-1 MS**
**Matrix: Water**
**Analysis Batch: 576644**

**Client Sample ID: MW-19**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.062 | | 2.00 | 2.20 | | mg/L | | 107 | 75 - 125 |
| Cadmium | <0.00050 | | 0.0500 | 0.0492 | | mg/L | | 98 | 75 - 125 |
| Calcium | 74 | | 10.0 | 84.2 | 4 | mg/L | | 100 | 75 - 125 |
| Chromium | <0.0050 | | 0.200 | 0.201 | | mg/L | | 100 | 75 - 125 |
| Cobalt | <0.0010 | | 0.500 | 0.478 | | mg/L | | 96 | 75 - 125 |
| Lead | <0.00050 | | 0.100 | 0.102 | | mg/L | | 102 | 75 - 125 |
| Molybdenum | 0.053 | | 1.00 | 1.08 | | mg/L | | 103 | 75 - 125 |
| Thallium | <0.0020 | | 0.100 | 0.111 | | mg/L | | 111 | 75 - 125 |

**Lab Sample ID: 500-192070-1 MS**
**Matrix: Water**
**Analysis Batch: 576866**

**Client Sample ID: MW-19**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.100 | 0.103 | | mg/L | | 103 | 75 - 125 |
| Selenium | <0.0025 | | 0.100 | 0.100 | | mg/L | | 100 | 75 - 125 |

**Lab Sample ID: 500-192070-1 MS**
**Matrix: Water**
**Analysis Batch: 577089**

**Client Sample ID: MW-19**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 3.3 | | 1.00 | 4.56 | | mg/L | | 125 | 75 - 125 |

**Lab Sample ID: 500-192070-1 MSD**
**Matrix: Water**
**Analysis Batch: 576644**

**Client Sample ID: MW-19**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.062 | | 2.00 | 2.17 | | mg/L | | 106 | 75 - 125 | 1 | 20 |
| Cadmium | <0.00050 | | 0.0500 | 0.0485 | | mg/L | | 97 | 75 - 125 | 1 | 20 |
| Calcium | 74 | | 10.0 | 82.6 | 4 | mg/L | | 83 | 75 - 125 | 2 | 20 |
| Chromium | <0.0050 | | 0.200 | 0.202 | | mg/L | | 101 | 75 - 125 | 1 | 20 |
| Cobalt | <0.0010 | | 0.500 | 0.479 | | mg/L | | 96 | 75 - 125 | 0 | 20 |
| Lead | <0.00050 | | 0.100 | 0.100 | | mg/L | | 100 | 75 - 125 | 2 | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: 500-192070-1 MSD**
**Matrix: Water**
**Analysis Batch: 576644**

**Client Sample ID: MW-19**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 0.053 | | 1.00 | 1.08 | | mg/L | | 103 | 75 - 125 | 0 | 20 |
| Thallium | <0.0020 | | 0.100 | 0.110 | | mg/L | | 110 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-192070-1 MSD**
**Matrix: Water**
**Analysis Batch: 576866**

**Client Sample ID: MW-19**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.100 | 0.106 | | mg/L | | 105 | 75 - 125 | 2 | 20 |
| Selenium | <0.0025 | | 0.100 | 0.101 | | mg/L | | 101 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-192070-1 MSD**
**Matrix: Water**
**Analysis Batch: 577089**

**Client Sample ID: MW-19**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 3.3 | | 1.00 | 4.43 | | mg/L | | 112 | 75 - 125 | 3 | 20 |

**Lab Sample ID: 500-192070-1 DU**
**Matrix: Water**
**Analysis Batch: 576644**

**Client Sample ID: MW-19**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Barium | 0.062 | | 0.0616 | | mg/L | | 1 | 20 |
| Cadmium | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Calcium | 74 | | 72.7 | | mg/L | | 2 | 20 |
| Chromium | <0.0050 | | <0.0050 | | mg/L | | NC | 20 |
| Cobalt | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Lead | <0.00050 | | <0.00050 | | mg/L | | NC | 20 |
| Molybdenum | 0.053 | | 0.0510 | | mg/L | | 3 | 20 |
| Thallium | <0.0020 | | <0.0020 | | mg/L | | NC | 20 |

**Lab Sample ID: 500-192070-1 DU**
**Matrix: Water**
**Analysis Batch: 576866**

**Client Sample ID: MW-19**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | <0.0010 | | mg/L | | NC | 20 |
| Selenium | <0.0025 | | <0.0025 | | mg/L | | NC | 20 |

**Lab Sample ID: 500-192070-1 DU**
**Matrix: Water**
**Analysis Batch: 577089**

**Client Sample ID: MW-19**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Boron | 3.3 | | 3.38 | | mg/L | | 2 | 20 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-576150/1-A**
**Matrix: Water**
**Analysis Batch: 576644**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 576150**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:34 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:34 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:34 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/10/20 07:37 | 12/11/20 21:34 | 1 |

**Lab Sample ID: MB 500-576150/1-A**
**Matrix: Water**
**Analysis Batch: 576866**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 576150**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:07 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:07 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:07 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/10/20 07:37 | 12/14/20 17:07 | 1 |

**Lab Sample ID: MB 500-576150/1-A**
**Matrix: Water**
**Analysis Batch: 577089**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 576150**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 12/10/20 07:37 | 12/15/20 17:07 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/10/20 07:37 | 12/15/20 17:07 | 1 |

**Lab Sample ID: LCS 500-576150/2-A**
**Matrix: Water**
**Analysis Batch: 576644**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 576150**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Cadmium | 0.0500 | 0.0502 | | mg/L | | 100 | 80 - 120 |
| Lead | 0.100 | 0.0947 | | mg/L | | 95 | 80 - 120 |
| Molybdenum | 1.00 | 1.00 | | mg/L | | 100 | 80 - 120 |
| Thallium | 0.100 | 0.0938 | | mg/L | | 94 | 80 - 120 |

**Lab Sample ID: LCS 500-576150/2-A**
**Matrix: Water**
**Analysis Batch: 576866**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 576150**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.100 | 0.100 | | mg/L | | 100 | 80 - 120 |
| Barium | 2.00 | 1.66 | | mg/L | | 83 | 80 - 120 |
| Calcium | 10.0 | 11.8 | | mg/L | | 118 | 80 - 120 |
| Selenium | 0.100 | 0.0989 | | mg/L | | 99 | 80 - 120 |

**Lab Sample ID: LCS 500-576150/2-A**
**Matrix: Water**
**Analysis Batch: 577089**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 576150**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 1.07 | | mg/L | | 107 | 80 - 120 |
| Cobalt | 0.500 | 0.535 | | mg/L | | 107 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-576951/1-A**
**Matrix: Water**
**Analysis Batch: 577145**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 576951**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:13 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:13 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:13 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:13 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:13 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:13 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:13 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:13 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/15/20 17:29 | 12/16/20 14:13 | 1 |

**Lab Sample ID: MB 500-576951/1-A**
**Matrix: Water**
**Analysis Batch: 577277**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 576951**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 12/15/20 17:29 | 12/16/20 18:04 | 1 |

**Lab Sample ID: LCS 500-576951/2-A**
**Matrix: Water**
**Analysis Batch: 577145**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 576951**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.100 | 0.0911 | | mg/L | | 91 | 80 - 120 |
| Barium | 2.00 | 1.90 | | mg/L | | 95 | 80 - 120 |
| Cadmium | 0.0500 | 0.0487 | | mg/L | | 97 | 80 - 120 |
| Calcium | 10.0 | 9.32 | | mg/L | | 93 | 80 - 120 |
| Cobalt | 0.500 | 0.526 | | mg/L | | 105 | 80 - 120 |
| Lead | 0.100 | 0.110 | | mg/L | | 110 | 80 - 120 |
| Molybdenum | 1.00 | 0.961 | | mg/L | | 96 | 80 - 120 |
| Selenium | 0.100 | 0.0989 | | mg/L | | 99 | 80 - 120 |
| Thallium | 0.100 | 0.113 | | mg/L | | 113 | 80 - 120 |

**Lab Sample ID: LCS 500-576951/2-A**
**Matrix: Water**
**Analysis Batch: 577277**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 576951**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 0.955 | | mg/L | | 96 | 80 - 120 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-576172/12-A**
**Matrix: Water**
**Analysis Batch: 576405**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 576172**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/10/20 08:20 | 12/11/20 06:54 | 1 |

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: LCS 500-576172/13-A**
**Matrix: Water**
**Analysis Batch: 576405**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 576172**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00210 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: MB 500-576393/12-A**
**Matrix: Water**
**Analysis Batch: 576653**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 576393**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/11/20 09:10 | 12/14/20 07:27 | 1 |

**Lab Sample ID: LCS 500-576393/13-A**
**Matrix: Water**
**Analysis Batch: 576653**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 576393**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00218 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: MB 500-577085/12-A**
**Matrix: Water**
**Analysis Batch: 577293**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 577085**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/16/20 09:20 | 12/17/20 07:19 | 1 |

**Lab Sample ID: LCS 500-577085/13-A**
**Matrix: Water**
**Analysis Batch: 577293**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 577085**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00201 | | mg/L | | 100 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-575962/1**
**Matrix: Water**
**Analysis Batch: 575962**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 12/09/20 02:42 | 1 |

**Lab Sample ID: LCS 500-575962/2**
**Matrix: Water**
**Analysis Batch: 575962**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 236 | | mg/L | | 94 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: MB 500-576132/1**
**Matrix: Water**
**Analysis Batch: 576132**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 12/10/20 02:23 | 1 |

**Lab Sample ID: LCS 500-576132/2**
**Matrix: Water**
**Analysis Batch: 576132**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 236 | | mg/L | | 94 | 80 - 120 |

**Lab Sample ID: MB 500-577212/1**
**Matrix: Water**
**Analysis Batch: 577212**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 12/17/20 01:12 | 1 |

**Lab Sample ID: LCS 500-577212/2**
**Matrix: Water**
**Analysis Batch: 577212**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 228 | | mg/L | | 91 | 80 - 120 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-576457/12**
**Matrix: Water**
**Analysis Batch: 576457**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 12/11/20 14:56 | 1 |

**Lab Sample ID: LCS 500-576457/13**
**Matrix: Water**
**Analysis Batch: 576457**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 50.4 | | mg/L | | 101 | 85 - 115 |

**Lab Sample ID: 500-192070-3 MS**
**Matrix: Water**
**Analysis Batch: 576457**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 150 | F1 | 50.0 | 188 | F1 | mg/L | | 70 | 75 - 125 |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: 500-192070-3 MSD**
**Matrix: Water**
**Analysis Batch: 576457**

**Client Sample ID: MW-18**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 150 | F1 | 50.0 | 190 | F1 | mg/L | | 74 | 75 - 125 | 1 | 20 |

**Lab Sample ID: 500-192070-4 MS**
**Matrix: Water**
**Analysis Batch: 576457**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | 54 | | 50.0 | 94.0 | | mg/L | | 79 | 75 - 125 |

**Lab Sample ID: 500-192070-4 MSD**
**Matrix: Water**
**Analysis Batch: 576457**

**Client Sample ID: MW-01**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 54 | | 50.0 | 94.1 | | mg/L | | 80 | 75 - 125 | 0 | 20 |

**Lab Sample ID: MB 500-577109/39**
**Matrix: Water**
**Analysis Batch: 577109**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 12/16/20 10:59 | 1 |

**Lab Sample ID: LCS 500-577109/40**
**Matrix: Water**
**Analysis Batch: 577109**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloride | 50.0 | 50.4 | | mg/L | | 101 | 85 - 115 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-577245/3**
**Matrix: Water**
**Analysis Batch: 577245**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 12/16/20 13:49 | 1 |

**Lab Sample ID: LCS 500-577245/4**
**Matrix: Water**
**Analysis Batch: 577245**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 10.0 | 10.9 | | mg/L | | 109 | 80 - 120 |

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: 500-192070-1 MS**
**Matrix: Water**
**Analysis Batch: 577245**

**Client Sample ID: MW-19**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.19 | | 5.00 | 5.75 | | mg/L | | 111 | 75 - 125 |

**Lab Sample ID: 500-192070-1 MSD**
**Matrix: Water**
**Analysis Batch: 577245**

**Client Sample ID: MW-19**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.19 | | 5.00 | 5.70 | | mg/L | | 110 | 75 - 125 | 1 | 20 |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-576921/15**
**Matrix: Water**
**Analysis Batch: 576921**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 12/15/20 14:06 | 1 |

**Lab Sample ID: LCS 500-576921/16**
**Matrix: Water**
**Analysis Batch: 576921**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Sulfate | 20.0 | 20.6 | | mg/L | | 103 | 80 - 120 |

**Lab Sample ID: 500-192070-1 MS**
**Matrix: Water**
**Analysis Batch: 576921**

**Client Sample ID: MW-19**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 76 | F1 | 20.0 | 94.8 | | mg/L | | 94 | 75 - 125 |

**Lab Sample ID: 500-192070-1 MSD**
**Matrix: Water**
**Analysis Batch: 576921**

**Client Sample ID: MW-19**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 76 | F1 | 20.0 | 96.5 | | mg/L | | 102 | 75 - 125 | 2 | 20 |

**Lab Sample ID: MB 500-577347/40**
**Matrix: Water**
**Analysis Batch: 577347**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 12/17/20 13:44 | 1 |

## Method: SM 4500 SO4 E - Sulfate, Total (Continued)

**Lab Sample ID: LCS 500-577347/43**
**Matrix: Water**
**Analysis Batch: 577347**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 20.0 | 21.2 | | mg/L | | 106 | 80 - 120 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: MW-19

**Date Collected: 12/07/20 10:45**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576167 | 12/09/20 12:40 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 16:33 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 18:36 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 20 | 577089 | 12/15/20 15:20 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 576172 | 12/10/20 08:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 576405 | 12/11/20 07:35 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 575962 | 12/09/20 03:06 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 576457 | 12/11/20 14:58 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 14:01 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 576921 | 12/15/20 14:07 | MS | TAL CHI |

## Client Sample ID: MW-17

**Date Collected: 12/07/20 11:30**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576224 | 12/10/20 10:34 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 16:42 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 18:54 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 577089 | 12/15/20 15:46 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 576172 | 12/10/20 08:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 576405 | 12/11/20 07:37 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 575962 | 12/09/20 03:09 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 576457 | 12/11/20 15:36 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 14:15 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 576921 | 12/15/20 14:08 | MS | TAL CHI |

## Client Sample ID: MW-18

**Date Collected: 12/07/20 12:16**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576224 | 12/10/20 10:37 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 16:44 | FXG | TAL CHI |

## Client Sample ID: MW-18

**Lab Sample ID: 500-192070-3**

**Date Collected: 12/07/20 12:16**

**Matrix: Water**

**Date Received: 12/08/20 10:05**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 18:57 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 577089 | 12/15/20 15:49 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 576172 | 12/10/20 08:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 576405 | 12/11/20 07:43 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 575962 | 12/09/20 03:11 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 576457 | 12/11/20 15:36 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 14:21 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 576921 | 12/15/20 14:08 | MS | TAL CHI |

## Client Sample ID: MW-01

**Lab Sample ID: 500-192070-4**

**Date Collected: 12/07/20 12:57**

**Matrix: Water**

**Date Received: 12/08/20 10:05**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576167 | 12/09/20 13:09 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 16:50 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 19:00 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 577089 | 12/15/20 15:53 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 576172 | 12/10/20 08:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 576405 | 12/11/20 07:45 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 575962 | 12/09/20 03:14 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 576457 | 12/11/20 15:02 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 14:26 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 576921 | 12/15/20 14:14 | MS | TAL CHI |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-192070-5**

**Date Collected: 12/07/20 00:00**

**Matrix: Water**

**Date Received: 12/08/20 10:05**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576167 | 12/09/20 13:13 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 16:52 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 19:11 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 577089 | 12/15/20 15:56 | FXG | TAL CHI |

## Client Sample ID: Duplicate

**Lab Sample ID: 500-192070-5**

**Date Collected: 12/07/20 00:00**

**Matrix: Water**

**Date Received: 12/08/20 10:05**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 576172 | 12/10/20 08:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 576405 | 12/11/20 07:47 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 575962 | 12/09/20 03:17 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 576457 | 12/11/20 15:08 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 14:32 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 3 | 576921 | 12/15/20 14:29 | MS | TAL CHI |

## Client Sample ID: MW-09

**Lab Sample ID: 500-192070-6**

**Date Collected: 12/08/20 08:42**

**Matrix: Water**

**Date Received: 12/09/20 10:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576582 | 12/12/20 00:16 | JJB | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 17:11 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 21:41 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 577089 | 12/15/20 17:14 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 577089 | 12/15/20 18:48 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 576393 | 12/11/20 09:10 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 576653 | 12/14/20 07:32 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 576132 | 12/10/20 02:41 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 576457 | 12/11/20 15:09 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 14:37 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 576921 | 12/15/20 14:09 | MS | TAL CHI |

## Client Sample ID: MW-11

**Lab Sample ID: 500-192070-7**

**Date Collected: 12/08/20 09:51**

**Matrix: Water**

**Date Received: 12/09/20 10:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576582 | 12/12/20 00:19 | JJB | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 17:13 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 21:45 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 577089 | 12/15/20 17:18 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 577089 | 12/15/20 18:52 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: MW-11

**Date Collected: 12/08/20 09:51**
**Date Received: 12/09/20 10:30**

## Lab Sample ID: 500-192070-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 576393 | 12/11/20 09:10 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 576653 | 12/14/20 07:34 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 576132 | 12/10/20 02:43 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 576457 | 12/11/20 15:38 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 14:52 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 576921 | 12/15/20 14:10 | MS | TAL CHI |

## Client Sample ID: MW-12

**Date Collected: 12/08/20 11:00**
**Date Received: 12/09/20 10:30**

## Lab Sample ID: 500-192070-8

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576582 | 12/12/20 00:22 | JJB | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 17:15 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 21:48 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 577089 | 12/15/20 17:21 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 576393 | 12/11/20 09:10 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 576653 | 12/14/20 07:36 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 576132 | 12/10/20 02:46 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 576457 | 12/11/20 15:38 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 14:54 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 10 | 576921 | 12/15/20 14:11 | MS | TAL CHI |

## Client Sample ID: MW-15

**Date Collected: 12/08/20 12:03**
**Date Received: 12/09/20 10:30**

## Lab Sample ID: 500-192070-9

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576582 | 12/12/20 00:26 | JJB | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 17:17 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 21:52 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 577089 | 12/15/20 17:25 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576150 | 12/10/20 07:37 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 577089 | 12/15/20 18:55 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 576393 | 12/11/20 09:10 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 576653 | 12/14/20 07:38 | MJG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Client Sample ID: MW-15

**Lab Sample ID: 500-192070-9**

**Date Collected: 12/08/20 12:03**

**Matrix: Water**

**Date Received: 12/09/20 10:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 2540C | | 1 | 576132 | 12/10/20 02:48 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 576457 | 12/11/20 15:39 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 15:00 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 20 | 576921 | 12/15/20 14:31 | MS | TAL CHI |

## Client Sample ID: MW-08

**Lab Sample ID: 500-192070-10**

**Date Collected: 12/14/20 10:20**

**Matrix: Water**

**Date Received: 12/15/20 14:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 576951 | 12/15/20 17:29 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 577113 | 12/16/20 10:41 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576951 | 12/15/20 17:29 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 577145 | 12/16/20 14:51 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576951 | 12/15/20 17:29 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 5 | 577277 | 12/16/20 18:35 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 577085 | 12/16/20 09:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 577293 | 12/17/20 08:44 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 577212 | 12/17/20 01:43 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 577109 | 12/16/20 11:38 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 15:03 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 4 | 577347 | 12/17/20 14:47 | MS | TAL CHI |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-29-21 |

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 12/7/20 | COC No: |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Diana Mockler | Carrier: FedEx | ____ of ____ COCs |
| 14665 West Lisbon Road, Suite 1A | **Analysis Turnaround Time** | | | Sampler: |
| Brookfield, WI 53154 | CALENDAR DAYS ☐ WORKING DAYS | | | **For Lab Use Only:** |
| (262) 781-0475 Phone | TAT if different from Below ____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR | ☒ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: 500-192070 |
| P O # 12313.0 | ☐ 1 day | | | |

500-192070 COC

| | Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | 903.0, 904.0 Radium - 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C - TDS | 4500_F_C - Fluoride | SM4500_Cl_E - Chloride | SM4500_SO4_E - Sulfate | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-19 | 12/7 | 1045 | G | W | 7 | N | N | X | X | X | X | X | X | |
| 2 | MW-17 | 12/7 | 1130 | ↓ | ↓ | ↓ | | | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | |
| 3 | MW-18 | 12/7 | 1216 | ↓ | ↓ | ↓ | | | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | |
| 4 | MW-01 | 12/7 | 1257 | ↓ | ↓ | ↓ | | | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | |
| 5 | DUPLICATE | 12/7 | — | ↓ | ↓ | ↓ | | | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | |
| | | | | | | | | | 4 | 4 | 1 | 1 | 1 | 1 | |

**Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other** ____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

**Special Instructions/QC Requirements & Comments:** Lab Project #50011612. Appendix III Parameters and Custom Appendix IV ABB/ASB Metals; As, Ba, Cd, Co, Pb, Li, Hg, Mo, Se, Tl

-0.1,0.3

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | | Cooler Temp. (°C): Obs'd:____ Corr'd:____ | | Therm ID No.:____ |
|---|---|---|---|---|---|
| Relinquished by: **Mitchel Dolan** MMD | Company: **KPRG** | Date/Time: 12/7/20/1600 | Received by: **FedEx** | Company: | Date/Time: 12/7/20 / 1600 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: Sam Scott | Company: BACHT | Date/Time: 12/8/20 1005 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 12/8/20 | COC No: |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Diana Mockler | Carrier: FedEx | _____ of _____ COCs |
| 14665 West Lisbon Road, Suite 1A | **Analysis Turnaround Time** | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | **For Lab Use Only:** |
| (262) 781-0475 Phone | TAT if different from Below _____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR | ☒ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: |
| P O # 12313.0 | ☐ 1 day | | | 500-192070 |

500-192070 COC

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y / N) | Perform MS / MSD (Y / N) | 903.0, 904.0 Radium - 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C - TDS | 4500_F_C - Fluoride | SM4500_Cl_E - Chloride | SM4500_SO4_E - Sulfate | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 MW-09 | 12/8 | 0842 | G | W | 7 | N | N | X | X | X | X | X | X | |
| 7 MW-11 | 12/8 | 0951 | ↓ | ↓ | ↓ | | | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | |
| 8 MW-12 | 12/8 | 1105 | | | | | | | | | | | | |
| 9 MW-15 | 12/8 | 1203 | | | | | | | | | | | | |
| | | | | | | | | 4 | 4 | 1 | 1 | 1 | 1 | |

**Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other** _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:** Lab Project #50011612. Appendix III Parameters and Custom Appendix IV ABB/ASB Metals; As, Ba, Cd, Co, Pb, Li, Hg, Mo, Se, Tl

-0.7 -0.1 -0.3 0.3

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | | Cooler Temp. (°C): Obs'd: -0.7 | Corr'd: _____ | Therm ID No.: _____ |
|---|---|---|---|---|---|
| Relinquished by: **Mitchel Dolan** MD | Company: **KPRG** | Date/Time: 12/8/20 1600 | Received by: **FedEx** | Company: | Date/Time: 12/8/20 1600 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: TESTAMERICA | Date/Time: 12/9/20 1030 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 12/14/2020 | COC No: |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Diana Mockler | Carrier: FedEx | _____ of _____ COCs |
| 14665 West Lisbon Road, Suite 1A | **Analysis Turnaround Time** | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | **For Lab Use Only:** |
| (262) 781-0475 Phone | TAT if different from Below _____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR | ☐ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: 500-192070 |
| P O # 12313.0 | ☐ 1 day | | | |

500-192070 COC

| | Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y / N) | Perform MS / MSD (Y / N) | 903.0, 904.0 Radium - 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C - TDS | 4500_F_C - Fluoride | SM4500_Cl_E - Chloride | SM4500_SO4_E - Sulfate | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | MW-08 | 12/14 | 1020 | G | W | 7 | N | N | X | X | X | X | X | X | |
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| | | | | | | | | | | | | | | | |
| | | | | | | | | | 4 | 4 | 1 | 1 | 1 | 1 | |

**Preservation Used: 1= Ice, 2= HCl; 3= $H_2SO_4$; 4=$HNO_3$; 5=NaOH; 6= Other** _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:** Lab Project #50011612. Appendix III Parameters and Custom Appendix IV ABB/ASB Metals; As, Ba, Cd, Co, Pb, Li, Hg, Mo, Se, Tl

0.1 ~0.4

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | | Therm ID No.: _____ |
|---|---|---|---|---|---|
| Relinquished by: **Mitchel Dolan** MMD | Company: **KPRG** | Date/Time: 12/14/20 1200 | Received by: FedEx | Company: TA | Date/Time: 12/14/2020 1200 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: 1440 |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |

**Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018**

500-192070 Wayb

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 07DEC20
ACTWGT: 58.00 LB
CAD: 6994780/SSFE2121
DIMS: 23x13x13 IN

BILL THIRD PARTY

TO TEST AMERICA
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(000) 000-0000 REF:
INV:
PO: DEPT:

Part # 156297-[illegible] EXP 07/21

FedEx Express

TRK# 0201 7810 2858 7674

TUE - 08 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

48gt

60484
IL-US ORD

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE

WESTMONT, IL 60
UNITED STATES

SHIP DATE: 07DEC20
ACTWGT: 56.05 LB
CAD: 6994780/SSFE2121
DIMS: 23x13x13 IN

BILL THIRD PARTY

TO TEST AM
TEST A
2417 BOND

UNIVERSITY PARK

519
29
5
16:30
A
2122
12.08

(000) 000-0000 REF:
INV:
PO: DEPT:

Part # 156297-[illegible] EXP 07/21

FedEx Express

TRK# 0201 7810 2849 2122

TUE - 08 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

48gt

60484
IL-US ORD

500-192070 Wayb

ORIGIN ID:PIAA (262)
MICHEL DOLAN

414 PLAZA DR STE 1

WESTMONT, IL 60559
UNITED STATES US

DATE: 08DEC20
WT: 47.05 LB
: 6994780/SSFE2121
S: 24x13x13 IN

BILL THIRD PARTY

TO TEST AMERICA
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(708) 634-5200 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0201 7810 9394 9977

WED - 09 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

AHS
60484
IL-US ORD

ORIGIN ID:PIAA (262) 622-1143
MICHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 08DEC20
ACTWGT: 47.65 LB
CAD: 6994780/SSFE2121
DIMS: 24x13x13 IN

BILL THIRD PARTY

TO TEST AMERICA
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(708) 634-5200 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0201 7810 9406 5380

WED - 09 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

AHS
60484
IL-US ORD



ORIGIN ID:PIAA (262) 622-1143
MICHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 08DEC20
ACTWGT: 55.95 LB
CAD: 6994780/SSFE2121
DIMS: 24x13x13 IN

BILL THIRD PARTY

TO TEST AMERICA
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(708) 534-5200 REF:
INV: DEPT:
PO:

FedEx Express

TRK# 0201 7810 9412 0148

WED - 09 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

48gt IL-US 60484 ORD

Part # 156297 [illegible] EXP 07/21



ORIGIN ID:PIAA (262) 622-1143
MICHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 08DEC20
ACTWGT: 50.75 LB
CAD: 6994780/SSFE2121
DIMS: 24x13x13 IN

BILL THIRD PARTY

TO TEST AMERICA
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 604

(708) 534-5200 REF:
INV: DEPT:
PO:

TRK# 0201 7810 9401 8579

WED - 09 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

48gt IL-US 60484 ORD

Part # 156297 [illegible] EXP 07/21

ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 14DEC20
ACTWGT: 30.90 LB
CAD: 6994780/SSFE2121
DIMS: 16x10x15 IN

BILL THIRD PARTY

TO TESTAMERICA CHICAGO
TESTAMERICA CHICAGO
2417 BOND ST

UNIVERSITY PARK IL 60484
(708) 534-5200 REF:
INV:
PO: DEPT:

FedEx Express

TUE - 15 DEC 4:30P
STANDARD OVERNIGHT

TRK# 0201 7813 8509 4861

AHS
60484
IL-US ORD

XH JOTA

28 qt.



500-192070 Wayb

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-192070-1

**Login Number: 192070**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | -0.1,0.3 samples not frozen,-0.7,-0.1,-0.3,0.3,-0.4 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-192070-2
Client Project/Site: Powerton CCR

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

Robin M Kintz

*Authorized for release by:*
*1/25/2021 10:13:42 AM*
Robin Kintz, Project Manager II
(708)534-5200
Robin.Kintz@Eurofinset.com

Designee for

Diana Mockler, Project Manager I
(219)252-7570
Diana.Mockler@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-192070-2

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-192070-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 12/8/2020 10:05 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 7 coolers at receipt time were -0.7º C, -0.4º C, -0.3º C, -0.1º C, -0.1º C, 0.3º C and 0.3º C.

**RAD**
Method 903.0: Radium-226 prep batch 160-491609:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-09 (500-192070-6), (LCS 160-491609/1-A), (MB 160-491609/24-A) and (500-192070-G-6-A DU)

Methods 903.0, 9315: Radium-226 prep batch 160-491668:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-11 (500-192070-7), MW-12 (500-192070-8), MW-15 (500-192070-9), (LCS 160-491668/1-A), (MB 160-491668/13-A) and (500-192070-F-7-A DU)

Methods 903.0, 9315: Radium-226 prep batch 160-491410:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-19 (500-192070-1), MW-17 (500-192070-2), MW-18 (500-192070-3), MW-01 (500-192070-4), Duplicate (500-192070-5), (LCS 160-491410/1-A), (MB 160-491410/21-A) and (500-192070-G-1-A DU)

Methods 903.0, 9315: 903/9315 Prep batch 492337:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
MW-08 (500-192070-10), (LCS 160-492337/1-A), (MB 160-492337/22-A), (500-192056-C-16-A) and (500-192056-D-16-A DU)

Method 904.0: 904 Prep batch 491658:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
MW-09 (500-192070-6), (LCS 160-491658/1-A), (MB 160-491658/24-A) and (500-192070-G-6-B DU)

Methods 904.0, 9320: 904/9320 prep batch 491413:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.
MW-19 (500-192070-1), MW-17 (500-192070-2), MW-18 (500-192070-3), MW-01 (500-192070-4), Duplicate (500-192070-5), (LCS 160-491413/1-A), (MB 160-491413/21-A) and (500-192070-G-1-B DU)

Method 904.0: Radium-228 prep batch 160-492423:

## Job ID: 500-192070-2 (Continued)

### Laboratory: Eurofins TestAmerica, Chicago (Continued)

The Ra-228 detection goal was not met for the following sample due to the presence of matrix interferences: MW-08 (500-192070-10). Analytical results are reported with the detection limit achieved.

Methods 904.0, 9320: Radium-228 prep batch 1600-492423:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-08 (500-192070-10), (LCS 160-492423/1-A), (MB 160-492423/22-A), (500-192056-C-16-B) and (500-192056-D-16-B DU)

Methods 904.0, 9320: Radium-228 prep batch 160-495466:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-11 (500-192070-7), MW-12 (500-192070-8), MW-15 (500-192070-9), (LCS 160-495466/1-A), (MB 160-495466/14-A) and (500-192070-E-8-B DU)

Method PrecSep_0: Radium 228 Prep Batch 160-491720:
The following samples contained a slight yellow discoloration: MW-11 (500-192070-7), MW-12 (500-192070-8), MW-15 (500-192070-9) and (500-192070-F-7 DU).

Method PrecSep_0: Radium 228 Prep Batch 160-492423:
The following sample was prepared at a reduced aliquot due to brown discoloration and heavy sediment levels: MW-08 (500-192070-10).

Method PrecSep_0: Radium 228 Prep batch 160-495466:
The following samples were prepared at a reduced aliquot to insure sufficient volume remains if needed for analysis: MW-11 (500-192070-7), MW-12 (500-192070-8), MW-15 (500-192070-9) and (500-192070-E-8 DU). The following samples had a noticeable sediment level: 500-192070-8, 500-192070-8DU, 500-192070-9. The following sample contained a slight yellow discoloration and a cloudy appearance.

Method PrecSep-21: Radium 226 Prep Batch 160-491668:
The following samples contained a slight yellow discoloration: MW-11 (500-192070-7), MW-12 (500-192070-8), MW-15 (500-192070-9) and (500-192070-F-7 DU).

Method PrecSep-21: Radium 226 Prep Batch 160-492337:
The following sample was prepared at a reduced aliquot due to brown discoloration and heavy sediment levels: MW-08 (500-192070-10).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Water | 12/07/20 10:45 | 12/08/20 10:05 | |
| 500-192070-2 | MW-17 | Water | 12/07/20 11:30 | 12/08/20 10:05 | |
| 500-192070-3 | MW-18 | Water | 12/07/20 12:16 | 12/08/20 10:05 | |
| 500-192070-4 | MW-01 | Water | 12/07/20 12:57 | 12/08/20 10:05 | |
| 500-192070-5 | Duplicate | Water | 12/07/20 00:00 | 12/08/20 10:05 | |
| 500-192070-6 | MW-09 | Water | 12/08/20 08:42 | 12/09/20 10:30 | |
| 500-192070-7 | MW-11 | Water | 12/08/20 09:51 | 12/09/20 10:30 | |
| 500-192070-8 | MW-12 | Water | 12/08/20 11:00 | 12/09/20 10:30 | |
| 500-192070-9 | MW-15 | Water | 12/08/20 12:03 | 12/09/20 10:30 | |
| 500-192070-10 | MW-08 | Water | 12/14/20 10:20 | 12/15/20 14:40 | |

## Client Sample ID: MW-19

**Date Collected: 12/07/20 10:45**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0321 | U | 0.231 | 0.231 | 1.00 | 0.442 | pCi/L | 12/10/20 13:06 | 01/15/21 14:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.8* | | *40 - 110* | *12/10/20 13:06* | *01/15/21 14:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.255 | U | 0.308 | 0.309 | 1.00 | 0.509 | pCi/L | 12/10/20 13:42 | 01/15/21 08:30 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *76.8* | | *40 - 110* | *12/10/20 13:42* | *01/15/21 08:30* | *1* |
| *Y Carrier* | *81.5* | | *40 - 110* | *12/10/20 13:42* | *01/15/21 08:30* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.287 | U | 0.385 | 0.386 | 5.00 | 0.509 | pCi/L | | 01/18/21 20:59 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Client Sample ID: MW-17

**Date Collected: 12/07/20 11:30**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0221 | U | 0.192 | 0.192 | 1.00 | 0.380 | pCi/L | 12/10/20 13:06 | 01/15/21 14:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.9* | | *40 - 110* | *12/10/20 13:06* | *01/15/21 14:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.138 | U | 0.257 | 0.257 | 1.00 | 0.438 | pCi/L | 12/10/20 13:42 | 01/15/21 08:32 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.9* | | *40 - 110* | *12/10/20 13:42* | *01/15/21 08:32* | *1* |
| *Y Carrier* | *84.1* | | *40 - 110* | *12/10/20 13:42* | *01/15/21 08:32* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.160 | U | 0.321 | 0.321 | 5.00 | 0.438 | pCi/L | | 01/18/21 20:59 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Client Sample ID: MW-18

**Date Collected: 12/07/20 12:16**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.215 | U | 0.197 | 0.198 | 1.00 | 0.475 | pCi/L | 12/10/20 13:06 | 01/15/21 14:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.7* | | *40 - 110* | *12/10/20 13:06* | *01/15/21 14:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.429 | U | 0.316 | 0.319 | 1.00 | 0.497 | pCi/L | 12/10/20 13:42 | 01/15/21 08:32 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *79.7* | | *40 - 110* | *12/10/20 13:42* | *01/15/21 08:32* | *1* |
| *Y Carrier* | *82.2* | | *40 - 110* | *12/10/20 13:42* | *01/15/21 08:32* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.214 | U | 0.372 | 0.375 | 5.00 | 0.497 | pCi/L | | 01/18/21 20:59 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Client Sample ID: MW-01

**Date Collected: 12/07/20 12:57**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.198 | U | 0.209 | 0.209 | 1.00 | 0.328 | pCi/L | 12/10/20 13:06 | 01/15/21 14:42 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *77.4* | | *40 - 110* | *12/10/20 13:06* | *01/15/21 14:42* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.526** | | 0.330 | 0.334 | 1.00 | 0.506 | pCi/L | 12/10/20 13:42 | 01/15/21 08:32 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *77.4* | | *40 - 110* | *12/10/20 13:42* | *01/15/21 08:32* | *1* |
| *Y Carrier* | *80.7* | | *40 - 110* | *12/10/20 13:42* | *01/15/21 08:32* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.724** | | 0.391 | 0.394 | 5.00 | 0.506 | pCi/L | | 01/18/21 20:59 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Client Sample ID: Duplicate

**Date Collected: 12/07/20 00:00**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0785 | U | 0.186 | 0.186 | 1.00 | 0.341 | pCi/L | 12/10/20 13:06 | 01/15/21 14:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *84.2* | | *40 - 110* | *12/10/20 13:06* | *01/15/21 14:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.128 | U | 0.276 | 0.277 | 1.00 | 0.473 | pCi/L | 12/10/20 13:42 | 01/15/21 08:33 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *84.2* | | *40 - 110* | *12/10/20 13:42* | *01/15/21 08:33* | *1* |
| *Y Carrier* | *83.7* | | *40 - 110* | *12/10/20 13:42* | *01/15/21 08:33* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.206 | U | 0.333 | 0.334 | 5.00 | 0.473 | pCi/L | | 01/18/21 20:59 | 1 |

## Client Sample ID: MW-09

**Date Collected: 12/08/20 08:42**
**Date Received: 12/09/20 10:30**

## Lab Sample ID: 500-192070-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0153 | U | 0.205 | 0.205 | 1.00 | 0.407 | pCi/L | 12/11/20 16:10 | 01/13/21 21:59 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.2* | | *40 - 110* | *12/11/20 16:10* | *01/13/21 21:59* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.425 | U | 0.305 | 0.308 | 1.00 | 0.479 | pCi/L | 12/14/20 08:58 | 01/13/21 13:20 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.2* | | *40 - 110* | *12/14/20 08:58* | *01/13/21 13:20* | *1* |
| *Y Carrier* | *84.9* | | *40 - 110* | *12/14/20 08:58* | *01/13/21 13:20* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.425 | U | 0.367 | 0.370 | 5.00 | 0.479 | pCi/L | | 01/15/21 21:27 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Client Sample ID: MW-11

**Date Collected: 12/08/20 09:51**
**Date Received: 12/09/20 10:30**

## Lab Sample ID: 500-192070-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.151 | U | 0.185 | 0.186 | 1.00 | 0.305 | pCi/L | 12/14/20 11:35 | 01/15/21 16:45 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.4* | | *40 - 110* | *12/14/20 11:35* | *01/15/21 16:45* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.291 | U | 0.319 | 0.320 | 1.00 | 0.523 | pCi/L | 01/18/21 08:52 | 01/21/21 08:47 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *94.5* | | *40 - 110* | *01/18/21 08:52* | *01/21/21 08:47* | *1* |
| *Y Carrier* | *89.7* | | *40 - 110* | *01/18/21 08:52* | *01/21/21 08:47* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.442 | U | 0.369 | 0.370 | 5.00 | 0.523 | pCi/L | | 01/22/21 21:47 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Client Sample ID: MW-12

**Date Collected: 12/08/20 11:00**
**Date Received: 12/09/20 10:30**

## Lab Sample ID: 500-192070-8

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.302 | U | 0.296 | 0.297 | 1.00 | 0.467 | pCi/L | 12/14/20 11:35 | 01/15/21 16:46 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *71.6* | | *40 - 110* | *12/14/20 11:35* | *01/15/21 16:46* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.146 | U | 0.279 | 0.279 | 1.00 | 0.476 | pCi/L | 01/18/21 08:52 | 01/21/21 08:48 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *90.2* | | *40 - 110* | *01/18/21 08:52* | *01/21/21 08:48* | *1* |
| *Y Carrier* | *93.5* | | *40 - 110* | *01/18/21 08:52* | *01/21/21 08:48* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.447 | U | 0.407 | 0.407 | 5.00 | 0.476 | pCi/L | | 01/22/21 21:47 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Client Sample ID: MW-15

**Date Collected: 12/08/20 12:03**
**Date Received: 12/09/20 10:30**

## Lab Sample ID: 500-192070-9

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.318 | U | 0.227 | 0.229 | 1.00 | 0.319 | pCi/L | 12/14/20 11:35 | 01/15/21 16:46 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.1* | | *40 - 110* | *12/14/20 11:35* | *01/15/21 16:46* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.308 | U | 0.340 | 0.341 | 1.00 | 0.557 | pCi/L | 01/18/21 08:52 | 01/21/21 08:48 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.6* | | *40 - 110* | *01/18/21 08:52* | *01/21/21 08:48* | *1* |
| *Y Carrier* | *92.3* | | *40 - 110* | *01/18/21 08:52* | *01/21/21 08:48* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.626** | | 0.409 | 0.411 | 5.00 | 0.557 | pCi/L | | 01/22/21 21:47 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Client Sample ID: MW-08

**Date Collected: 12/14/20 10:20**
**Date Received: 12/15/20 14:40**

## Lab Sample ID: 500-192070-10

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.304 | U | 0.402 | 0.403 | 1.00 | 0.672 | pCi/L | 12/18/20 08:45 | 01/18/21 14:17 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *69.1* | | *40 - 110* | *12/18/20 08:45* | *01/18/21 14:17* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.01 | U G | 0.701 | 0.707 | 1.00 | 1.09 | pCi/L | 12/18/20 09:31 | 01/18/21 08:24 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *69.1* | | *40 - 110* | *12/18/20 09:31* | *01/18/21 08:24* | *1* |
| *Y Carrier* | *81.9* | | *40 - 110* | *12/18/20 09:31* | *01/18/21 08:24* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **1.31** | | 0.808 | 0.814 | 5.00 | 1.09 | pCi/L | | 01/19/21 21:00 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| G | The Sample MDC is greater than the requested RL. |
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

## Rad

### Prep Batch: 491410

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Total/NA | Water | PrecSep-21 | |
| 500-192070-2 | MW-17 | Total/NA | Water | PrecSep-21 | |
| 500-192070-3 | MW-18 | Total/NA | Water | PrecSep-21 | |
| 500-192070-4 | MW-01 | Total/NA | Water | PrecSep-21 | |
| 500-192070-5 | Duplicate | Total/NA | Water | PrecSep-21 | |
| MB 160-491410/21-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-491410/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-192070-1 DU | MW-19 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 491413

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-1 | MW-19 | Total/NA | Water | PrecSep_0 | |
| 500-192070-2 | MW-17 | Total/NA | Water | PrecSep_0 | |
| 500-192070-3 | MW-18 | Total/NA | Water | PrecSep_0 | |
| 500-192070-4 | MW-01 | Total/NA | Water | PrecSep_0 | |
| 500-192070-5 | Duplicate | Total/NA | Water | PrecSep_0 | |
| MB 160-491413/21-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-491413/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-192070-1 DU | MW-19 | Total/NA | Water | PrecSep_0 | |

### Prep Batch: 491609

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-6 | MW-09 | Total/NA | Water | PrecSep-21 | |
| MB 160-491609/24-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-491609/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-192070-6 DU | MW-09 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 491658

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-6 | MW-09 | Total/NA | Water | PrecSep_0 | |
| MB 160-491658/24-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-491658/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-192070-6 DU | MW-09 | Total/NA | Water | PrecSep_0 | |

### Prep Batch: 491668

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-7 | MW-11 | Total/NA | Water | PrecSep-21 | |
| 500-192070-8 | MW-12 | Total/NA | Water | PrecSep-21 | |
| 500-192070-9 | MW-15 | Total/NA | Water | PrecSep-21 | |
| MB 160-491668/13-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-491668/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-192070-7 DU | MW-11 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 492337

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-10 | MW-08 | Total/NA | Water | PrecSep-21 | |
| MB 160-492337/22-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-492337/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

# QC Association Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Rad

### Prep Batch: 492423

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-10 | MW-08 | Total/NA | Water | PrecSep_0 | |
| MB 160-492423/22-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-492423/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |

### Prep Batch: 495466

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192070-7 | MW-11 | Total/NA | Water | PrecSep_0 | |
| 500-192070-8 | MW-12 | Total/NA | Water | PrecSep_0 | |
| 500-192070-9 | MW-15 | Total/NA | Water | PrecSep_0 | |
| MB 160-495466/14-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-495466/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-192070-8 DU | MW-12 | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-491410/21-A**
**Matrix: Water**
**Analysis Batch: 495354**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 491410**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.07145 | U | 0.210 | 0.210 | 1.00 | 0.390 | pCi/L | 12/10/20 13:06 | 01/15/21 14:49 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.4* | | *40 - 110* | *12/10/20 13:06* | *01/15/21 14:49* | *1* |

**Lab Sample ID: LCS 160-491410/1-A**
**Matrix: Water**
**Analysis Batch: 495352**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 491410**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.3 | 12.40 | | 1.57 | 1.00 | 0.400 | pCi/L | 109 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *77.4* | | *40 - 110* |

**Lab Sample ID: 500-192070-1 DU**
**Matrix: Water**
**Analysis Batch: 495352**

**Client Sample ID: MW-19**
**Prep Type: Total/NA**
**Prep Batch: 491410**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.0321 | U | | -0.03964 | U | 0.239 | 1.00 | 0.481 | pCi/L | | | 0.15 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *77.4* | | *40 - 110* |

**Lab Sample ID: MB 160-491609/24-A**
**Matrix: Water**
**Analysis Batch: 494923**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 491609**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.1767 | U | 0.187 | 0.188 | 1.00 | 0.293 | pCi/L | 12/11/20 16:10 | 01/13/21 22:02 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.5* | | *40 - 110* | *12/11/20 16:10* | *01/13/21 22:02* | *1* |

**Lab Sample ID: LCS 160-491609/1-A**
**Matrix: Water**
**Analysis Batch: 494940**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 491609**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.3 | 11.29 | | 1.47 | 1.00 | 0.453 | pCi/L | 100 | 75 - 125 | | |

## Method: 903.0 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: LCS 160-491609/1-A**
**Matrix: Water**
**Analysis Batch: 494940**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 491609**

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 87.5 | | 40 - 110 |

**Lab Sample ID: 500-192070-6 DU**
**Matrix: Water**
**Analysis Batch: 494923**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**
**Prep Batch: 491609**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0153 | U | | 0.1834 | U | 0.178 | 1.00 | 0.272 | pCi/L | | | 0.52 | 1 |

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 89.0 | | 40 - 110 |

**Lab Sample ID: MB 160-491668/13-A**
**Matrix: Water**
**Analysis Batch: 495357**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 491668**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.1790 | U | 0.189 | 0.190 | 1.00 | 0.299 | pCi/L | 12/14/20 11:35 | 01/15/21 16:50 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 89.0 | | 40 - 110 | 12/14/20 11:35 | 01/15/21 16:50 | 1 |

**Lab Sample ID: LCS 160-491668/1-A**
**Matrix: Water**
**Analysis Batch: 495357**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 491668**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.3 | 9.968 | | 1.32 | 1.00 | 0.302 | pCi/L | 88 | 75 - 125 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 85.3 | | 40 - 110 |

**Lab Sample ID: 500-192070-7 DU**
**Matrix: Water**
**Analysis Batch: 495357**

**Client Sample ID: MW-11**
**Prep Type: Total/NA**
**Prep Batch: 491668**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.151 | U | | 0.3039 | U | 0.225 | 1.00 | 0.316 | pCi/L | | | 0.37 | 1 |

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 90.2 | | 40 - 110 |

## Method: 903.0 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: MB 160-492337/22-A**
**Matrix: Water**
**Analysis Batch: 495565**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 492337**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.09722 | U | 0.157 | 0.157 | 1.00 | 0.275 | pCi/L | 12/18/20 08:45 | 01/18/21 16:53 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *86.9* | | *40 - 110* | *12/18/20 08:45* | *01/18/21 16:53* | *1* |

**Lab Sample ID: LCS 160-492337/1-A**
**Matrix: Water**
**Analysis Batch: 495565**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 492337**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.3 | 10.56 | | 1.38 | 1.00 | 0.310 | pCi/L | 93 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *84.1* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-491413/21-A**
**Matrix: Water**
**Analysis Batch: 495354**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 491413**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.3109 | U | 0.279 | 0.280 | 1.00 | 0.448 | pCi/L | 12/10/20 13:42 | 01/15/21 08:37 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.4* | | *40 - 110* | *12/10/20 13:42* | *01/15/21 08:37* | *1* |
| *Y Carrier* | *85.2* | | *40 - 110* | *12/10/20 13:42* | *01/15/21 08:37* | *1* |

**Lab Sample ID: LCS 160-491413/1-A**
**Matrix: Water**
**Analysis Batch: 495352**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 491413**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 7.50 | 8.975 | | 1.12 | 1.00 | 0.505 | pCi/L | 120 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *77.4* | | *40 - 110* |
| *Y Carrier* | *83.4* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: 500-192070-1 DU**
**Matrix: Water**
**Analysis Batch: 495352**

**Client Sample ID: MW-19**
**Prep Type: Total/NA**
**Prep Batch: 491413**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.255 | U | | 0.008198 | U | 0.310 | 1.00 | 0.549 | pCi/L | | | 0.40 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *77.4* | | *40 - 110* |
| *Y Carrier* | *82.6* | | *40 - 110* |

**Lab Sample ID: MB 160-491658/24-A**
**Matrix: Water**
**Analysis Batch: 494940**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 491658**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.2324 | U | 0.289 | 0.289 | 1.00 | 0.478 | pCi/L | 12/14/20 08:58 | 01/13/21 13:20 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *75.5* | | *40 - 110* | *12/14/20 08:58* | *01/13/21 13:20* | *1* |
| *Y Carrier* | *85.6* | | *40 - 110* | *12/14/20 08:58* | *01/13/21 13:20* | *1* |

**Lab Sample ID: LCS 160-491658/1-A**
**Matrix: Water**
**Analysis Batch: 494939**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 491658**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 7.51 | 7.387 | | 0.944 | 1.00 | 0.461 | pCi/L | 98 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *87.5* | | *40 - 110* |
| *Y Carrier* | *83.0* | | *40 - 110* |

**Lab Sample ID: 500-192070-6 DU**
**Matrix: Water**
**Analysis Batch: 494940**

**Client Sample ID: MW-09**
**Prep Type: Total/NA**
**Prep Batch: 491658**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.425 | U | | 0.3739 | U | 0.282 | 1.00 | 0.440 | pCi/L | | | 0.09 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *89.0* | | *40 - 110* |
| *Y Carrier* | *84.1* | | *40 - 110* |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: MB 160-492423/22-A**
**Matrix: Water**
**Analysis Batch: 495477**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 492423**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.1665 | U | 0.225 | 0.226 | 1.00 | 0.376 | pCi/L | 12/18/20 09:31 | 01/18/21 08:29 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *86.9* | | *40 - 110* | *12/18/20 09:31* | *01/18/21 08:29* | *1* |
| *Y Carrier* | *92.0* | | *40 - 110* | *12/18/20 09:31* | *01/18/21 08:29* | *1* |

**Lab Sample ID: LCS 160-492423/1-A**
**Matrix: Water**
**Analysis Batch: 495520**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 492423**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 7.49 | 8.465 | | 1.05 | 1.00 | 0.477 | pCi/L | 113 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *84.1* | | *40 - 110* |
| *Y Carrier* | *79.3* | | *40 - 110* |

**Lab Sample ID: MB 160-495466/14-A**
**Matrix: Water**
**Analysis Batch: 496078**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 495466**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.1706 | U | 0.283 | 0.284 | 1.00 | 0.481 | pCi/L | 01/18/21 08:52 | 01/21/21 08:54 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *83.8* | | *40 - 110* | *01/18/21 08:52* | *01/21/21 08:54* | *1* |
| *Y Carrier* | *95.0* | | *40 - 110* | *01/18/21 08:52* | *01/21/21 08:54* | *1* |

**Lab Sample ID: LCS 160-495466/1-A**
**Matrix: Water**
**Analysis Batch: 496073**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 495466**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 9.98 | 9.708 | | 1.24 | 1.00 | 0.612 | pCi/L | 97 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *82.6* | | *40 - 110* |
| *Y Carrier* | *89.7* | | *40 - 110* |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: 500-192070-8 DU**
**Matrix: Water**
**Analysis Batch: 496073**

**Client Sample ID: MW-12**
**Prep Type: Total/NA**
**Prep Batch: 495466**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.146 | U | | 0.2712 | U | 0.342 | 1.00 | 0.565 | pCi/L | | | 0.20 | 1 |

| *Carrier* | *DU %Yield* | *DU Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *87.2* | | *40 - 110* |
| *Y Carrier* | *92.7* | | *40 - 110* |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Client Sample ID: MW-19
**Date Collected: 12/07/20 10:45**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491410 | 12/10/20 13:06 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 495352 | 01/15/21 14:42 | SCB | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 491413 | 12/10/20 13:42 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 495352 | 01/15/21 08:30 | SCB | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 495582 | 01/18/21 20:59 | GRW | TAL SL |

## Client Sample ID: MW-17
**Date Collected: 12/07/20 11:30**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491410 | 12/10/20 13:06 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 495352 | 01/15/21 14:42 | SCB | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 491413 | 12/10/20 13:42 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 495352 | 01/15/21 08:32 | SCB | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 495582 | 01/18/21 20:59 | GRW | TAL SL |

## Client Sample ID: MW-18
**Date Collected: 12/07/20 12:16**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491410 | 12/10/20 13:06 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 495352 | 01/15/21 14:42 | SCB | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 491413 | 12/10/20 13:42 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 495352 | 01/15/21 08:32 | SCB | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 495582 | 01/18/21 20:59 | GRW | TAL SL |

## Client Sample ID: MW-01
**Date Collected: 12/07/20 12:57**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491410 | 12/10/20 13:06 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 495352 | 01/15/21 14:42 | SCB | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 491413 | 12/10/20 13:42 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 495352 | 01/15/21 08:32 | SCB | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 495582 | 01/18/21 20:59 | GRW | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Client Sample ID: Duplicate
**Date Collected: 12/07/20 00:00**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192070-5
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491410 | 12/10/20 13:06 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 495352 | 01/15/21 14:43 | SCB | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 491413 | 12/10/20 13:42 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 495352 | 01/15/21 08:33 | SCB | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 495582 | 01/18/21 20:59 | GRW | TAL SL |

## Client Sample ID: MW-09
**Date Collected: 12/08/20 08:42**
**Date Received: 12/09/20 10:30**

## Lab Sample ID: 500-192070-6
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491609 | 12/11/20 16:10 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 494940 | 01/13/21 21:59 | SCB | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 491658 | 12/14/20 08:58 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 494940 | 01/13/21 13:20 | SCB | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 495359 | 01/15/21 21:27 | GRW | TAL SL |

## Client Sample ID: MW-11
**Date Collected: 12/08/20 09:51**
**Date Received: 12/09/20 10:30**

## Lab Sample ID: 500-192070-7
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491668 | 12/14/20 11:35 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 495357 | 01/15/21 16:45 | SCB | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 495466 | 01/18/21 08:52 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 496073 | 01/21/21 08:47 | SCB | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 496298 | 01/22/21 21:47 | GRW | TAL SL |

## Client Sample ID: MW-12
**Date Collected: 12/08/20 11:00**
**Date Received: 12/09/20 10:30**

## Lab Sample ID: 500-192070-8
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491668 | 12/14/20 11:35 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 495357 | 01/15/21 16:46 | SCB | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 495466 | 01/18/21 08:52 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 496073 | 01/21/21 08:48 | SCB | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 496298 | 01/22/21 21:47 | GRW | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Client Sample ID: MW-15

**Lab Sample ID: 500-192070-9**

**Date Collected: 12/08/20 12:03**

**Matrix: Water**

**Date Received: 12/09/20 10:30**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491668 | 12/14/20 11:35 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 495357 | 01/15/21 16:46 | SCB | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 495466 | 01/18/21 08:52 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 496073 | 01/21/21 08:48 | SCB | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 496298 | 01/22/21 21:47 | GRW | TAL SL |

## Client Sample ID: MW-08

**Lab Sample ID: 500-192070-10**

**Date Collected: 12/14/20 10:20**

**Matrix: Water**

**Date Received: 12/15/20 14:40**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 492337 | 12/18/20 08:45 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 495565 | 01/18/21 14:17 | FLC | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 492423 | 12/18/20 09:31 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 495520 | 01/18/21 08:24 | SCB | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 495709 | 01/19/21 21:00 | GRW | TAL SL |

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Laboratory: Eurofins TestAmerica, St. Louis

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | 004553 | 11-30-21 |

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 12/7/20 | COC No: |
|---|---|---|---|---|
| KPRG and Associates, Inc. | /Fax: (262) 781-0475 | Lab Contact: Diana Mockler | Carrier: FedEx | ____ of ____ COCs |
| 14665 West Lisbon Road, Suite 1A | **Analysis Turnaround Time** | | | Sampler: |
| Brookfield, WI 53154 | CALENDAR DAYS ☐ WORKING DAYS | | | **For Lab Use Only:** |
| (262) 781-0475 Phone | TAT if different from Below ____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR | ☒ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: 500-192070 |
| P O # 12313.0 | ☐ 1 day | | | |

500-192070 COC

| | Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS / MSD (Y/N) | 903.0, 904.0 Radium - 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C - TDS | 4500_F_C - Fluoride | SM4500_Cl_E - Chloride | SM4500_SO4_E - Sulfate | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-19 | 12/7 | 1045 | G | W | 7 | N | N | X | X | X | X | X | X | |
| 2 | MW-17 | 12/7 | 1130 | ↓ | ↓ | ↓ | | | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | |
| 3 | MW-18 | 12/7 | 1216 | ↓ | ↓ | ↓ | | | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | |
| 4 | MW-01 | 12/7 | 1257 | ↓ | ↓ | ↓ | | | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | |
| 5 | DUPLICATE | 12/7 | — | ↓ | ↓ | ↓ | | | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | |
| | | | | | | | | | 4 | 4 | 1 | 1 | 1 | 1 | |

**Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other** ____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

**Special Instructions/QC Requirements & Comments:** Lab Project #50011612. Appendix III Parameters and Custom Appendix IV ABB/ASB Metals; As, Ba, Cd, Co, Pb, Li, Hg, Mo, Se, Tl

-0.1,0.3

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | | Cooler Temp. (°C): Obs'd:____ Corr'd:____ | | Therm ID No.:____ |
|---|---|---|---|---|---|
| Relinquished by: **Mitchel Dolan** MMD | Company: **KPRG** | Date/Time: 12/7/20/1600 | Received by: **FedEx** | Company: | Date/Time: 12/7/20 / 1600 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: Shawn Scott | Company: TACHI | Date/Time: 12/8/20 1005 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 12/8/20 | COC No: |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Diana Mockler | Carrier: FedEx | _____ of _____ COCs |
| 14665 West Lisbon Road, Suite 1A | **Analysis Turnaround Time** | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | **For Lab Use Only:** |
| (262) 781-0475 Phone | TAT if different from Below _____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR | ☒ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: |
| P O # 12313.0 | ☐ 1 day | | | 500-192070 |

500-192070 COC

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y / N) | Perform MS / MSD (Y / N) | 903.0, 904.0 Radium - 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C - TDS | 4500_F_C - Fluoride | SM4500_Cl_E - Chloride | SM4500_SO4_E - Sulfate | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 MW-09 | 12/8 | 0842 | G | W | 7 | N | N | X | X | X | X | X | X | |
| 7 MW-11 | 12/8 | 0951 | ↓ | ↓ | ↓ | | | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | |
| 8 MW-12 | 12/8 | 1105 | | | | | | | | | | | | |
| 9 MW-15 | 12/8 | 1203 | | | | | | | | | | | | |
| | | | | | | | | 4 | 4 | 1 | 1 | 1 | 1 | |

**Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other** _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:** Lab Project #50011612. Appendix III Parameters and Custom Appendix IV ABB/ASB Metals; As, Ba, Cd, Co, Pb, Li, Hg, Mo, Se, Tl

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: -0.2 -0.1 -0.3 0.3 Corr'd: _____ Therm ID No.: _____

| | | | | | |
|---|---|---|---|---|---|
| Relinquished by: **Mitchel Dolan** MD | Company: **KPRG** | Date/Time: 12/8/20 1600 | Received by: **FedEx** | Company: | Date/Time: 12/8/20 1600 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: TESTAMERICA | Date/Time: 12/9/20 1030 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 12/14/2020 | COC No: |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Diana Mockler | Carrier: FedEx | _____ of _____ COCs |
| 14665 West Lisbon Road, Suite 1A | **Analysis Turnaround Time** | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | **For Lab Use Only:** |
| (262) 781-0475 Phone | TAT if different from Below _____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR | ☐ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: 500-192070 |
| P O # 12313.0 | ☐ 1 day | | | |

| | Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y / N) | Perform MS / MSD (Y / N) | 903.0, 904.0 Radium - 226/228 | 6010C, 6020A, 7470A - Total Metals | 2540C - TDS | 4500_F_C - Fluoride | SM4500_Cl_E - Chloride | SM4500_SO4_E - Sulfate | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | MW-08 | 12/14 | 1020 | G | W | 7 | N | N | X | X | X | X | X | X | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
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500-192070 COC

**Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other** _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:** Lab Project #50011612. Appendix III Parameters and Custom Appendix IV ABB/ASB Metals; As, Ba, Cd, Co, Pb, Li, Hg, Mo, Se, Tl

0.1 ~0.4

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | | Therm ID No.: _____ |
|---|---|---|---|---|---|
| Relinquished by: Mitchel Dolan | Company: KPRG | Date/Time: 12/14/20 1200 | Received by: FedEx | Company: | Date/Time: 12/14/2020 1200 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: 1440 |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

500-192070 Wayb

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 07DEC20
ACTWGT: 58.00 LB
CAD: 6994780/SSFE2121
DIMS: 23x13x13 IN

BILL THIRD PARTY

TO TEST AMERICA
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(000) 000-0000 REF:
INV:
PO: DEPT:

Part # 156297-XXX REV XX EXP 07/21

FedEx Express

TRK# 0201 7810 2858 7674

TUE - 08 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

48gt

60484
IL-US ORD

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE

WESTMONT, IL 60
UNITED STATES

SHIP DATE: 07DEC20
ACTWGT: 56.05 LB
CAD: 6994780/SSFE2121
DIMS: 23x13x13 IN

BILL THIRD PARTY

TO TEST AM
TEST A
2417 BOND

UNIVERSITY PARK

(000) 000-0000 REF:
INV:
PO: DEPT:

519
29
5
16:30
A
2122
12.08

Part # 156297-XXX REV XX EXP 07/21

FedEx Express

TRK# 0201 7810 2849 2122

TUE - 08 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

48gt

60484
IL-US ORD

500-192070 Wayb

ORIGIN ID:PIAA (262)
MICHEL DOLAN

414 PLAZA DR STE 1

WESTMONT, IL 60559
UNITED STATES US

DATE: 08DEC20
T: 47.05 LB
: 6994780/SSFE2121
S: 24x13x13 IN

BILL THIRD PARTY

TO TEST AMERICA
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(708) 634-5200 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0201 7810 9394 9977

WED - 09 DEC 4:30P
STANDARD OVERNIGHT
AHS
60484
IL-US ORD

XH JOTA

ORIGIN ID:PIAA (262) 622-1143
MICHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 08DEC20
ACTWGT: 47.65 LB
CAD: 6994780/SSFE2121
DIMS: 24x13x13 IN

BILL THIRD PARTY

TO TEST AMERICA
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(708) 634-5200 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0201 7810 9406 5380

WED - 09 DEC 4:30P
STANDARD OVERNIGHT
AHS
60484
IL-US ORD

XH JOTA



ORIGIN ID:PIAA (262) 622-1143
MICHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 08DEC20
ACTWGT: 55.95 LB
CAD: 6994780/SSFE2121
DIMS: 24x13x13 IN

BILL THIRD PARTY

TO TEST AMERICA
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(708) 534-5200 REF:
INV: DEPT:
PO:

FedEx Express

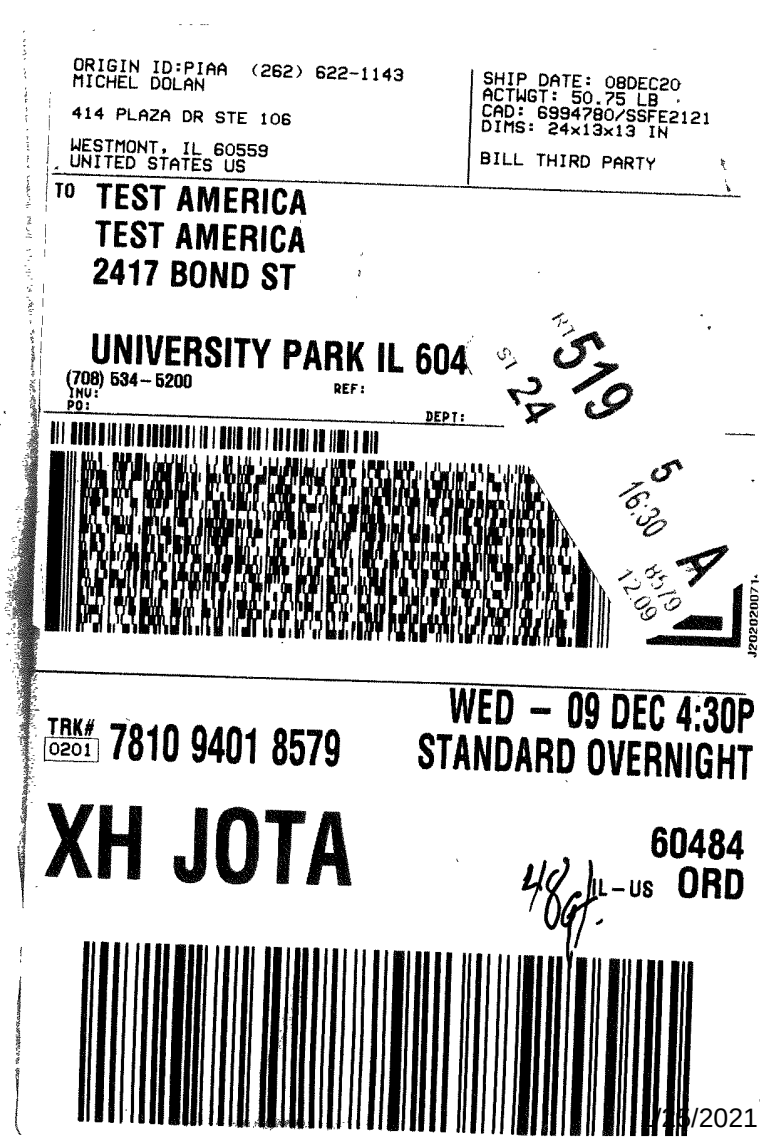
TRK# 0201 7810 9412 0148

WED - 09 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

48gt IL-US 60484 ORD

Part # 156297 [illegible] EXP 07/21



ORIGIN ID:PIAA (262) 622-1143
MICHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 08DEC20
ACTWGT: 50.75 LB
CAD: 6994780/SSFE2121
DIMS: 24x13x13 IN

BILL THIRD PARTY

TO TEST AMERICA
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 604

(708) 534-5200 REF:
INV: DEPT:
PO:

TRK# 0201 7810 9401 8579

WED - 09 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

48gt IL-US 60484 ORD

Part # 156297 [illegible] EXP 07/21

ORIGIN ID:PIAA (262) 622-1143
MITCHELL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 14DEC20
ACTWGT: 30.90 LB
CAD: 6994780/SSFE2121
DIMS: 16x10x15 IN

BILL THIRD PARTY

TO TESTAMERICA CHICAGO
TESTAMERICA CHICAGO
2417 BOND ST

UNIVERSITY PARK IL 60484
(708) 534-5200 REF:
INV:
PO: DEPT:

FedEx Express

TUE - 15 DEC 4:30P
STANDARD OVERNIGHT

TRK# 0201 7813 8509 4861

AHS
60484
IL-US ORD

XH JOTA

28 qt.



500-192070 Wayb

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-143207.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: Diana.Mockler@Eurofinset.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-192070-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 1/7/2021 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-19 (500-192070-1) | 12/7/20 | 10:45 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-17 (500-192070-2) | 12/7/20 | 11:30 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-18 (500-192070-3) | 12/7/20 | 12:16 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-01 (500-192070-4) | 12/7/20 | 12:57 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| Duplicate (500-192070-5) | 12/7/20 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
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Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 12/8/20 1500 | ETA | Fed Ex | | |
| 2 | Relinquished by: Fed Ex | Date/Time: | Company | Received by: Mallory O'Saner | Date/Time: 12/9/20 09:37 | Company ETA-STL |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 11/01/2020

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-143280.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: Diana.Mockler@Eurofinset.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-192070-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 12/17/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-09 (500-192070-6) | 12/8/20 | 08:42 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-11 (500-192070-7) | 12/8/20 | 09:51 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-12 (500-192070-8) | 12/8/20 | 11:00 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-15 (500-192070-9) | 12/8/20 | 12:03 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
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Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 12/9/20 1600 | ETA | Fed Ex | | |
| 2 | Relinquished by: Fed Ex | Date/Time: | Company | Received by: Mallory O'Sarer | Date/Time: 12/10/20 09:18 | Company ETA-STL |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 11/01/2020

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-143448.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: Diana.Mockler@Eurofinset.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-192070-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 12/17/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-08 (500-192070-10) | 12/14/20 | 10:20 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

**Preservation Codes:**

| | |
|---|---|
| A - HCL | M - Hexane |
| B - NaOH | N - None |
| C - Zn Acetate | O - AsNaO2 |
| D - Nitric Acid | P - Na2O4S |
| E - NaHSO4 | Q - Na2SO3 |
| F - MeOH | R - Na2S2O3 |
| G - Amchlor | S - H2SO4 |
| H - Ascorbic Acid | T - TSP Dodecahydrate |
| I - Ice | U - Acetone |
| J - DI Water | V - MCAA |
| K - EDTA | W - pH 4-5 |
| L - EDA | Z - other (specify) |

Other:

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] Fed Ex | 12/15/20 1600 | ETA | Fed Ex | | |
| 2 | Relinquished by: Fed Ex | Date/Time: | Company | Received by: [signature] | Date/Time: 12/17/20 09:50 | Company ETA-STL |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 11/01/2020

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-192070-2

**Login Number: 192070**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | -0.1,0.3 samples not frozen,-0.7,-0.1,-0.3,0.3,-0.4 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-192070-2

**Login Number: 192070**
**List Number: 2**
**Creator: O'Gara, Mallory L**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 12/09/20 01:04 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-192070-2

**Login Number: 192070**
**List Number: 3**
**Creator: O'Gara, Mallory L**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 12/10/20 02:19 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-192070-2

**Login Number: 192070**
**List Number: 4**
**Creator: O'Gara, Mallory L**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 12/17/20 01:13 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR

Job ID: 500-192070-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) |
| 500-192070-1 | MW-19 | 76.8 |
| 500-192070-1 DU | MW-19 | 77.4 |
| 500-192070-2 | MW-17 | 79.9 |
| 500-192070-3 | MW-18 | 79.7 |
| 500-192070-4 | MW-01 | 77.4 |
| 500-192070-5 | Duplicate | 84.2 |
| 500-192070-6 | MW-09 | 90.2 |
| 500-192070-6 DU | MW-09 | 89.0 |
| 500-192070-7 | MW-11 | 88.4 |
| 500-192070-7 DU | MW-11 | 90.2 |
| 500-192070-8 | MW-12 | 71.6 |
| 500-192070-9 | MW-15 | 91.1 |
| 500-192070-10 | MW-08 | 69.1 |
| LCS 160-491410/1-A | Lab Control Sample | 77.4 |
| LCS 160-491609/1-A | Lab Control Sample | 87.5 |
| LCS 160-491668/1-A | Lab Control Sample | 85.3 |
| LCS 160-492337/1-A | Lab Control Sample | 84.1 |
| MB 160-491410/21-A | Method Blank | 85.4 |
| MB 160-491609/24-A | Method Blank | 75.5 |
| MB 160-491668/13-A | Method Blank | 89.0 |
| MB 160-492337/22-A | Method Blank | 86.9 |

**Tracer/Carrier Legend**

Ba = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) | Y (40-110) |
| 500-192070-1 | MW-19 | 76.8 | 81.5 |
| 500-192070-1 DU | MW-19 | 77.4 | 82.6 |
| 500-192070-2 | MW-17 | 79.9 | 84.1 |
| 500-192070-3 | MW-18 | 79.7 | 82.2 |
| 500-192070-4 | MW-01 | 77.4 | 80.7 |
| 500-192070-5 | Duplicate | 84.2 | 83.7 |
| 500-192070-6 | MW-09 | 90.2 | 84.9 |
| 500-192070-6 DU | MW-09 | 89.0 | 84.1 |
| 500-192070-7 | MW-11 | 94.5 | 89.7 |
| 500-192070-8 | MW-12 | 90.2 | 93.5 |
| 500-192070-8 DU | MW-12 | 87.2 | 92.7 |
| 500-192070-9 | MW-15 | 85.6 | 92.3 |
| 500-192070-10 | MW-08 | 69.1 | 81.9 |
| LCS 160-491413/1-A | Lab Control Sample | 77.4 | 83.4 |
| LCS 160-491658/1-A | Lab Control Sample | 87.5 | 83.0 |
| LCS 160-492423/1-A | Lab Control Sample | 84.1 | 79.3 |
| LCS 160-495466/1-A | Lab Control Sample | 82.6 | 89.7 |
| MB 160-491413/21-A | Method Blank | 85.4 | 85.2 |
| MB 160-491658/24-A | Method Blank | 75.5 | 85.6 |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Job ID: 500-192070-2
Project/Site: Powerton CCR

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Matrix: Water**
**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | Ba (40-110) | Y (40-110) | | | | | | | | |
| MB 160-492423/22-A | Method Blank | 86.9 | 92.0 | | | | | | | | |
| MB 160-495466/14-A | Method Blank | 83.8 | 95.0 | | | | | | | | |

**Tracer/Carrier Legend**

Ba = Ba Carrier
Y = Y Carrier

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-192075-1
Client Project/Site: Powerton CCR FAB

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

Robin M Kintz

*Authorized for release by:*
*12/21/2020 11:28:48 AM*
Robin Kintz, Project Manager II
(708)534-5200
Robin.Kintz@Eurofinset.com

Designee for

Diana Mockler, Project Manager I
(219)252-7570
Diana.Mockler@Eurofinset.com

LINKS

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www.eurofinsus.com/Env

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-192075-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-192075-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 12/8/2020 10:05 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were -2.3º C, -1.1º C, -0.1º C and 0.3º C.

**Metals**
Method 6010C: The interference check standard solution (ICSA) associated with Analytical batch 500-576167 had results for Lithium above the reporting limit (RL). Associated samples MW-01 (500-192075-1) were non-detects for Lithium, therefore the data has been reported.

Method 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-576644. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

Method 6020A: The internal standard Terbium (Tb) was used to report the elements Lead and Thallium in batch 500-577089. This was due to the LCS being spiked with the trace digestion spike which contains Bismuth.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

## Client Sample ID: MW-01 — Lab Sample ID: 500-192075-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.058 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.59 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0052 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 640 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 54 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.25 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 55 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-10 — Lab Sample ID: 500-192075-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0015 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.28 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.4 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0089 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0023 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Selenium | 0.0031 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 550 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 44 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.26 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 71 | | 15 | | mg/L | 3 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-02 — Lab Sample ID: 500-192075-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.076 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.66 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 100 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0059 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 430 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 41 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.15 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 64 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-03 — Lab Sample ID: 500-192075-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.086 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: MW-03 (Continued) — Lab Sample ID: 500-192075-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Boron | 0.86 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 92 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 390 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 45 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.28 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 60 | | 15 | | mg/L | 3 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-04 — Lab Sample ID: 500-192075-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.034 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.57 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 92 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0076 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 580 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 88 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.32 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 94 | | 15 | | mg/L | 3 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: MW-05 — Lab Sample ID: 500-192075-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.050 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 0.53 | | 0.050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Calcium | 98 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Molybdenum | 0.0072 | | 0.0050 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 670 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 78 | | 10 | | mg/L | 5 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.31 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 110 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

## Client Sample ID: FAB DUP — Lab Sample ID: 500-192075-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.0011 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Barium | 0.26 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Boron | 2.4 | | 0.50 | | mg/L | 10 | | 6020A | Total Recoverable |
| Calcium | 120 | | 0.20 | | mg/L | 1 | | 6020A | Total Recoverable |
| Cobalt | 0.0050 | | 0.0010 | | mg/L | 1 | | 6020A | Total Recoverable |
| Lead | 0.0013 | | 0.00050 | | mg/L | 1 | | 6020A | Total Recoverable |

This Detection Summary does not include radiochemical test results.

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

## Client Sample ID: FAB DUP (Continued)

## Lab Sample ID: 500-192075-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Selenium | 0.0030 | | 0.0025 | | mg/L | 1 | | 6020A | Total Recoverable |
| Total Dissolved Solids | 500 | | 10 | | mg/L | 1 | | SM 2540C | Total/NA |
| Chloride | 43 | | 2.0 | | mg/L | 1 | | SM 4500 Cl- E | Total/NA |
| Fluoride | 0.26 | | 0.10 | | mg/L | 1 | | SM 4500 F C | Total/NA |
| Sulfate | 69 | | 25 | | mg/L | 5 | | SM 4500 SO4 E | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| SM 2540C | Solids, Total Dissolved (TDS) | SM | TAL CHI |
| SM 4500 Cl- E | Chloride, Total | SM | TAL CHI |
| SM 4500 F C | Fluoride | SM | TAL CHI |
| SM 4500 SO4 E | Sulfate, Total | SM | TAL CHI |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Water | 12/07/20 12:57 | 12/08/20 10:05 | |
| 500-192075-2 | MW-10 | Water | 12/08/20 13:13 | 12/10/20 10:20 | |
| 500-192075-3 | MW-02 | Water | 12/09/20 08:22 | 12/10/20 10:20 | |
| 500-192075-4 | MW-03 | Water | 12/09/20 09:18 | 12/10/20 10:20 | |
| 500-192075-5 | MW-04 | Water | 12/09/20 10:14 | 12/10/20 10:20 | |
| 500-192075-6 | MW-05 | Water | 12/09/20 11:23 | 12/10/20 10:20 | |
| 500-192075-7 | FAB DUP | Water | 12/08/20 00:00 | 12/10/20 10:20 | |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

## Client Sample ID: MW-01

**Date Collected: 12/07/20 12:57**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192075-1

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | ^ | 0.010 | | mg/L | | 12/08/20 17:57 | 12/09/20 13:16 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:54 | 1 |
| **Barium** | **0.058** | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:14 | 1 |
| **Boron** | **0.59** | | 0.050 | | mg/L | | 12/08/20 17:57 | 12/15/20 16:00 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:14 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:14 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:14 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:14 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:14 | 1 |
| **Molybdenum** | **0.0052** | | 0.0050 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:14 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:54 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/08/20 17:57 | 12/11/20 19:14 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/10/20 08:20 | 12/11/20 07:07 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **640** | | 10 | | mg/L | | | 12/09/20 03:19 | 1 |
| **Chloride** | **54** | | 2.0 | | mg/L | | | 12/11/20 15:11 | 1 |
| **Fluoride** | **0.25** | | 0.10 | | mg/L | | | 12/16/20 15:08 | 1 |
| **Sulfate** | **55** | | 25 | | mg/L | | | 12/15/20 14:16 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

## Client Sample ID: MW-10

**Date Collected: 12/08/20 13:13**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-2

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/11/20 07:38 | 12/14/20 12:07 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.0015** | | 0.0010 | | mg/L | | 12/11/20 07:38 | 12/14/20 18:22 | 1 |
| **Barium** | **0.28** | | 0.0025 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:03 | 1 |
| **Boron** | **2.4** | | 0.50 | | mg/L | | 12/11/20 07:38 | 12/15/20 16:32 | 10 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:03 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:03 | 1 |
| **Cobalt** | **0.0089** | | 0.0010 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:03 | 1 |
| **Lead** | **0.0023** | | 0.00050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:03 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:03 | 1 |
| **Selenium** | **0.0031** | | 0.0025 | | mg/L | | 12/11/20 07:38 | 12/14/20 18:22 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/15/20 09:35 | 12/16/20 10:21 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **550** | | 10 | | mg/L | | | 12/14/20 01:31 | 1 |
| **Chloride** | **44** | | 2.0 | | mg/L | | | 12/12/20 12:50 | 1 |
| **Fluoride** | **0.26** | | 0.10 | | mg/L | | | 12/16/20 15:15 | 1 |
| **Sulfate** | **71** | | 15 | | mg/L | | | 12/15/20 14:11 | 3 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

## Client Sample ID: MW-02

**Date Collected: 12/09/20 08:22**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-3

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/11/20 07:38 | 12/14/20 12:10 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 12/11/20 07:38 | 12/14/20 18:24 | 1 |
| **Barium** | **0.076** | | 0.0025 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:07 | 1 |
| **Boron** | **0.66** | | 0.050 | | mg/L | | 12/11/20 07:38 | 12/15/20 16:36 | 1 |
| **Calcium** | **100** | | 0.20 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:07 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:07 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:07 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:07 | 1 |
| **Molybdenum** | **0.0059** | | 0.0050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:07 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/11/20 07:38 | 12/14/20 18:24 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/15/20 09:35 | 12/16/20 10:23 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **430** | | 10 | | mg/L | | | 12/14/20 01:39 | 1 |
| **Chloride** | **41** | | 2.0 | | mg/L | | | 12/12/20 12:51 | 1 |
| **Fluoride** | **0.15** | | 0.10 | | mg/L | | | 12/16/20 15:22 | 1 |
| **Sulfate** | **64** | | 25 | | mg/L | | | 12/15/20 14:18 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

## Client Sample ID: MW-03

**Date Collected: 12/09/20 09:18**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-4

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/11/20 07:38 | 12/14/20 12:14 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 12/11/20 07:38 | 12/14/20 18:26 | 1 |
| **Barium** | **0.086** | | 0.0025 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:10 | 1 |
| **Boron** | **0.86** | | 0.050 | | mg/L | | 12/11/20 07:38 | 12/15/20 16:40 | 1 |
| **Calcium** | **92** | | 0.20 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:10 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:10 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:10 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:10 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:10 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/11/20 07:38 | 12/14/20 18:26 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/15/20 09:35 | 12/16/20 10:48 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **390** | | 10 | | mg/L | | | 12/14/20 01:44 | 1 |
| **Chloride** | **45** | | 2.0 | | mg/L | | | 12/12/20 12:52 | 1 |
| **Fluoride** | **0.28** | | 0.10 | | mg/L | | | 12/16/20 15:25 | 1 |
| **Sulfate** | **60** | | 15 | | mg/L | | | 12/15/20 14:12 | 3 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

## Client Sample ID: MW-04

**Date Collected: 12/09/20 10:14**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-5

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/11/20 07:38 | 12/14/20 12:17 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 12/11/20 07:38 | 12/14/20 18:32 | 1 |
| **Barium** | **0.034** | | 0.0025 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:21 | 1 |
| **Boron** | **0.57** | | 0.050 | | mg/L | | 12/11/20 07:38 | 12/15/20 16:43 | 1 |
| **Calcium** | **92** | | 0.20 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:21 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:21 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:21 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:21 | 1 |
| **Molybdenum** | **0.0076** | | 0.0050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:21 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/11/20 07:38 | 12/14/20 18:32 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/15/20 09:35 | 12/16/20 10:50 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **580** | | 10 | | mg/L | | | 12/14/20 01:47 | 1 |
| **Chloride** | **88** | | 10 | | mg/L | | | 12/12/20 13:21 | 5 |
| **Fluoride** | **0.32** | | 0.10 | | mg/L | | | 12/16/20 15:29 | 1 |
| **Sulfate** | **94** | | 15 | | mg/L | | | 12/15/20 14:12 | 3 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

## Client Sample ID: MW-05

**Date Collected: 12/09/20 11:23**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-6

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/11/20 07:38 | 12/14/20 12:20 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 12/11/20 07:38 | 12/14/20 18:33 | 1 |
| **Barium** | **0.050** | | 0.0025 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:24 | 1 |
| **Boron** | **0.53** | | 0.050 | | mg/L | | 12/11/20 07:38 | 12/15/20 16:47 | 1 |
| **Calcium** | **98** | | 0.20 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:24 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:24 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:24 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:24 | 1 |
| **Molybdenum** | **0.0072** | | 0.0050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:24 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/11/20 07:38 | 12/14/20 18:33 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/15/20 09:35 | 12/16/20 10:53 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **670** | | 10 | | mg/L | | | 12/14/20 01:49 | 1 |
| **Chloride** | **78** | | 10 | | mg/L | | | 12/12/20 13:22 | 5 |
| **Fluoride** | **0.31** | | 0.10 | | mg/L | | | 12/16/20 15:35 | 1 |
| **Sulfate** | **110** | | 25 | | mg/L | | | 12/15/20 14:13 | 5 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

## Client Sample ID: FAB DUP

**Date Collected: 12/08/20 00:00**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-7

**Matrix: Water**

### Method: 6010C - Metals (ICP) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/11/20 07:38 | 12/14/20 12:23 | 1 |

### Method: 6020A - Metals (ICP/MS) - Total Recoverable

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.0011** | | 0.0010 | | mg/L | | 12/11/20 07:38 | 12/14/20 18:35 | 1 |
| **Barium** | **0.26** | | 0.0025 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:28 | 1 |
| **Boron** | **2.4** | | 0.50 | | mg/L | | 12/11/20 07:38 | 12/15/20 16:50 | 10 |
| **Calcium** | **120** | | 0.20 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:28 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:28 | 1 |
| **Cobalt** | **0.0050** | | 0.0010 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:28 | 1 |
| **Lead** | **0.0013** | | 0.00050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:28 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 12/11/20 07:38 | 12/11/20 20:28 | 1 |
| **Selenium** | **0.0030** | | 0.0025 | | mg/L | | 12/11/20 07:38 | 12/14/20 18:35 | 1 |

### Method: 7470A - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/15/20 09:35 | 12/16/20 10:55 | 1 |

### General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Total Dissolved Solids** | **500** | | 10 | | mg/L | | | 12/14/20 01:52 | 1 |
| **Chloride** | **43** | | 2.0 | | mg/L | | | 12/12/20 12:56 | 1 |
| **Fluoride** | **0.26** | | 0.10 | | mg/L | | | 12/16/20 15:53 | 1 |
| **Sulfate** | **69** | | 25 | | mg/L | | | 12/15/20 14:13 | 5 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

## Qualifiers

### Metals

| Qualifier | Qualifier Description |
|---|---|
| ^ | ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

## Metals

### Prep Batch: 575895

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Total Recoverable | Water | 3005A | |
| MB 500-575895/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-575895/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 576167

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Total Recoverable | Water | 6010C | 575895 |
| MB 500-575895/1-A | Method Blank | Total Recoverable | Water | 6010C | 575895 |
| LCS 500-575895/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 575895 |

### Prep Batch: 576172

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Total/NA | Water | 7470A | |
| MB 500-576172/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-576172/13-A | Lab Control Sample | Total/NA | Water | 7470A | |

### Prep Batch: 576343

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-2 | MW-10 | Total Recoverable | Water | 3005A | |
| 500-192075-3 | MW-02 | Total Recoverable | Water | 3005A | |
| 500-192075-4 | MW-03 | Total Recoverable | Water | 3005A | |
| 500-192075-5 | MW-04 | Total Recoverable | Water | 3005A | |
| 500-192075-6 | MW-05 | Total Recoverable | Water | 3005A | |
| 500-192075-7 | FAB DUP | Total Recoverable | Water | 3005A | |
| MB 500-576343/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-576343/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 576405

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Total/NA | Water | 7470A | 576172 |
| MB 500-576172/12-A | Method Blank | Total/NA | Water | 7470A | 576172 |
| LCS 500-576172/13-A | Lab Control Sample | Total/NA | Water | 7470A | 576172 |

### Analysis Batch: 576644

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Total Recoverable | Water | 6020A | 575895 |
| 500-192075-2 | MW-10 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-3 | MW-02 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-4 | MW-03 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-5 | MW-04 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-6 | MW-05 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-7 | FAB DUP | Total Recoverable | Water | 6020A | 576343 |
| MB 500-575895/1-A | Method Blank | Total Recoverable | Water | 6020A | 575895 |
| MB 500-576343/1-A | Method Blank | Total Recoverable | Water | 6020A | 576343 |
| LCS 500-575895/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 575895 |
| LCS 500-576343/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 576343 |

### Analysis Batch: 576826

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-2 | MW-10 | Total Recoverable | Water | 6010C | 576343 |
| 500-192075-3 | MW-02 | Total Recoverable | Water | 6010C | 576343 |

## Metals (Continued)

### Analysis Batch: 576826 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-4 | MW-03 | Total Recoverable | Water | 6010C | 576343 |
| 500-192075-5 | MW-04 | Total Recoverable | Water | 6010C | 576343 |
| 500-192075-6 | MW-05 | Total Recoverable | Water | 6010C | 576343 |
| 500-192075-7 | FAB DUP | Total Recoverable | Water | 6010C | 576343 |
| MB 500-576343/1-A | Method Blank | Total Recoverable | Water | 6010C | 576343 |
| LCS 500-576343/2-A | Lab Control Sample | Total Recoverable | Water | 6010C | 576343 |

### Prep Batch: 576859

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-2 | MW-10 | Total/NA | Water | 7470A | |
| 500-192075-3 | MW-02 | Total/NA | Water | 7470A | |
| 500-192075-4 | MW-03 | Total/NA | Water | 7470A | |
| 500-192075-5 | MW-04 | Total/NA | Water | 7470A | |
| 500-192075-6 | MW-05 | Total/NA | Water | 7470A | |
| 500-192075-7 | FAB DUP | Total/NA | Water | 7470A | |
| MB 500-576859/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-576859/13-A | Lab Control Sample | Total/NA | Water | 7470A | |

### Analysis Batch: 576866

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Total Recoverable | Water | 6020A | 575895 |
| 500-192075-2 | MW-10 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-3 | MW-02 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-4 | MW-03 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-5 | MW-04 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-6 | MW-05 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-7 | FAB DUP | Total Recoverable | Water | 6020A | 576343 |
| MB 500-575895/1-A | Method Blank | Total Recoverable | Water | 6020A | 575895 |
| MB 500-576343/1-A | Method Blank | Total Recoverable | Water | 6020A | 576343 |
| LCS 500-575895/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 575895 |
| LCS 500-576343/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 576343 |

### Analysis Batch: 577089

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Total Recoverable | Water | 6020A | 575895 |
| 500-192075-2 | MW-10 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-3 | MW-02 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-4 | MW-03 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-5 | MW-04 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-6 | MW-05 | Total Recoverable | Water | 6020A | 576343 |
| 500-192075-7 | FAB DUP | Total Recoverable | Water | 6020A | 576343 |
| MB 500-575895/1-A | Method Blank | Total Recoverable | Water | 6020A | 575895 |
| MB 500-576343/1-A | Method Blank | Total Recoverable | Water | 6020A | 576343 |
| LCS 500-575895/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 575895 |
| LCS 500-576343/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 576343 |

### Analysis Batch: 577102

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-2 | MW-10 | Total/NA | Water | 7470A | 576859 |
| 500-192075-3 | MW-02 | Total/NA | Water | 7470A | 576859 |
| 500-192075-4 | MW-03 | Total/NA | Water | 7470A | 576859 |

## Metals (Continued)

### Analysis Batch: 577102 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-5 | MW-04 | Total/NA | Water | 7470A | 576859 |
| 500-192075-6 | MW-05 | Total/NA | Water | 7470A | 576859 |
| 500-192075-7 | FAB DUP | Total/NA | Water | 7470A | 576859 |
| MB 500-576859/12-A | Method Blank | Total/NA | Water | 7470A | 576859 |
| LCS 500-576859/13-A | Lab Control Sample | Total/NA | Water | 7470A | 576859 |

## General Chemistry

### Analysis Batch: 575962

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Total/NA | Water | SM 2540C | |
| MB 500-575962/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-575962/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |

### Analysis Batch: 576457

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-576457/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-576457/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 576529

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-2 | MW-10 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192075-3 | MW-02 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192075-4 | MW-03 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192075-5 | MW-04 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192075-6 | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192075-7 | FAB DUP | Total/NA | Water | SM 4500 Cl- E | |
| MB 500-576529/12 | Method Blank | Total/NA | Water | SM 4500 Cl- E | |
| LCS 500-576529/13 | Lab Control Sample | Total/NA | Water | SM 4500 Cl- E | |
| 500-192075-6 MS | MW-05 | Total/NA | Water | SM 4500 Cl- E | |
| 500-192075-6 MSD | MW-05 | Total/NA | Water | SM 4500 Cl- E | |

### Analysis Batch: 576566

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-2 | MW-10 | Total/NA | Water | SM 2540C | |
| 500-192075-3 | MW-02 | Total/NA | Water | SM 2540C | |
| 500-192075-4 | MW-03 | Total/NA | Water | SM 2540C | |
| 500-192075-5 | MW-04 | Total/NA | Water | SM 2540C | |
| 500-192075-6 | MW-05 | Total/NA | Water | SM 2540C | |
| 500-192075-7 | FAB DUP | Total/NA | Water | SM 2540C | |
| MB 500-576566/1 | Method Blank | Total/NA | Water | SM 2540C | |
| LCS 500-576566/2 | Lab Control Sample | Total/NA | Water | SM 2540C | |
| 500-192075-2 MS | MW-10 | Total/NA | Water | SM 2540C | |
| 500-192075-2 DU | MW-10 | Total/NA | Water | SM 2540C | |
| 500-192075-3 DU | MW-02 | Total/NA | Water | SM 2540C | |

### Analysis Batch: 576921

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Total/NA | Water | SM 4500 SO4 E | |
| 500-192075-2 | MW-10 | Total/NA | Water | SM 4500 SO4 E | |

## General Chemistry (Continued)

### Analysis Batch: 576921 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-3 | MW-02 | Total/NA | Water | SM 4500 SO4 E | |
| 500-192075-4 | MW-03 | Total/NA | Water | SM 4500 SO4 E | |
| 500-192075-5 | MW-04 | Total/NA | Water | SM 4500 SO4 E | |
| 500-192075-6 | MW-05 | Total/NA | Water | SM 4500 SO4 E | |
| 500-192075-7 | FAB DUP | Total/NA | Water | SM 4500 SO4 E | |
| MB 500-576921/15 | Method Blank | Total/NA | Water | SM 4500 SO4 E | |
| LCS 500-576921/16 | Lab Control Sample | Total/NA | Water | SM 4500 SO4 E | |

### Analysis Batch: 577245

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Total/NA | Water | SM 4500 F C | |
| 500-192075-2 | MW-10 | Total/NA | Water | SM 4500 F C | |
| 500-192075-3 | MW-02 | Total/NA | Water | SM 4500 F C | |
| 500-192075-4 | MW-03 | Total/NA | Water | SM 4500 F C | |
| 500-192075-5 | MW-04 | Total/NA | Water | SM 4500 F C | |
| 500-192075-6 | MW-05 | Total/NA | Water | SM 4500 F C | |
| 500-192075-7 | FAB DUP | Total/NA | Water | SM 4500 F C | |
| MB 500-577245/3 | Method Blank | Total/NA | Water | SM 4500 F C | |
| LCS 500-577245/4 | Lab Control Sample | Total/NA | Water | SM 4500 F C | |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-575895/1-A**
**Matrix: Water**
**Analysis Batch: 576167**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | ^ | 0.010 | | mg/L | | 12/08/20 17:57 | 12/09/20 12:33 | 1 |

**Lab Sample ID: LCS 500-575895/2-A**
**Matrix: Water**
**Analysis Batch: 576167**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.506 | ^ | mg/L | | 101 | 80 - 120 |

**Lab Sample ID: MB 500-576343/1-A**
**Matrix: Water**
**Analysis Batch: 576826**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 576343**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | <0.010 | | 0.010 | | mg/L | | 12/11/20 07:38 | 12/14/20 11:54 | 1 |

**Lab Sample ID: LCS 500-576343/2-A**
**Matrix: Water**
**Analysis Batch: 576826**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 576343**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lithium | 0.500 | 0.513 | | mg/L | | 103 | 80 - 120 |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-575895/1-A**
**Matrix: Water**
**Analysis Batch: 576644**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Barium | <0.0025 | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |
| Cadmium | <0.00050 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |
| Thallium | <0.0020 | | 0.0020 | | mg/L | | 12/08/20 17:57 | 12/11/20 18:29 | 1 |

**Lab Sample ID: MB 500-575895/1-A**
**Matrix: Water**
**Analysis Batch: 576866**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:27 | 1 |
| Barium | <0.0025 | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:27 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:27 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/08/20 17:57 | 12/14/20 16:27 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-575895/1-A**
**Matrix: Water**
**Analysis Batch: 577089**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 12/08/20 17:57 | 12/15/20 15:13 | 1 |

**Lab Sample ID: LCS 500-575895/2-A**
**Matrix: Water**
**Analysis Batch: 576644**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Barium | 2.00 | 2.05 | | mg/L | | 103 | 80 - 120 |
| Cadmium | 0.0500 | 0.0489 | | mg/L | | 98 | 80 - 120 |
| Calcium | 10.0 | 10.3 | | mg/L | | 103 | 80 - 120 |
| Chromium | 0.200 | 0.200 | | mg/L | | 100 | 80 - 120 |
| Cobalt | 0.500 | 0.488 | | mg/L | | 98 | 80 - 120 |
| Lead | 0.100 | 0.101 | | mg/L | | 101 | 80 - 120 |
| Molybdenum | 1.00 | 0.992 | | mg/L | | 99 | 80 - 120 |
| Thallium | 0.100 | 0.109 | | mg/L | | 109 | 80 - 120 |

**Lab Sample ID: LCS 500-575895/2-A**
**Matrix: Water**
**Analysis Batch: 576866**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.100 | 0.0998 | | mg/L | | 100 | 80 - 120 |
| Barium | 2.00 | 1.62 | | mg/L | | 81 | 80 - 120 |
| Calcium | 10.0 | 11.9 | | mg/L | | 119 | 80 - 120 |
| Selenium | 0.100 | 0.0971 | | mg/L | | 97 | 80 - 120 |

**Lab Sample ID: LCS 500-575895/2-A**
**Matrix: Water**
**Analysis Batch: 577089**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 575895**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 1.07 | | mg/L | | 107 | 80 - 120 |

**Lab Sample ID: MB 500-576343/1-A**
**Matrix: Water**
**Analysis Batch: 576644**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 576343**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Barium | <0.0025 | | 0.0025 | | mg/L | | 12/11/20 07:38 | 12/11/20 19:39 | 1 |
| Calcium | <0.20 | | 0.20 | | mg/L | | 12/11/20 07:38 | 12/11/20 19:39 | 1 |
| Chromium | <0.0050 | | 0.0050 | | mg/L | | 12/11/20 07:38 | 12/11/20 19:39 | 1 |
| Cobalt | <0.0010 | | 0.0010 | | mg/L | | 12/11/20 07:38 | 12/11/20 19:39 | 1 |
| Lead | <0.00050 | | 0.00050 | | mg/L | | 12/11/20 07:38 | 12/11/20 19:39 | 1 |
| Molybdenum | <0.0050 | | 0.0050 | | mg/L | | 12/11/20 07:38 | 12/11/20 19:39 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 500-576343/1-A**
**Matrix: Water**
**Analysis Batch: 576866**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 576343**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.0010 | | 0.0010 | | mg/L | | 12/11/20 07:38 | 12/14/20 18:09 | 1 |
| Selenium | <0.0025 | | 0.0025 | | mg/L | | 12/11/20 07:38 | 12/14/20 18:09 | 1 |

**Lab Sample ID: MB 500-576343/1-A**
**Matrix: Water**
**Analysis Batch: 577089**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 576343**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Boron | <0.050 | | 0.050 | | mg/L | | 12/11/20 07:38 | 12/15/20 16:25 | 1 |

**Lab Sample ID: LCS 500-576343/2-A**
**Matrix: Water**
**Analysis Batch: 576644**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 576343**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Barium | 2.00 | 2.15 | | mg/L | | 107 | 80 - 120 |
| Calcium | 10.0 | 10.3 | | mg/L | | 103 | 80 - 120 |
| Chromium | 0.200 | 0.195 | | mg/L | | 98 | 80 - 120 |
| Cobalt | 0.500 | 0.480 | | mg/L | | 96 | 80 - 120 |
| Lead | 0.100 | 0.101 | | mg/L | | 101 | 80 - 120 |
| Molybdenum | 1.00 | 0.996 | | mg/L | | 100 | 80 - 120 |

**Lab Sample ID: LCS 500-576343/2-A**
**Matrix: Water**
**Analysis Batch: 576866**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 576343**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 0.100 | 0.0939 | | mg/L | | 94 | 80 - 120 |
| Selenium | 0.100 | 0.0934 | | mg/L | | 93 | 80 - 120 |

**Lab Sample ID: LCS 500-576343/2-A**
**Matrix: Water**
**Analysis Batch: 577089**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 576343**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Boron | 1.00 | 1.05 | | mg/L | | 105 | 80 - 120 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-576172/12-A**
**Matrix: Water**
**Analysis Batch: 576405**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 576172**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/10/20 08:20 | 12/11/20 06:54 | 1 |

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: LCS 500-576172/13-A**
**Matrix: Water**
**Analysis Batch: 576405**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 576172**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00210 | | mg/L | | 105 | 80 - 120 |

**Lab Sample ID: MB 500-576859/12-A**
**Matrix: Water**
**Analysis Batch: 577102**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 576859**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.00020 | | 0.00020 | | mg/L | | 12/15/20 09:35 | 12/16/20 09:38 | 1 |

**Lab Sample ID: LCS 500-576859/13-A**
**Matrix: Water**
**Analysis Batch: 577102**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 576859**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.00200 | 0.00188 | | mg/L | | 94 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS)

**Lab Sample ID: MB 500-575962/1**
**Matrix: Water**
**Analysis Batch: 575962**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 12/09/20 02:42 | 1 |

**Lab Sample ID: LCS 500-575962/2**
**Matrix: Water**
**Analysis Batch: 575962**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 236 | | mg/L | | 94 | 80 - 120 |

**Lab Sample ID: MB 500-576566/1**
**Matrix: Water**
**Analysis Batch: 576566**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | <10 | | 10 | | mg/L | | | 12/14/20 01:16 | 1 |

**Lab Sample ID: LCS 500-576566/2**
**Matrix: Water**
**Analysis Batch: 576566**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 250 | 224 | | mg/L | | 90 | 80 - 120 |

## Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

**Lab Sample ID: 500-192075-2 MS**
**Matrix: Water**
**Analysis Batch: 576566**

**Client Sample ID: MW-10**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 550 | | 250 | 758 | | mg/L | | 83 | 75 - 125 | | |

**Lab Sample ID: 500-192075-2 DU**
**Matrix: Water**
**Analysis Batch: 576566**

**Client Sample ID: MW-10**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 550 | | | 534 | | mg/L | | | | 3 | 5 |

**Lab Sample ID: 500-192075-3 DU**
**Matrix: Water**
**Analysis Batch: 576566**

**Client Sample ID: MW-02**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | | DU Result | DU Qualifier | Unit | D | | | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids | 430 | | | 424 | | mg/L | | | | 2 | 5 |

## Method: SM 4500 Cl- E - Chloride, Total

**Lab Sample ID: MB 500-576457/12**
**Matrix: Water**
**Analysis Batch: 576457**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 12/11/20 14:56 | 1 |

**Lab Sample ID: LCS 500-576457/13**
**Matrix: Water**
**Analysis Batch: 576457**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 50.4 | | mg/L | | 101 | 85 - 115 | | |

**Lab Sample ID: MB 500-576529/12**
**Matrix: Water**
**Analysis Batch: 576529**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chloride | <2.0 | | 2.0 | | mg/L | | | 12/12/20 12:38 | 1 |

**Lab Sample ID: LCS 500-576529/13**
**Matrix: Water**
**Analysis Batch: 576529**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | | | 50.0 | 47.5 | | mg/L | | 95 | 85 - 115 | | |

## Method: SM 4500 Cl- E - Chloride, Total (Continued)

**Lab Sample ID: 500-192075-6 MS**
**Matrix: Water**
**Analysis Batch: 576529**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 78 | | 50.0 | 124 | | mg/L | | 93 | 75 - 125 | | |

**Lab Sample ID: 500-192075-6 MSD**
**Matrix: Water**
**Analysis Batch: 576529**

**Client Sample ID: MW-05**
**Prep Type: Total/NA**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 78 | | 50.0 | 121 | | mg/L | | 86 | 75 - 125 | 3 | 20 |

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 500-577245/3**
**Matrix: Water**
**Analysis Batch: 577245**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | <0.10 | | 0.10 | | mg/L | | | 12/16/20 13:49 | 1 |

**Lab Sample ID: LCS 500-577245/4**
**Matrix: Water**
**Analysis Batch: 577245**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | | | 10.0 | 10.9 | | mg/L | | 109 | 80 - 120 | | |

## Method: SM 4500 SO4 E - Sulfate, Total

**Lab Sample ID: MB 500-576921/15**
**Matrix: Water**
**Analysis Batch: 576921**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Sulfate | <5.0 | | 5.0 | | mg/L | | | 12/15/20 14:06 | 1 |

**Lab Sample ID: LCS 500-576921/16**
**Matrix: Water**
**Analysis Batch: 576921**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | | | 20.0 | 20.6 | | mg/L | | 103 | 80 - 120 | | |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

## Client Sample ID: MW-01

**Date Collected: 12/07/20 12:57**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192075-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576167 | 12/09/20 13:16 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 16:54 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 19:14 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 575895 | 12/08/20 17:57 | BDE | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 577089 | 12/15/20 16:00 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 576172 | 12/10/20 08:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 576405 | 12/11/20 07:07 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 575962 | 12/09/20 03:19 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 576457 | 12/11/20 15:11 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 15:08 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 576921 | 12/15/20 14:16 | MS | TAL CHI |

## Client Sample ID: MW-10

**Date Collected: 12/08/20 13:13**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576826 | 12/14/20 12:07 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 18:22 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 20:03 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 577089 | 12/15/20 16:32 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 576859 | 12/15/20 09:35 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 577102 | 12/16/20 10:21 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 576566 | 12/14/20 01:31 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 576529 | 12/12/20 12:50 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 15:15 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 3 | 576921 | 12/15/20 14:11 | MS | TAL CHI |

## Client Sample ID: MW-02

**Date Collected: 12/09/20 08:22**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576826 | 12/14/20 12:10 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 18:24 | FXG | TAL CHI |

## Client Sample ID: MW-02

**Lab Sample ID: 500-192075-3**

**Date Collected: 12/09/20 08:22**

**Matrix: Water**

**Date Received: 12/10/20 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 20:07 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 577089 | 12/15/20 16:36 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 576859 | 12/15/20 09:35 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 577102 | 12/16/20 10:23 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 576566 | 12/14/20 01:39 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 576529 | 12/12/20 12:51 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 15:22 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 576921 | 12/15/20 14:18 | MS | TAL CHI |

## Client Sample ID: MW-03

**Lab Sample ID: 500-192075-4**

**Date Collected: 12/09/20 09:18**

**Matrix: Water**

**Date Received: 12/10/20 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576826 | 12/14/20 12:14 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 18:26 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 20:10 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 577089 | 12/15/20 16:40 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 576859 | 12/15/20 09:35 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 577102 | 12/16/20 10:48 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 576566 | 12/14/20 01:44 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 576529 | 12/12/20 12:52 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 15:25 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 3 | 576921 | 12/15/20 14:12 | MS | TAL CHI |

## Client Sample ID: MW-04

**Lab Sample ID: 500-192075-5**

**Date Collected: 12/09/20 10:14**

**Matrix: Water**

**Date Received: 12/10/20 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576826 | 12/14/20 12:17 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 18:32 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 20:21 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 577089 | 12/15/20 16:43 | FXG | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

## Client Sample ID: MW-04

**Lab Sample ID: 500-192075-5**

**Date Collected: 12/09/20 10:14**

**Matrix: Water**

**Date Received: 12/10/20 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 7470A | | | 576859 | 12/15/20 09:35 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 577102 | 12/16/20 10:50 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 576566 | 12/14/20 01:47 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 576529 | 12/12/20 13:21 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 15:29 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 3 | 576921 | 12/15/20 14:12 | MS | TAL CHI |

## Client Sample ID: MW-05

**Lab Sample ID: 500-192075-6**

**Date Collected: 12/09/20 11:23**

**Matrix: Water**

**Date Received: 12/10/20 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576826 | 12/14/20 12:20 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 18:33 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 20:24 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 577089 | 12/15/20 16:47 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 576859 | 12/15/20 09:35 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 577102 | 12/16/20 10:53 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 576566 | 12/14/20 01:49 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 5 | 576529 | 12/12/20 13:22 | EAT | TAL CHI |
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 15:35 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 576921 | 12/15/20 14:13 | MS | TAL CHI |

## Client Sample ID: FAB DUP

**Lab Sample ID: 500-192075-7**

**Date Collected: 12/08/20 00:00**

**Matrix: Water**

**Date Received: 12/10/20 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6010C | | 1 | 576826 | 12/14/20 12:23 | EEN | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576866 | 12/14/20 18:35 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 1 | 576644 | 12/11/20 20:28 | FXG | TAL CHI |
| Total Recoverable | Prep | 3005A | | | 576343 | 12/11/20 07:38 | LMN | TAL CHI |
| Total Recoverable | Analysis | 6020A | | 10 | 577089 | 12/15/20 16:50 | FXG | TAL CHI |
| Total/NA | Prep | 7470A | | | 576859 | 12/15/20 09:35 | MJG | TAL CHI |
| Total/NA | Analysis | 7470A | | 1 | 577102 | 12/16/20 10:55 | MJG | TAL CHI |
| Total/NA | Analysis | SM 2540C | | 1 | 576566 | 12/14/20 01:52 | CLB | TAL CHI |
| Total/NA | Analysis | SM 4500 Cl- E | | 1 | 576529 | 12/12/20 12:56 | EAT | TAL CHI |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

## Client Sample ID: FAB DUP

**Date Collected: 12/08/20 00:00**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-7

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | SM 4500 F C | | 1 | 577245 | 12/16/20 15:53 | MS | TAL CHI |
| Total/NA | Analysis | SM 4500 SO4 E | | 5 | 576921 | 12/15/20 14:13 | MS | TAL CHI |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-1

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | IL00035 | 04-29-21 |

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 12/7/20 | COC No: |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Diana Mockler | Carrier: FedEx | ____ of ____ COCs |
| 14665 West Lisbon Road, Suite 1A | **Analysis Turnaround Time** | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | **For Lab Use Only:** |
| (262) 781-0475 Phone | TAT if different from Below ____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR FAB | ☒ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: 500-192075 |
| P O # 12313.1 | ☐ 1 day | | | |

500-192075 COC

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y / N) | Perform MS / MSD (Y / N) | 903.0, 904.0 | 6010C, 6020A, 7470A | 2540C, 4500_F_C, SM4500_Cl_E, SM4500_SO4_E | SM4500_SO4_E Local Method | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-01 | 12/7 | 1257 | G | W | 7 | N | N | X | X | X | X | |
| | | | | | | | | 4 | 4 | 1 | 1 | |

**Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other** ____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

**Special Instructions/QC Requirements & Comments:** Lab Project #50011612. Appendix III Parameters and Custom Appendix IV FAB Metals; As, Ba, Cr, Co, Pb, Mo, Se

-0.1, 0.3

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____ |
|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Relinquished by: **Mitchel Dolan** MMD | Company: **KPRG** | Date/Time: 12/7/20/1600 | Received by: **FedEx** | Company: | Date/Time: 12/7/20 / 1600 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: Shin Scott | Company: TA-CHI | Date/Time: 12/8/20 1005 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 12/9/20 | COC No: |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Diana Mockler | Carrier: FedEx | _____ of _____ COCs |
| 14665 West Lisbon Road, Suite 1A | Analysis Turnaround Time | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| (262) 781-0475 Phone | TAT if different from Below _____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR FAB | ☒ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: |
| P O # 12313.1 | ☐ 1 day | | | 500-192075 |

500-192075 COC

| | Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y / N) | Perform MS / MSD (Y / N) | 903.0, 904.0 | 6010C, 6020A, 7470A | 2540C, 4500_F_C; SM4500_Cl_E; SM4500_SO4_E | SM4500_SO4_E Local Method | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | MW-10 | 12/8 | 1313 | G | W | 7 | N | N | X | X | X | X | |
| 3 | MW-02 | 12/4 | 0822 | ↓ | ↓ | ↓ | | | ↓ | ↓ | ↓ | ↓ | |
| 4 | MW-03 | 12/9 | 0918 | | | | | | | | | | |
| 5 | MW-04 | 12/9 | 1014 | | | | | | | | | | |
| 6 | MW-05 | 12/9 | 1123 | | | | | | | | | | |
| 7 | FAB DUP | 12/8 | — | | | | | | | | | | |
| | | | | | | | | | 4 | 4 | 1 | 1 | |

**Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____**

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:** Lab Project #50011612. Appendix III Parameters and Custom Appendix IV FAB Metals; As, Ba, Cr, Co, Pb, Mo, Se

-1.1, -2.3

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ | | Therm ID No.:_____ |
|---|---|---|---|---|---|
| Relinquished by: **Mitchel Dolan** | Company: **KPRG** | Date/Time: 12/9/20 1600 | Received by: **FedEx** | Company: | Date/Time: 12/9/2020 1600 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: TAL-CHI | Date/Time: 12/10/20 1020 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

500-192075 Wayb

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 07DEC20
ACTWGT: 58.00 LB
CAD: 6994780/SSFE2121
DIMS: 23x13x13 IN

BILL THIRD PARTY

TO TEST AMERICA
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(000) 000-0000 REF:
INV:
PO: DEPT:

Part # 156297-495 REV# EXP 07/21

FedEx Express

TRK# 0201 7810 2858 7674

TUE - 08 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

48qt

60484
IL-US ORD

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE

WESTMONT, IL 605
UNITED STATES

SHIP DATE: 07DEC20
ACTWGT: 56.05 LB
CAD: 6994780/SSFE2121
DIMS: 23x13x13 IN

BILL THIRD PARTY

TO TEST AM
TEST A
2417 BOND

UNIVERSITY PARK

519
29
5
16:30
A
2122
12.08

(000) 000-0000 REF:
INV:
PO: DEPT:

Part # 156297-495 REV# EXP 07/21

FedEx Express

TRK# 0201 7810 2849 2122

TUE - 08 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

48qt

60484
IL-US ORD

ORIGIN ID:PIAA (000) 000-0000
TEST AMERICA

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 09DEC20
ACTWGT: 53.10 LB
CAD: 6994780/SSFE2121
DIMS: 24x18x12 IN

BILL THIRD PARTY

TO **SAMPLE RECEIVING**
**TESTAMERICA CHICAGO**
**2417 BOND ST**

**UNIVERSITY PARK IL 60484**

(708) 534-5200 REF:
INV:
PO: DEPT:

500-192075 Wayb

FedEx Express

4 of 5

MPS# 0263 **7811 5518 6684**

Mstr# 7811 5518 6651

0201

**THU - 10 DEC 4:30P**
**STANDARD OVERNIGHT**

**XH JOTA**

48qt

IL-US **60484** **ORD**

ORIGIN ID:PIAA (000) 000-0000
TEST AMERICA

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 09DEC20
ACTWGT: 53.10 LB
CAD: 6994780/SSFE2121
DIMS: 24x18x12 IN

BILL THIRD PARTY

TO **SAMPLE RECEIVING**
**TESTAMERICA CHICAGO**
**2417 BOND ST**

**UNIVERSITY PARK IL 60484**

(708) 534-5200 REF:
INV:
PO: DEPT:

FedEx Express

5 of 5

MPS# 0263 **7811 5518 6695**

Mstr# 7811 5518 6651

0201

**THU - 10 DEC 4:30P**
**STANDARD OVERNIGHT**

**XH JOTA**

48qt

IL-US **60484** **ORD**

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-192075-1

**Login Number: 192075**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | -0.1,0.3 samples not frozen,-1.1,-2.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing America



# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-192075-2
Client Project/Site: Powerton CCR FAB

For:
KPRG and Associates, Inc.
14665 West Lisbon Road,
Suite 1A
Brookfield, Wisconsin 53005

Attn: Richard Gnat

Diana Mockler

*Authorized for release by:*
*1/19/2021 8:10:10 AM*

Diana Mockler, Project Manager I
(219)252-7570
Diana.Mockler@Eurofinset.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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## Job ID: 500-192075-2

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-192075-2**

**Comments**
No additional comments.

**Receipt**
The samples were received on 12/8/2020 10:05 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were -2.3º C, -1.1º C, -0.1º C and 0.3º C.

**Receipt Exceptions**

**RAD**
Methods 903.0, 9315: 903 prep batch 491936
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

MW-10 (500-192075-2), MW-02 (500-192075-3), MW-03 (500-192075-4), MW-04 (500-192075-5), MW-05 (500-192075-6), FAB DUP (500-192075-7), (LCS 160-491936/1-A), (MB 160-491936/23-A) and (500-192075-G-2-A DU)

Methods 903.0, 9315: Radium-226 prep batch 160-491410:

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-01 (500-192075-1), (LCS 160-491410/1-A), (MB 160-491410/21-A), (500-192070-E-1-A) and (500-192070-G-1-A DU)

Methods 904.0, 9320: 904 Prep batch 491940
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

MW-10 (500-192075-2), MW-02 (500-192075-3), MW-03 (500-192075-4), MW-04 (500-192075-5), MW-05 (500-192075-6), FAB DUP (500-192075-7), (LCS 160-491940/1-A), (MB 160-491940/23-A) and (500-192075-G-2-B DU)

Methods 904.0, 9320: 904/9320 prep batch 491413
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

MW-01 (500-192075-1), (LCS 160-491413/1-A), (MB 160-491413/21-A), (500-192070-E-1-B) and (500-192070-G-1-B DU)

Method PrecSep_0: Radium 228 Prep Batch 160-491940:
The following samples were prepared at a reduced aliquot due to a cloudy appearance: FAB DUP (500-192075-7).

Method PrecSep_0: Radium 228 Prep Batch 160-491940:
The following samples were prepared at a reduced aliquot due to brown discoloration and a cloudy appearance: MW-10 (500-192075-2) and (500-192075-G-2 DU).

## Job ID: 500-192075-2 (Continued)

### Laboratory: Eurofins TestAmerica, Chicago (Continued)

Method PrecSep-21: Radium 226 Prep Batch 160-491936:
The following samples were prepared at a reduced aliquot due to a cloudy appearance: FAB DUP (500-192075-7).

Method PrecSep-21: Radium 226 Prep Batch 160-491936:
The following samples were prepared at a reduced aliquot due to brown discoloration and a cloudy appearance: MW-10 (500-192075-2) and (500-192075-G-2 DU).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Method Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-2

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 903.0 | Radium-226 (GFPC) | EPA | TAL SL |
| 904.0 | Radium-228 (GFPC) | EPA | TAL SL |
| Ra226_Ra228 | Combined Radium-226 and Radium-228 | TAL-STL | TAL SL |
| PrecSep_0 | Preparation, Precipitate Separation | None | TAL SL |
| PrecSep-21 | Preparation, Precipitate Separation (21-Day In-Growth) | None | TAL SL |

**Protocol References:**

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Sample Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Water | 12/07/20 12:57 | 12/08/20 10:05 | |
| 500-192075-2 | MW-10 | Water | 12/08/20 13:13 | 12/10/20 10:20 | |
| 500-192075-3 | MW-02 | Water | 12/09/20 08:22 | 12/10/20 10:20 | |
| 500-192075-4 | MW-03 | Water | 12/09/20 09:18 | 12/10/20 10:20 | |
| 500-192075-5 | MW-04 | Water | 12/09/20 10:14 | 12/10/20 10:20 | |
| 500-192075-6 | MW-05 | Water | 12/09/20 11:23 | 12/10/20 10:20 | |
| 500-192075-7 | FAB DUP | Water | 12/08/20 00:00 | 12/10/20 10:20 | |

## Client Sample ID: MW-01

**Date Collected: 12/07/20 12:57**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192075-1

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0656 | U | 0.215 | 0.215 | 1.00 | 0.458 | pCi/L | 12/10/20 13:06 | 01/15/21 14:43 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *71.1* | | *40 - 110* | *12/10/20 13:06* | *01/15/21 14:43* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0116 | U | 0.304 | 0.304 | 1.00 | 0.542 | pCi/L | 12/10/20 13:42 | 01/15/21 08:34 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *71.1* | | *40 - 110* | *12/10/20 13:42* | *01/15/21 08:34* | *1* |
| *Y Carrier* | *84.9* | | *40 - 110* | *12/10/20 13:42* | *01/15/21 08:34* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | -0.0540 | U | 0.372 | 0.372 | 5.00 | 0.542 | pCi/L | | 01/18/21 20:59 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-2

## Client Sample ID: MW-10

**Date Collected: 12/08/20 13:13**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-2

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.751 | | 0.426 | 0.431 | 1.00 | 0.525 | pCi/L | 12/15/20 13:25 | 01/08/21 16:56 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.7* | | *40 - 110* | *12/15/20 13:25* | *01/08/21 16:56* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.01 | | 0.588 | 0.595 | 1.00 | 0.901 | pCi/L | 12/15/20 14:03 | 01/08/21 09:10 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *91.7* | | *40 - 110* | *12/15/20 14:03* | *01/08/21 09:10* | *1* |
| *Y Carrier* | *94.6* | | *40 - 110* | *12/15/20 14:03* | *01/08/21 09:10* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 1.76 | | 0.726 | 0.735 | 5.00 | 0.901 | pCi/L | | 01/15/21 21:49 | 1 |

# Client Sample Results

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-2

## Client Sample ID: MW-02

**Date Collected: 12/09/20 08:22**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-3

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.0754 | U | 0.126 | 0.126 | 1.00 | 0.313 | pCi/L | 12/15/20 13:25 | 01/08/21 16:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.6* | | *40 - 110* | *12/15/20 13:25* | *01/08/21 16:57* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.00755 | U | 0.264 | 0.264 | 1.00 | 0.471 | pCi/L | 12/15/20 14:03 | 01/08/21 09:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.6* | | *40 - 110* | *12/15/20 14:03* | *01/08/21 09:11* | *1* |
| *Y Carrier* | *90.5* | | *40 - 110* | *12/15/20 14:03* | *01/08/21 09:11* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | -0.0679 | U | 0.293 | 0.293 | 5.00 | 0.471 | pCi/L | | 01/15/21 21:49 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-2

## Client Sample ID: MW-03

**Date Collected: 12/09/20 09:18**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-4

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.111 | U | 0.168 | 0.168 | 1.00 | 0.290 | pCi/L | 12/15/20 13:25 | 01/08/21 16:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *84.1* | | *40 - 110* | *12/15/20 13:25* | *01/08/21 16:57* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | -0.133 | U | 0.227 | 0.227 | 1.00 | 0.432 | pCi/L | 12/15/20 14:03 | 01/08/21 09:11 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *84.1* | | *40 - 110* | *12/15/20 14:03* | *01/08/21 09:11* | *1* |
| *Y Carrier* | *92.3* | | *40 - 110* | *12/15/20 14:03* | *01/08/21 09:11* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | -0.0222 | U | 0.282 | 0.282 | 5.00 | 0.432 | pCi/L | | 01/15/21 21:49 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-2

## Client Sample ID: MW-04

**Date Collected: 12/09/20 10:14**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-5

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.292 | U | 0.251 | 0.252 | 1.00 | 0.383 | pCi/L | 12/15/20 13:25 | 01/08/21 16:57 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.0* | | *40 - 110* | *12/15/20 13:25* | *01/08/21 16:57* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.0842 | U | 0.237 | 0.238 | 1.00 | 0.411 | pCi/L | 12/15/20 14:03 | 01/08/21 09:02 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.0* | | *40 - 110* | *12/15/20 14:03* | *01/08/21 09:02* | *1* |
| *Y Carrier* | *102* | | *40 - 110* | *12/15/20 14:03* | *01/08/21 09:02* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.376 | U | 0.345 | 0.347 | 5.00 | 0.411 | pCi/L | | 01/15/21 21:49 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-2

## Client Sample ID: MW-05

**Date Collected: 12/09/20 11:23**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-6

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.145 | U | 0.192 | 0.192 | 1.00 | 0.321 | pCi/L | 12/15/20 13:25 | 01/08/21 16:58 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.3* | | *40 - 110* | *12/15/20 13:25* | *01/08/21 16:58* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Radium-228** | **0.424** | | 0.248 | 0.252 | 1.00 | 0.375 | pCi/L | 12/15/20 14:03 | 01/08/21 09:03 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.3* | | *40 - 110* | *12/15/20 14:03* | *01/08/21 09:03* | *1* |
| *Y Carrier* | *104* | | *40 - 110* | *12/15/20 14:03* | *01/08/21 09:03* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| **Combined Radium 226 + 228** | **0.569** | | 0.314 | 0.317 | 5.00 | 0.375 | pCi/L | | 01/15/21 21:49 | 1 |

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-2

## Client Sample ID: FAB DUP

**Date Collected: 12/08/20 00:00**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-7

**Matrix: Water**

### Method: 903.0 - Radium-226 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.158 | U | 0.222 | 0.222 | 1.00 | 0.376 | pCi/L | 12/15/20 13:25 | 01/08/21 16:58 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.7* | | *40 - 110* | *12/15/20 13:25* | *01/08/21 16:58* | *1* |

### Method: 904.0 - Radium-228 (GFPC)

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.269 | U | 0.278 | 0.279 | 1.00 | 0.453 | pCi/L | 12/15/20 14:03 | 01/08/21 09:03 | 1 |

| *Carrier* | *%Yield* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *88.7* | | *40 - 110* | *12/15/20 14:03* | *01/08/21 09:03* | *1* |
| *Y Carrier* | *101* | | *40 - 110* | *12/15/20 14:03* | *01/08/21 09:03* | *1* |

### Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

| Analyte | Result | Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Combined Radium 226 + 228 | 0.428 | U | 0.356 | 0.357 | 5.00 | 0.453 | pCi/L | | 01/15/21 21:49 | 1 |

# Definitions/Glossary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-2

## Qualifiers

### Rad

| Qualifier | Qualifier Description |
|---|---|
| U | Result is less than the sample detection limit. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

## Rad

### Prep Batch: 491410

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Total/NA | Water | PrecSep-21 | |
| MB 160-491410/21-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-491410/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 491413

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-1 | MW-01 | Total/NA | Water | PrecSep_0 | |
| MB 160-491413/21-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-491413/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |

### Prep Batch: 491936

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-2 | MW-10 | Total/NA | Water | PrecSep-21 | |
| 500-192075-3 | MW-02 | Total/NA | Water | PrecSep-21 | |
| 500-192075-4 | MW-03 | Total/NA | Water | PrecSep-21 | |
| 500-192075-5 | MW-04 | Total/NA | Water | PrecSep-21 | |
| 500-192075-6 | MW-05 | Total/NA | Water | PrecSep-21 | |
| 500-192075-7 | FAB DUP | Total/NA | Water | PrecSep-21 | |
| MB 160-491936/23-A | Method Blank | Total/NA | Water | PrecSep-21 | |
| LCS 160-491936/1-A | Lab Control Sample | Total/NA | Water | PrecSep-21 | |
| 500-192075-2 DU | MW-10 | Total/NA | Water | PrecSep-21 | |

### Prep Batch: 491940

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-192075-2 | MW-10 | Total/NA | Water | PrecSep_0 | |
| 500-192075-3 | MW-02 | Total/NA | Water | PrecSep_0 | |
| 500-192075-4 | MW-03 | Total/NA | Water | PrecSep_0 | |
| 500-192075-5 | MW-04 | Total/NA | Water | PrecSep_0 | |
| 500-192075-6 | MW-05 | Total/NA | Water | PrecSep_0 | |
| 500-192075-7 | FAB DUP | Total/NA | Water | PrecSep_0 | |
| MB 160-491940/23-A | Method Blank | Total/NA | Water | PrecSep_0 | |
| LCS 160-491940/1-A | Lab Control Sample | Total/NA | Water | PrecSep_0 | |
| 500-192075-2 DU | MW-10 | Total/NA | Water | PrecSep_0 | |

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-491410/21-A**
**Matrix: Water**
**Analysis Batch: 495354**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 491410**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.07145 | U | 0.210 | 0.210 | 1.00 | 0.390 | pCi/L | 12/10/20 13:06 | 01/15/21 14:49 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *85.4* | | *40 - 110* | *12/10/20 13:06* | *01/15/21 14:49* | *1* |

**Lab Sample ID: LCS 160-491410/1-A**
**Matrix: Water**
**Analysis Batch: 495352**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 491410**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.3 | 12.40 | | 1.57 | 1.00 | 0.400 | pCi/L | 109 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *77.4* | | *40 - 110* |

**Lab Sample ID: MB 160-491936/23-A**
**Matrix: Water**
**Analysis Batch: 494394**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 491936**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | -0.02193 | U | 0.131 | 0.131 | 1.00 | 0.293 | pCi/L | 12/15/20 13:25 | 01/08/21 17:02 | 1 |

| *Carrier* | *MB %Yield* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Ba Carrier* | *82.9* | | *40 - 110* | *12/15/20 13:25* | *01/08/21 17:02* | *1* |

**Lab Sample ID: LCS 160-491936/1-A**
**Matrix: Water**
**Analysis Batch: 494394**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 491936**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | | | 11.3 | 10.36 | | 1.39 | 1.00 | 0.328 | pCi/L | 91 | 75 - 125 | | |

| *Carrier* | *LCS %Yield* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Ba Carrier* | *74.0* | | *40 - 110* |

**Lab Sample ID: 500-192075-2 DU**
**Matrix: Water**
**Analysis Batch: 494394**

**Client Sample ID: MW-10**
**Prep Type: Total/NA**
**Prep Batch: 491936**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-226 | 0.751 | | | 0.6251 | | 0.428 | 1.00 | 0.575 | pCi/L | | | 0.15 | 1 |

## Method: 903.0 - Radium-226 (GFPC) (Continued)

**Lab Sample ID: 500-192075-2 DU**
**Matrix: Water**
**Analysis Batch: 494394**

**Client Sample ID: MW-10**
**Prep Type: Total/NA**
**Prep Batch: 491936**

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 85.9 | | 40 - 110 |

## Method: 904.0 - Radium-228 (GFPC)

**Lab Sample ID: MB 160-491413/21-A**
**Matrix: Water**
**Analysis Batch: 495354**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 491413**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.3109 | U | 0.279 | 0.280 | 1.00 | 0.448 | pCi/L | 12/10/20 13:42 | 01/15/21 08:37 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 85.4 | | 40 - 110 | 12/10/20 13:42 | 01/15/21 08:37 | 1 |
| Y Carrier | 85.2 | | 40 - 110 | 12/10/20 13:42 | 01/15/21 08:37 | 1 |

**Lab Sample ID: LCS 160-491413/1-A**
**Matrix: Water**
**Analysis Batch: 495352**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 491413**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 7.50 | 8.975 | | 1.12 | 1.00 | 0.505 | pCi/L | 120 | 75 - 125 | | |

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 77.4 | | 40 - 110 |
| Y Carrier | 83.4 | | 40 - 110 |

**Lab Sample ID: MB 160-491940/23-A**
**Matrix: Water**
**Analysis Batch: 494357**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 491940**

| Analyte | MB Result | MB Qualifier | Count Uncert. (2σ+/-) | Total Uncert. (2σ+/-) | RL | MDC | Unit | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 0.01414 | U | 0.228 | 0.228 | 1.00 | 0.408 | pCi/L | 12/15/20 14:03 | 01/08/21 09:17 | 1 |

| Carrier | MB %Yield | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| Ba Carrier | 82.9 | | 40 - 110 | 12/15/20 14:03 | 01/08/21 09:17 | 1 |
| Y Carrier | 95.3 | | 40 - 110 | 12/15/20 14:03 | 01/08/21 09:17 | 1 |

**Lab Sample ID: LCS 160-491940/1-A**
**Matrix: Water**
**Analysis Batch: 494394**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 491940**

| Analyte | | | Spike Added | LCS Result | LCS Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | | | 7.52 | 8.559 | | 1.09 | 1.00 | 0.525 | pCi/L | 114 | 75 - 125 | | |

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-491940/1-A**
**Matrix: Water**
**Analysis Batch: 494394**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 491940**

| Carrier | LCS %Yield | LCS Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 74.0 | | 40 - 110 |
| Y Carrier | 86.0 | | 40 - 110 |

**Lab Sample ID: 500-192075-2 DU**
**Matrix: Water**
**Analysis Batch: 494394**

**Client Sample ID: MW-10**
**Prep Type: Total/NA**
**Prep Batch: 491940**

| Analyte | Sample Result | Sample Qual | | DU Result | DU Qual | Total Uncert. (2σ+/-) | RL | MDC | Unit | | | RER | RER Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Radium-228 | 1.01 | | | 0.2751 | U | 0.485 | 1.00 | 0.824 | pCi/L | | | 0.68 | 1 |

| Carrier | DU %Yield | DU Qualifier | Limits |
|---|---|---|---|
| Ba Carrier | 85.9 | | 40 - 110 |
| Y Carrier | 89.0 | | 40 - 110 |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-2

## Client Sample ID: MW-01
**Date Collected: 12/07/20 12:57**
**Date Received: 12/08/20 10:05**

## Lab Sample ID: 500-192075-1
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491410 | 12/10/20 13:06 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 495352 | 01/15/21 14:43 | SCB | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 491413 | 12/10/20 13:42 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 495352 | 01/15/21 08:34 | SCB | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 495582 | 01/18/21 20:59 | GRW | TAL SL |

## Client Sample ID: MW-10
**Date Collected: 12/08/20 13:13**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-2
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491936 | 12/15/20 13:25 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 494394 | 01/08/21 16:56 | TMS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 491940 | 12/15/20 14:03 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 494394 | 01/08/21 09:10 | TMS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 495361 | 01/15/21 21:49 | GRW | TAL SL |

## Client Sample ID: MW-02
**Date Collected: 12/09/20 08:22**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-3
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491936 | 12/15/20 13:25 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 494394 | 01/08/21 16:57 | TMS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 491940 | 12/15/20 14:03 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 494394 | 01/08/21 09:11 | TMS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 495361 | 01/15/21 21:49 | GRW | TAL SL |

## Client Sample ID: MW-03
**Date Collected: 12/09/20 09:18**
**Date Received: 12/10/20 10:20**

## Lab Sample ID: 500-192075-4
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491936 | 12/15/20 13:25 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 494394 | 01/08/21 16:57 | TMS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 491940 | 12/15/20 14:03 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 494394 | 01/08/21 09:11 | TMS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 495361 | 01/15/21 21:49 | GRW | TAL SL |

# Lab Chronicle

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-2

## Client Sample ID: MW-04

**Lab Sample ID: 500-192075-5**

**Date Collected: 12/09/20 10:14**

**Matrix: Water**

**Date Received: 12/10/20 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491936 | 12/15/20 13:25 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 494394 | 01/08/21 16:57 | TMS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 491940 | 12/15/20 14:03 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 494394 | 01/08/21 09:02 | TMS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 495361 | 01/15/21 21:49 | GRW | TAL SL |

## Client Sample ID: MW-05

**Lab Sample ID: 500-192075-6**

**Date Collected: 12/09/20 11:23**

**Matrix: Water**

**Date Received: 12/10/20 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491936 | 12/15/20 13:25 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 494394 | 01/08/21 16:58 | TMS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 491940 | 12/15/20 14:03 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 494394 | 01/08/21 09:03 | TMS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 495361 | 01/15/21 21:49 | GRW | TAL SL |

## Client Sample ID: FAB DUP

**Lab Sample ID: 500-192075-7**

**Date Collected: 12/08/20 00:00**

**Matrix: Water**

**Date Received: 12/10/20 10:20**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | PrecSep-21 | | | 491936 | 12/15/20 13:25 | KMP | TAL SL |
| Total/NA | Analysis | 903.0 | | 1 | 494394 | 01/08/21 16:58 | TMS | TAL SL |
| Total/NA | Prep | PrecSep_0 | | | 491940 | 12/15/20 14:03 | KMP | TAL SL |
| Total/NA | Analysis | 904.0 | | 1 | 494394 | 01/08/21 09:03 | TMS | TAL SL |
| Total/NA | Analysis | Ra226_Ra228 | | 1 | 495361 | 01/15/21 21:49 | GRW | TAL SL |

**Laboratory References:**

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-2

## Laboratory: Eurofins TestAmerica, St. Louis

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|---|---|---|---|
| Illinois | NELAP | 004553 | 11-30-21 |

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**TestAmerica Laboratories, Inc.**

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 12/7/20 | COC No: |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Diana Mockler | Carrier: FedEx | ____ of ____ COCs |
| 14665 West Lisbon Road, Suite 1A | **Analysis Turnaround Time** | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | **For Lab Use Only:** |
| (262) 781-0475 Phone | TAT if different from Below ____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR FAB | ☒ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: |
| P O # 12313.1 | ☐ 1 day | | | 500-192075 |

500-192075 COC

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y / N) | Perform MS / MSD (Y / N) | 903.0, 904.0 | 6010C, 6020A, 7470A | 2540C, 4500_F_C, SM4500_Cl_E, SM4500_SO4_E | SM4500_SO4_E Local Method | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-01 | 12/7 | 1257 | G | W | 7 | N | N | X | X | X | X | |
| | | | | | | | | 4 | 4 | 1 | 1 | |

**Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other** ____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

**Special Instructions/QC Requirements & Comments: Lab Project #50011612. Appendix III Parameters and Custom Appendix IV FAB Metals; As, Ba, Cr, Co, Pb, Mo, Se**

-0.1, 0.3

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____ |
|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Relinquished by: **Mitchel Dolan** MMD | Company: **KPRG** | Date/Time: 12/7/20/1600 | Received by: **FedEx** | Company: | Date/Time: 12/7/20 / 1600 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: Shin Scott | Company: TA-CHI | Date/Time: 12/8/20 1005 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

**TestAmerica Chicago**
2417 Bond Street

University Park, IL 60484-3101
phone 708.534.5200 fax 708.534.5211

# Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

**Regulatory Program:** ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

**TestAmerica Laboratories, Inc.**

| Client Contact | Project Manager: Rich Gnat | Site Contact: Mitchel Dolan | Date: 12/9/20 | COC No: |
|---|---|---|---|---|
| KPRG and Associates, Inc. | Tel/Fax: (262) 781-0475 | Lab Contact: Diana Mockler | Carrier: FedEx | _____ of _____ COCs |
| 14665 West Lisbon Road, Suite 1A | Analysis Turnaround Time | | | Sampler: |
| Brookfield, WI 53154 | ☐ CALENDAR DAYS ☐ WORKING DAYS | | | For Lab Use Only: |
| (262) 781-0475 Phone | TAT if different from Below _____ | | | Walk-in Client: |
| (262) 781-0478 FAX | ☐ 2 weeks | | | Lab Sampling: |
| Project Name: Powerton CCR FAB | ☒ 1 week | | | |
| Site: Powerton Station - Pekin, IL | ☐ 2 days | | | Job / SDG No.: |
| P O # 12313.1 | ☐ 1 day | | | 500-192075 |

500-192075 COC

| | Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y / N) | Perform MS / MSD (Y / N) | 903.0, 904.0 | 6010C, 6020A, 7470A | 2540C, 4500_F_C; SM4500_Cl_E; SM4500_SO4_E | SM4500_SO4_E Local Method | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | MW-10 | 12/8 | 1313 | G | W | 7 | N | N | X | X | X | X | |
| 3 | MW-02 | 12/4 | 0822 | | | | | | | | | | |
| 4 | MW-03 | 12/9 | 0918 | | | | | | | | | | |
| 5 | MW-04 | 12/9 | 1014 | | | | | | | | | | |
| 6 | MW-05 | 12/9 | 1123 | | | | | | | | | | |
| 7 | FAB DUP | 12/8 | — | | | | | | | | | | |
| | | | | | | | | | 4 | 4 | 1 | 1 | |

**Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other** _____

**Possible Hazard Identification:**
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

☐ Return to Client ☐ Disposal by Lab ☐ Archive for _____ Months

**Special Instructions/QC Requirements & Comments:** Lab Project #50011612. Appendix III Parameters and Custom Appendix IV FAB Metals; As, Ba, Cr, Co, Pb, Mo, Se

-1.1, -2.3

| Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | | Therm ID No.: _____ |
|---|---|---|---|---|---|
| Relinquished by: **Mitchel Dolan** MDD | Company: **KPRG** | Date/Time: 12/9/20 1600 | Received by: **FedEx** | Company: | Date/Time: 12/9/2020 1600 |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: TAL-CHI | Date/Time: 12/10/20 1020 |

Form No. CA-C-WI-002, Rev. 4.18, dated 9/5/2018

500-192075 Wayb

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 07DEC20
ACTWGT: 58.00 LB
CAD: 6994780/SSFE2121
DIMS: 23x13x13 IN

BILL THIRD PARTY

TO TEST AMERICA
TEST AMERICA
2417 BOND ST

UNIVERSITY PARK IL 60484

(000) 000-0000 REF:
INV:
PO: DEPT:

Part # 156297-495 REV# EXP 07/21

FedEx Express

TRK# 0201 7810 2858 7674

TUE - 08 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

48gt

60484
IL-US ORD

ORIGIN ID:PIAA (262) 622-1143
MITCHEL DOLAN

414 PLAZA DR STE

WESTMONT, IL 605
UNITED STATES

SHIP DATE: 07DEC20
ACTWGT: 56.05 LB
CAD: 6994780/SSFE2121
DIMS: 23x13x13 IN

BILL THIRD PARTY

TO TEST AM
TEST A
2417 BOND

UNIVERSITY PARK

519
29
5
16:30
A
2122
12.08

(000) 000-0000 REF:
INV:
PO: DEPT:

Part # 156297-495 REV# EXP 07/21

FedEx Express

TRK# 0201 7810 2849 2122

TUE - 08 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

48gt

60484
IL-US ORD

ORIGIN ID:PIAA (000) 000-0000
TEST AMERICA

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 09DEC20
ACTWGT: 53.10 LB
CAD: 6994780/SSFE2121
DIMS: 24x18x12 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
TESTAMERICA CHICAGO
2417 BOND ST

UNIVERSITY PARK IL 60484
(708) 534-5200 REF:
INV:
PO: DEPT:

500-192075 Wayb

FedEx Express

4 of 5

MPS# 0263 7811 5518 6684

Mstr# 7811 5518 6651

0201

THU - 10 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

48qt

IL-US 60484 ORD

ORIGIN ID:PIAA (000) 000-0000
TEST AMERICA

414 PLAZA DR STE 106

WESTMONT, IL 60559
UNITED STATES US

SHIP DATE: 09DEC20
ACTWGT: 53.10 LB
CAD: 6994780/SSFE2121
DIMS: 24x18x12 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
TESTAMERICA CHICAGO
2417 BOND ST

UNIVERSITY PARK IL 60484
(708) 534-5200 REF:
INV:
PO: DEPT:

FedEx Express

5 of 5

MPS# 0263 7811 5518 6695

Mstr# 7811 5518 6651

0201

THU - 10 DEC 4:30P
STANDARD OVERNIGHT

XH JOTA

48qt

IL-US 60484 ORD

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-143208.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: Diana.Mockler@Eurofinset.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-192075-2 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 1/7/2021 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR FAB | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-01 (500-192075-1) | 12/7/20 | 12:57 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| | [signature] | 12/8/20 1500 | ETA | Fed Ex | | |
| | Relinquished by: Fed Ex | Date/Time: | Company | Received by: Mallory O'Sara | Date/Time: 12/9/20 09:37 | Company ETA-STL |
| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 11/01/2020

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-143310.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: Diana.Mockler@Eurofinset.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-192075-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 12/17/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR FAB | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-10 (500-192075-2) | 12/8/20 | 13:13 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-02 (500-192075-3) | 12/9/20 | 08:22 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-192075-4) | 12/9/20 | 09:18 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-192075-5) | 12/9/20 | 10:14 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-192075-6) | 12/9/20 | 11:23 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| FAB DUP (500-192075-7) | 12/8/20 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| ***Possible Hazard Identification*** | ***Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)*** |
|---|---|
| *Unconfirmed* | ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months* |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 12/10/20 1700 | ETA | Fed EX | | |
| 2 | Relinquished by: Fed EX | Date/Time: | Company | Received by: [signature] | Date/Time: 12/11/20 08:48 | Company ETA-STL |
| 3 | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 11/01/2020

**Eurofins TestAmerica, Chicago**
2417 Bond Street
University Park, IL 60484
Phone: 708-534-5200 Fax: 708-534-5211

# Chain of Custody Record

eurofins | Environment Testing America

| Client Information (Sub Contract Lab) | Sampler: | Lab PM: Mockler, Diana J | Carrier Tracking No(s): | COC No: 500-143310.1 |
|---|---|---|---|---|
| Client Contact: Shipping/Receiving | Phone: | E-Mail: Diana.Mockler@Eurofinset.com | State of Origin: Illinois | Page: Page 1 of 1 |
| Company: TestAmerica Laboratories, Inc. | | Accreditations Required (See note): NELAP - Illinois | | Job #: 500-192075-1 |
| Address: 13715 Rider Trail North, , | Due Date Requested: 12/17/2020 | | | |
| City: Earth City | TAT Requested (days): | | | |
| State, Zip: MO, 63045 | | | | |
| Phone: 314-298-8566(Tel) 314-298-8757(Fax) | PO #: | | | |
| Email: | WO #: | | | |
| Project Name: Powerton CCR FAB | Project #: 50011612 | | | |
| Site: MWG - Powerton | SSOW#: | | | |

**Analysis Requested**

**Preservation Codes:**
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other:

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 903.0/PrecSep_21 Standard Target List | 904.0/PrecSep_0 Standard Target List | Ra226Ra228_GFPC | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | | | | | |
| MW-10 (500-192075-2) | 12/8/20 | 13:13 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-02 (500-192075-3) | 12/9/20 | 08:22 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-03 (500-192075-4) | 12/9/20 | 09:18 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-04 (500-192075-5) | 12/9/20 | 10:14 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| MW-05 (500-192075-6) | 12/9/20 | 11:23 Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| FAB DUP (500-192075-7) | 12/8/20 | Central | | Water | | | X | X | X | 3 | Full QC needed (dups, etc) Batch QC must be performed (dup, spikes, etc) - no NCMs |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

| Possible Hazard Identification | Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) |
|---|---|
| Unconfirmed | ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months |
| Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 | Special Instructions/QC Requirements: |

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: |
|---|---|---|---|

| | Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
|---|---|---|---|---|---|---|
| 1 | [signature] | 12/10/20 1700 | ETA | Fed Ex | | |
| 2 | Fed Ex | | | [signature] | 12/11/20 08:40 | TEDA-SL |
| 3 | | | | | | |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: |
|---|---|---|

Ver: 11/01/2020

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-192075-2

**Login Number: 192075**
**List Number: 1**
**Creator: Scott, Sherri L**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | -0.1,0.3 samples not frozen,-1.1,-2.3 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-192075-2

**Login Number: 192075**
**List Number: 2**
**Creator: O'Gara, Mallory L**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 12/09/20 12:58 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Login Sample Receipt Checklist

Client: KPRG and Associates, Inc.

Job Number: 500-192075-2

**Login Number: 192075**
**List Number: 3**
**Creator: Korrinhizer, Micha L**

**List Source: Eurofins TestAmerica, St. Louis**
**List Creation: 12/11/20 08:10 PM**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Tracer/Carrier Summary

Client: KPRG and Associates, Inc.
Project/Site: Powerton CCR FAB

Job ID: 500-192075-2

## Method: 903.0 - Radium-226 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) |
|---|---|---|
| | | Ba |
| Lab Sample ID | Client Sample ID | (40-110) |
| 500-192075-1 | MW-01 | 71.1 |
| 500-192075-2 | MW-10 | 91.7 |
| 500-192075-2 DU | MW-10 | 85.9 |
| 500-192075-3 | MW-02 | 82.6 |
| 500-192075-4 | MW-03 | 84.1 |
| 500-192075-5 | MW-04 | 82.0 |
| 500-192075-6 | MW-05 | 82.3 |
| 500-192075-7 | FAB DUP | 88.7 |
| LCS 160-491410/1-A | Lab Control Sample | 77.4 |
| LCS 160-491936/1-A | Lab Control Sample | 74.0 |
| MB 160-491410/21-A | Method Blank | 85.4 |
| MB 160-491936/23-A | Method Blank | 82.9 |

**Tracer/Carrier Legend**

Ba = Ba Carrier

## Method: 904.0 - Radium-228 (GFPC)

**Matrix: Water**

**Prep Type: Total/NA**

| | | Percent Yield (Acceptance Limits) | |
|---|---|---|---|
| | | Ba | Y |
| Lab Sample ID | Client Sample ID | (40-110) | (40-110) |
| 500-192075-1 | MW-01 | 71.1 | 84.9 |
| 500-192075-2 | MW-10 | 91.7 | 94.6 |
| 500-192075-2 DU | MW-10 | 85.9 | 89.0 |
| 500-192075-3 | MW-02 | 82.6 | 90.5 |
| 500-192075-4 | MW-03 | 84.1 | 92.3 |
| 500-192075-5 | MW-04 | 82.0 | 102 |
| 500-192075-6 | MW-05 | 82.3 | 104 |
| 500-192075-7 | FAB DUP | 88.7 | 101 |
| LCS 160-491413/1-A | Lab Control Sample | 77.4 | 83.4 |
| LCS 160-491940/1-A | Lab Control Sample | 74.0 | 86.0 |
| MB 160-491413/21-A | Method Blank | 85.4 | 85.2 |
| MB 160-491940/23-A | Method Blank | 82.9 | 95.3 |

**Tracer/Carrier Legend**

Ba = Ba Carrier
Y = Y Carrier