TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

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TestAmerica Job ID: 550-68450-1
Client Project/Site: CCR

For:
Arizona Public Service Company
4801 Cholla Lake Rd
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Attn: Doug Lavarnway

*Authorized for release by:*
*9/7/2016 10:48:59 AM*

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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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# Definitions/Glossary

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Qualifiers

### HPLC/IC

| Qualifier | Qualifier Description |
|---|---|
| D1 | Sample required dilution due to matrix. |
| D5 | Minimum Reporting Limit (MRL) adjusted due to sample dilution; analyte was non-detect in the sample. |

### Metals

| Qualifier | Qualifier Description |
|---|---|
| D1 | Sample required dilution due to matrix. |

## 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) |

## Job ID: 550-68450-1

### Laboratory: TestAmerica Phoenix

**Narrative**

**Job Narrative**
**550-68450-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 8/23/2016 9:56 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 0.1º C, 0.4º C, 0.7º C, 1.6º C and 3.1º C.

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

**Metals**
Method(s) 200.8 LL: Internal standard responses were outside of acceptance limits for the following samples: FC-CCR-MW70-816 (550-68450-14), FC-CCR-MW71-816 (550-68450-15), FC-CCR-MW72-816 (550-68450-16), FC-CCR-MW100-816 (550-68450-17) and FC-CCR-MW101-816 (550-68450-18). The sample(s) shows evidence of matrix interference.

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

# Sample Summary

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 550-68450-1 | FC-CCR-MW7-816 | Water | 08/21/16 13:36 | 08/23/16 09:56 |
| 550-68450-2 | FC-CCR-MW8-816 | Water | 08/21/16 12:42 | 08/23/16 09:56 |
| 550-68450-3 | FC-CCR-MW49A-816 | Water | 08/21/16 14:38 | 08/23/16 09:56 |
| 550-68450-4 | FC-CCR-MW60-816 | Water | 08/21/16 10:47 | 08/23/16 09:56 |
| 550-68450-5 | FC-CCR-MW61-816 | Water | 08/21/16 11:45 | 08/23/16 09:56 |
| 550-68450-6 | FC-CCR-MW62-816 | Water | 08/20/16 16:36 | 08/23/16 09:56 |
| 550-68450-7 | FC-CCR-MW63-816 | Water | 08/20/16 10:58 | 08/23/16 09:56 |
| 550-68450-8 | FC-CCR-MW64-816 | Water | 08/20/16 12:45 | 08/23/16 09:56 |
| 550-68450-9 | FC-CCR-MW65-816 | Water | 08/20/16 15:50 | 08/23/16 09:56 |
| 550-68450-10 | FC-CCR-MW66-816 | Water | 08/20/16 13:53 | 08/23/16 09:56 |
| 550-68450-11 | FC-CCR-MW67-816 | Water | 08/20/16 19:27 | 08/23/16 09:56 |
| 550-68450-12 | FC-CCR-MW68-816 | Water | 08/20/16 17:20 | 08/23/16 09:56 |
| 550-68450-13 | FC-CCR-MW69-816 | Water | 08/21/16 15:41 | 08/23/16 09:56 |
| 550-68450-14 | FC-CCR-MW70-816 | Water | 08/20/16 14:55 | 08/23/16 09:56 |
| 550-68450-15 | FC-CCR-MW71-816 | Water | 08/21/16 09:37 | 08/23/16 09:56 |
| 550-68450-16 | FC-CCR-MW72-816 | Water | 08/21/16 08:49 | 08/23/16 09:56 |
| 550-68450-17 | FC-CCR-MW100-816 | Water | 08/20/16 19:27 | 08/23/16 09:56 |
| 550-68450-18 | FC-CCR-MW101-816 | Water | 08/21/16 09:37 | 08/23/16 09:56 |

# Detection Summary

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW7-816 — Lab Sample ID: 550-68450-1

| Analyte | Result | Qualifier | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|
| Lithium | 1.2 | | 0.20 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00016 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |
| Arsenic | 0.00055 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.017 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0015 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.033 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Selenium | 0.011 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Thallium | 0.00016 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW8-816 — Lab Sample ID: 550-68450-2

| Analyte | Result | Qualifier | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|
| Lithium | 1.5 | | 0.20 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00048 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.014 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Cadmium | 0.00022 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.00082 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.00093 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.049 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Selenium | 0.0016 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW49A-816 — Lab Sample ID: 550-68450-3

| Analyte | Result | Qualifier | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|
| Lithium | 1.8 | | 0.20 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00035 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |
| Arsenic | 0.0011 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.022 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Cadmium | 0.00030 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.00079 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0030 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.028 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Selenium | 0.0018 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Thallium | 0.0015 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW60-816 — Lab Sample ID: 550-68450-4

| Analyte | Result | Qualifier | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|
| Fluoride | 15 | D1 | 2.0 | mg/L | 5 | | 300.0 | Total/NA |
| Lithium | 0.90 | | 0.20 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00023 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |
| Arsenic | 0.00072 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.018 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Cadmium | 0.0016 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.0023 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.29 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Lead | 0.00060 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.16 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Selenium | 0.0011 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Thallium | 0.00025 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |

This Detection Summary does not include radiochemical test results.

TestAmerica Phoenix

# Detection Summary

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW61-816 — Lab Sample ID: 550-68450-5

| Analyte | Result | Qualifier | RL | | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.91 | | 0.40 | | mg/L | 1 | | 300.0 | Total/NA |
| Lithium | 0.44 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00023 | | 0.00010 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Arsenic | 0.00058 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.015 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cadmium | 0.00091 | | 0.00010 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.00052 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.013 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Lead | 0.0010 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.083 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Selenium | 0.00091 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Thallium | 0.00016 | | 0.00010 | | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW62-816 — Lab Sample ID: 550-68450-6

| Analyte | Result | Qualifier | RL | | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.3 | | 0.40 | | mg/L | 1 | | 300.0 | Total/NA |
| Antimony | 0.00011 | | 0.00010 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Arsenic | 0.0023 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.034 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.0015 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0061 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Lead | 0.00050 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.012 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Selenium | 0.00054 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW63-816 — Lab Sample ID: 550-68450-7

| Analyte | Result | Qualifier | RL | | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.9 | | 0.40 | | mg/L | 1 | | 300.0 | Total/NA |
| Antimony | 0.00013 | | 0.00010 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Arsenic | 0.00082 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.022 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.00084 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0064 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.017 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW64-816 — Lab Sample ID: 550-68450-8

| Analyte | Result | Qualifier | RL | | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.6 | | 0.40 | | mg/L | 1 | | 300.0 | Total/NA |
| Arsenic | 0.00056 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.033 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.00093 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0015 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.0073 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Thallium | 0.00013 | | 0.00010 | | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW65-816 — Lab Sample ID: 550-68450-9

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW65-816 (Continued) — Lab Sample ID: 550-68450-9

| Analyte | Result | Qualifier | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|
| Fluoride | 2.1 | | 0.40 | mg/L | 1 | | 300.0 | Total/NA |
| Barium | 0.019 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0012 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.013 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW66-816 — Lab Sample ID: 550-68450-10

| Analyte | Result | Qualifier | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|
| Fluoride | 19 | D1 | 4.0 | mg/L | 10 | | 300.0 | Total/NA |
| Lithium | 0.32 | | 0.20 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00013 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |
| Arsenic | 0.0013 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.021 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.0012 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0080 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.039 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Selenium | 0.0018 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Thallium | 0.00062 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW67-816 — Lab Sample ID: 550-68450-11

| Analyte | Result | Qualifier | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|
| Fluoride | 19 | D1 | 4.0 | mg/L | 10 | | 300.0 | Total/NA |
| Lithium | 0.36 | | 0.20 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00021 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |
| Arsenic | 0.0039 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.020 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Cadmium | 0.00011 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.0010 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0055 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.064 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Selenium | 0.067 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Thallium | 0.00031 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW68-816 — Lab Sample ID: 550-68450-12

| Analyte | Result | Qualifier | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|
| Fluoride | 7.5 | D1 | 4.0 | mg/L | 10 | | 300.0 | Total/NA |
| Lithium | 0.35 | | 0.20 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00012 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |
| Arsenic | 0.0065 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.0078 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Cadmium | 0.00016 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.00072 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0020 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.0095 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Selenium | 0.22 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Thallium | 0.00063 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW69-816 — Lab Sample ID: 550-68450-13

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW69-816 (Continued) — Lab Sample ID: 550-68450-13

| Analyte | Result | Qualifier | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|
| Fluoride | 13 | D1 | 4.0 | mg/L | 10 | | 300.0 | Total/NA |
| Lithium | 0.37 | | 0.20 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00054 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |
| Arsenic | 0.011 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.016 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.00076 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0037 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.015 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Selenium | 0.015 | | 0.00050 | mg/L | 1 | | 200.8 LL | Total/NA |
| Thallium | 0.00024 | | 0.00010 | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW70-816 — Lab Sample ID: 550-68450-14

| Analyte | Result | Qualifier | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|
| Lithium | 0.35 | | 0.20 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00026 | D1 | 0.00020 | mg/L | 2 | | 200.8 LL | Total/NA |
| Arsenic | 0.0051 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Barium | 0.016 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Chromium | 0.0037 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Cobalt | 0.0032 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Molybdenum | 0.027 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Selenium | 0.23 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Thallium | 0.00057 | D1 | 0.00020 | mg/L | 2 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW71-816 — Lab Sample ID: 550-68450-15

| Analyte | Result | Qualifier | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|
| Lithium | 0.36 | | 0.20 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00022 | D1 | 0.00020 | mg/L | 2 | | 200.8 LL | Total/NA |
| Arsenic | 0.0066 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Barium | 0.014 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Molybdenum | 0.0025 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Selenium | 0.26 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Thallium | 0.00029 | D1 | 0.00020 | mg/L | 2 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW72-816 — Lab Sample ID: 550-68450-16

| Analyte | Result | Qualifier | RL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|
| Lithium | 0.42 | | 0.20 | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00026 | D1 | 0.00020 | mg/L | 2 | | 200.8 LL | Total/NA |
| Arsenic | 0.0047 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Barium | 0.016 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Cobalt | 0.0034 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Molybdenum | 0.0061 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Selenium | 0.18 | D1 | 0.0010 | mg/L | 2 | | 200.8 LL | Total/NA |
| Thallium | 0.0011 | D1 | 0.00020 | mg/L | 2 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW100-816 — Lab Sample ID: 550-68450-17

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW100-816 (Continued) — Lab Sample ID: 550-68450-17

| Analyte | Result | Qualifier | RL | | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 20 | D1 | 4.0 | | mg/L | 10 | | 300.0 | Total/NA |
| Lithium | 0.35 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00029 | D1 | 0.00020 | | mg/L | 2 | | 200.8 LL | Total/NA |
| Arsenic | 0.0040 | D1 | 0.0010 | | mg/L | 2 | | 200.8 LL | Total/NA |
| Barium | 0.022 | D1 | 0.0010 | | mg/L | 2 | | 200.8 LL | Total/NA |
| Chromium | 0.0016 | D1 | 0.0010 | | mg/L | 2 | | 200.8 LL | Total/NA |
| Cobalt | 0.0064 | D1 | 0.0010 | | mg/L | 2 | | 200.8 LL | Total/NA |
| Molybdenum | 0.063 | D1 | 0.0010 | | mg/L | 2 | | 200.8 LL | Total/NA |
| Selenium | 0.068 | D1 | 0.0010 | | mg/L | 2 | | 200.8 LL | Total/NA |
| Thallium | 0.00034 | D1 | 0.00020 | | mg/L | 2 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW101-816 — Lab Sample ID: 550-68450-18

| Analyte | Result | Qualifier | RL | | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.37 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00024 | D1 | 0.00020 | | mg/L | 2 | | 200.8 LL | Total/NA |
| Arsenic | 0.0076 | D1 | 0.0010 | | mg/L | 2 | | 200.8 LL | Total/NA |
| Barium | 0.013 | D1 | 0.0010 | | mg/L | 2 | | 200.8 LL | Total/NA |
| Molybdenum | 0.0024 | D1 | 0.0010 | | mg/L | 2 | | 200.8 LL | Total/NA |
| Selenium | 0.25 | D1 | 0.0010 | | mg/L | 2 | | 200.8 LL | Total/NA |
| Thallium | 0.00028 | D1 | 0.00020 | | mg/L | 2 | | 200.8 LL | Total/NA |

This Detection Summary does not include radiochemical test results.

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW7-816

**Lab Sample ID: 550-68450-1**
**Date Collected: 08/21/16 13:36**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.40 | mg/L | | | 08/31/16 19:09 | 1 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:33 | 08/25/16 02:46 | 1 |
| **Lithium** | **1.2** | | 0.20 | mg/L | | 08/23/16 16:33 | 08/25/16 02:46 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00016** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:07 | 1 |
| **Arsenic** | **0.00055** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:07 | 1 |
| **Barium** | **0.017** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:07 | 1 |
| Cadmium | ND | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:07 | 1 |
| Chromium | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:07 | 1 |
| **Cobalt** | **0.0015** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:07 | 1 |
| Lead | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:07 | 1 |
| **Molybdenum** | **0.033** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:07 | 1 |
| **Selenium** | **0.011** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:07 | 1 |
| **Thallium** | **0.00016** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:07 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 15:54 | 1 |

## Client Sample ID: FC-CCR-MW8-816

**Lab Sample ID: 550-68450-2**
**Date Collected: 08/21/16 12:42**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.40 | mg/L | | | 08/31/16 19:27 | 1 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:33 | 08/25/16 02:52 | 1 |
| **Lithium** | **1.5** | | 0.20 | mg/L | | 08/23/16 16:33 | 08/25/16 02:52 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00048** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:09 | 1 |
| Arsenic | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:09 | 1 |
| **Barium** | **0.014** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:09 | 1 |
| **Cadmium** | **0.00022** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:09 | 1 |
| **Chromium** | **0.00082** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:09 | 1 |
| **Cobalt** | **0.00093** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:09 | 1 |
| Lead | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:09 | 1 |
| **Molybdenum** | **0.049** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:09 | 1 |
| **Selenium** | **0.0016** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:09 | 1 |
| Thallium | ND | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:09 | 1 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW8-816

**Lab Sample ID: 550-68450-2**
**Date Collected: 08/21/16 12:42**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 15:56 | 1 |

## Client Sample ID: FC-CCR-MW49A-816

**Lab Sample ID: 550-68450-3**
**Date Collected: 08/21/16 14:38**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 D5 | 0.80 | mg/L | | | 08/31/16 19:45 | 2 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:33 | 08/25/16 02:57 | 1 |
| **Lithium** | **1.8** | | 0.20 | mg/L | | 08/23/16 16:33 | 08/25/16 02:57 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00035** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:12 | 1 |
| **Arsenic** | **0.0011** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:12 | 1 |
| **Barium** | **0.022** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:12 | 1 |
| **Cadmium** | **0.00030** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:12 | 1 |
| **Chromium** | **0.00079** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:12 | 1 |
| **Cobalt** | **0.0030** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:12 | 1 |
| Lead | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:12 | 1 |
| **Molybdenum** | **0.028** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:12 | 1 |
| **Selenium** | **0.0018** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:12 | 1 |
| **Thallium** | **0.0015** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:12 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 15:58 | 1 |

## Client Sample ID: FC-CCR-MW60-816

**Lab Sample ID: 550-68450-4**
**Date Collected: 08/21/16 10:47**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **15** | **D1** | 2.0 | mg/L | | | 08/31/16 20:04 | 5 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:33 | 08/25/16 01:13 | 1 |
| **Lithium** | **0.90** | | 0.20 | mg/L | | 08/23/16 16:33 | 08/25/16 01:13 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00023** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:14 | 1 |
| **Arsenic** | **0.00072** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:14 | 1 |
| **Barium** | **0.018** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:14 | 1 |
| **Cadmium** | **0.0016** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:14 | 1 |

## Client Sample ID: FC-CCR-MW60-816

**Lab Sample ID: 550-68450-4**
**Date Collected: 08/21/16 10:47**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 200.8 LL - Metals (ICP/MS) (Continued)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Chromium | 0.0023 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:14 | 1 |
| Cobalt | 0.29 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:14 | 1 |
| Lead | 0.00060 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:14 | 1 |
| Molybdenum | 0.16 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:14 | 1 |
| Selenium | 0.0011 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:14 | 1 |
| Thallium | 0.00025 | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:14 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 15:59 | 1 |

## Client Sample ID: FC-CCR-MW61-816

**Lab Sample ID: 550-68450-5**
**Date Collected: 08/21/16 11:45**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.91 | | 0.40 | mg/L | | | 08/31/16 20:22 | 1 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:29 | 08/24/16 19:35 | 1 |
| Lithium | 0.44 | | 0.20 | mg/L | | 08/23/16 16:29 | 08/24/16 19:35 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Antimony | 0.00023 | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:16 | 1 |
| Arsenic | 0.00058 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:16 | 1 |
| Barium | 0.015 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:16 | 1 |
| Cadmium | 0.00091 | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:16 | 1 |
| Chromium | 0.00052 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:16 | 1 |
| Cobalt | 0.013 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:16 | 1 |
| Lead | 0.0010 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:16 | 1 |
| Molybdenum | 0.083 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:16 | 1 |
| Selenium | 0.00091 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:16 | 1 |
| Thallium | 0.00016 | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:16 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 16:01 | 1 |

## Client Sample ID: FC-CCR-MW62-816

**Lab Sample ID: 550-68450-6**
**Date Collected: 08/20/16 16:36**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.3 | | 0.40 | mg/L | | | 08/31/16 20:41 | 1 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW62-816

**Lab Sample ID: 550-68450-6**
**Date Collected: 08/20/16 16:36**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:29 | 08/24/16 19:41 | 1 |
| Lithium | ND | | 0.20 | mg/L | | 08/23/16 16:29 | 08/24/16 19:41 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00011** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:18 | 1 |
| **Arsenic** | **0.0023** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:18 | 1 |
| **Barium** | **0.034** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:18 | 1 |
| Cadmium | ND | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:18 | 1 |
| **Chromium** | **0.0015** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:18 | 1 |
| **Cobalt** | **0.0061** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:18 | 1 |
| **Lead** | **0.00050** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:18 | 1 |
| **Molybdenum** | **0.012** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:18 | 1 |
| **Selenium** | **0.00054** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:18 | 1 |
| Thallium | ND | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:18 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 16:02 | 1 |

## Client Sample ID: FC-CCR-MW63-816

**Lab Sample ID: 550-68450-7**
**Date Collected: 08/20/16 10:58**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **1.9** | | 0.40 | mg/L | | | 08/31/16 22:49 | 1 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:29 | 08/24/16 19:46 | 1 |
| Lithium | ND | | 0.20 | mg/L | | 08/23/16 16:29 | 08/24/16 19:46 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00013** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:24 | 1 |
| **Arsenic** | **0.00082** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:24 | 1 |
| **Barium** | **0.022** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:24 | 1 |
| Cadmium | ND | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:24 | 1 |
| **Chromium** | **0.00084** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:24 | 1 |
| **Cobalt** | **0.0064** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:24 | 1 |
| Lead | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:24 | 1 |
| **Molybdenum** | **0.017** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:24 | 1 |
| Selenium | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:24 | 1 |
| Thallium | ND | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:24 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 16:04 | 1 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW64-816

**Lab Sample ID: 550-68450-8**
**Date Collected: 08/20/16 12:45**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **1.6** | | 0.40 | mg/L | | | 08/31/16 20:59 | 1 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:29 | 08/24/16 19:51 | 1 |
| Lithium | ND | | 0.20 | mg/L | | 08/23/16 16:29 | 08/24/16 19:51 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:27 | 1 |
| **Arsenic** | **0.00056** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:27 | 1 |
| **Barium** | **0.033** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:27 | 1 |
| Cadmium | ND | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:27 | 1 |
| **Chromium** | **0.00093** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:27 | 1 |
| **Cobalt** | **0.0015** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:27 | 1 |
| Lead | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:27 | 1 |
| **Molybdenum** | **0.0073** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:27 | 1 |
| Selenium | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:27 | 1 |
| **Thallium** | **0.00013** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:27 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 16:05 | 1 |

## Client Sample ID: FC-CCR-MW65-816

**Lab Sample ID: 550-68450-9**
**Date Collected: 08/20/16 15:50**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **2.1** | | 0.40 | mg/L | | | 08/31/16 23:08 | 1 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:29 | 08/24/16 19:58 | 1 |
| Lithium | ND | | 0.20 | mg/L | | 08/23/16 16:29 | 08/24/16 19:58 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:29 | 1 |
| Arsenic | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:29 | 1 |
| **Barium** | **0.019** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:29 | 1 |
| Cadmium | ND | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:29 | 1 |
| Chromium | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:29 | 1 |
| **Cobalt** | **0.0012** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:29 | 1 |
| Lead | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:29 | 1 |
| **Molybdenum** | **0.013** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:29 | 1 |
| Selenium | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:29 | 1 |
| Thallium | ND | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:29 | 1 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW65-816

**Lab Sample ID: 550-68450-9**
**Date Collected: 08/20/16 15:50**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 16:07 | 1 |

## Client Sample ID: FC-CCR-MW66-816

**Lab Sample ID: 550-68450-10**
**Date Collected: 08/20/16 13:53**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **19** | **D1** | 4.0 | mg/L | | | 08/31/16 23:26 | 10 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:29 | 08/24/16 20:01 | 1 |
| **Lithium** | **0.32** | | 0.20 | mg/L | | 08/23/16 16:29 | 08/24/16 20:01 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00013** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:31 | 1 |
| **Arsenic** | **0.0013** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:31 | 1 |
| **Barium** | **0.021** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:31 | 1 |
| Cadmium | ND | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:31 | 1 |
| **Chromium** | **0.0012** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:31 | 1 |
| **Cobalt** | **0.0080** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:31 | 1 |
| Lead | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:31 | 1 |
| **Molybdenum** | **0.039** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:31 | 1 |
| **Selenium** | **0.0018** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:31 | 1 |
| **Thallium** | **0.00062** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:31 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 16:08 | 1 |

## Client Sample ID: FC-CCR-MW67-816

**Lab Sample ID: 550-68450-11**
**Date Collected: 08/20/16 19:27**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **19** | **D1** | 4.0 | mg/L | | | 08/31/16 23:45 | 10 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:29 | 08/24/16 20:06 | 1 |
| **Lithium** | **0.36** | | 0.20 | mg/L | | 08/23/16 16:29 | 08/24/16 20:06 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00021** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:33 | 1 |
| **Arsenic** | **0.0039** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:33 | 1 |
| **Barium** | **0.020** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:33 | 1 |
| **Cadmium** | **0.00011** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:33 | 1 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW67-816

**Lab Sample ID: 550-68450-11**
**Date Collected: 08/20/16 19:27**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 200.8 LL - Metals (ICP/MS) (Continued)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Chromium | 0.0010 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:33 | 1 |
| Cobalt | 0.0055 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:33 | 1 |
| Lead | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:33 | 1 |
| Molybdenum | 0.064 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:33 | 1 |
| Selenium | 0.067 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:33 | 1 |
| Thallium | 0.00031 | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:33 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 16:13 | 1 |

## Client Sample ID: FC-CCR-MW68-816

**Lab Sample ID: 550-68450-12**
**Date Collected: 08/20/16 17:20**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Fluoride | 7.5 | D1 | 4.0 | mg/L | | | 09/01/16 00:03 | 10 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:29 | 08/24/16 20:11 | 1 |
| Lithium | 0.35 | | 0.20 | mg/L | | 08/23/16 16:29 | 08/24/16 20:11 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Antimony | 0.00012 | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:35 | 1 |
| Arsenic | 0.0065 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:35 | 1 |
| Barium | 0.0078 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:35 | 1 |
| Cadmium | 0.00016 | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:35 | 1 |
| Chromium | 0.00072 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:35 | 1 |
| Cobalt | 0.0020 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:35 | 1 |
| Lead | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:35 | 1 |
| Molybdenum | 0.0095 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:35 | 1 |
| Selenium | 0.22 | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:35 | 1 |
| Thallium | 0.00063 | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:35 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 16:15 | 1 |

## Client Sample ID: FC-CCR-MW69-816

**Lab Sample ID: 550-68450-13**
**Date Collected: 08/21/16 15:41**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Fluoride | 13 | D1 | 4.0 | mg/L | | | 09/01/16 00:22 | 10 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW69-816

**Lab Sample ID: 550-68450-13**
**Date Collected: 08/21/16 15:41**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:29 | 08/24/16 20:17 | 1 |
| **Lithium** | **0.37** | | 0.20 | mg/L | | 08/23/16 16:29 | 08/24/16 20:17 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00054** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:37 | 1 |
| **Arsenic** | **0.011** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:37 | 1 |
| **Barium** | **0.016** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:37 | 1 |
| Cadmium | ND | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:37 | 1 |
| **Chromium** | **0.00076** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:37 | 1 |
| **Cobalt** | **0.0037** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:37 | 1 |
| Lead | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:37 | 1 |
| **Molybdenum** | **0.015** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:37 | 1 |
| **Selenium** | **0.015** | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 16:37 | 1 |
| **Thallium** | **0.00024** | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 16:37 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 16:16 | 1 |

## Client Sample ID: FC-CCR-MW70-816

**Lab Sample ID: 550-68450-14**
**Date Collected: 08/20/16 14:55**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 D5 | 0.80 | mg/L | | | 09/02/16 02:43 | 2 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:29 | 08/24/16 20:22 | 1 |
| **Lithium** | **0.35** | | 0.20 | mg/L | | 08/23/16 16:29 | 08/24/16 20:22 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00026** | **D1** | 0.00020 | mg/L | | 08/24/16 09:58 | 09/06/16 16:18 | 2 |
| **Arsenic** | **0.0051** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:18 | 2 |
| **Barium** | **0.016** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:18 | 2 |
| Cadmium | ND | D1 | 0.00020 | mg/L | | 08/24/16 09:58 | 09/06/16 16:18 | 2 |
| **Chromium** | **0.0037** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:18 | 2 |
| **Cobalt** | **0.0032** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:18 | 2 |
| Lead | ND | D1 | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:18 | 2 |
| **Molybdenum** | **0.027** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:18 | 2 |
| **Selenium** | **0.23** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:18 | 2 |
| **Thallium** | **0.00057** | **D1** | 0.00020 | mg/L | | 08/24/16 09:58 | 09/06/16 16:18 | 2 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 16:18 | 1 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW71-816

**Lab Sample ID: 550-68450-15**
**Date Collected: 08/21/16 09:37**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 D5 | 0.80 | mg/L | | | 09/01/16 00:58 | 2 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:29 | 08/24/16 20:28 | 1 |
| **Lithium** | **0.36** | | 0.20 | mg/L | | 08/23/16 16:29 | 08/24/16 20:28 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00022** | **D1** | 0.00020 | mg/L | | 08/24/16 09:58 | 09/06/16 16:20 | 2 |
| **Arsenic** | **0.0066** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:20 | 2 |
| **Barium** | **0.014** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:20 | 2 |
| Cadmium | ND | D1 | 0.00020 | mg/L | | 08/24/16 09:58 | 09/06/16 16:20 | 2 |
| Chromium | ND | D1 | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:20 | 2 |
| Cobalt | ND | D1 | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:20 | 2 |
| Lead | ND | D1 | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:20 | 2 |
| **Molybdenum** | **0.0025** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:20 | 2 |
| **Selenium** | **0.26** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:20 | 2 |
| **Thallium** | **0.00029** | **D1** | 0.00020 | mg/L | | 08/24/16 09:58 | 09/06/16 16:20 | 2 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 16:19 | 1 |

## Client Sample ID: FC-CCR-MW72-816

**Lab Sample ID: 550-68450-16**
**Date Collected: 08/21/16 08:49**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.40 | mg/L | | | 09/01/16 01:17 | 1 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:29 | 08/24/16 20:33 | 1 |
| **Lithium** | **0.42** | | 0.20 | mg/L | | 08/23/16 16:29 | 08/24/16 20:33 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00026** | **D1** | 0.00020 | mg/L | | 08/24/16 09:58 | 09/06/16 16:22 | 2 |
| **Arsenic** | **0.0047** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:22 | 2 |
| **Barium** | **0.016** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:22 | 2 |
| Cadmium | ND | D1 | 0.00020 | mg/L | | 08/24/16 09:58 | 09/06/16 16:22 | 2 |
| Chromium | ND | D1 | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:22 | 2 |
| **Cobalt** | **0.0034** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:22 | 2 |
| Lead | ND | D1 | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:22 | 2 |
| **Molybdenum** | **0.0061** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:22 | 2 |
| **Selenium** | **0.18** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:22 | 2 |
| **Thallium** | **0.0011** | **D1** | 0.00020 | mg/L | | 08/24/16 09:58 | 09/06/16 16:22 | 2 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW72-816

**Lab Sample ID: 550-68450-16**
**Date Collected: 08/21/16 08:49**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 16:21 | 1 |

## Client Sample ID: FC-CCR-MW100-816

**Lab Sample ID: 550-68450-17**
**Date Collected: 08/20/16 19:27**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **20** | **D1** | 4.0 | mg/L | | | 09/01/16 01:35 | 10 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:29 | 08/24/16 20:38 | 1 |
| **Lithium** | **0.35** | | 0.20 | mg/L | | 08/23/16 16:29 | 08/24/16 20:38 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00029** | **D1** | 0.00020 | mg/L | | 08/24/16 09:58 | 09/06/16 16:24 | 2 |
| **Arsenic** | **0.0040** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:24 | 2 |
| **Barium** | **0.022** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:24 | 2 |
| Cadmium | ND | D1 | 0.00020 | mg/L | | 08/24/16 09:58 | 09/06/16 16:24 | 2 |
| **Chromium** | **0.0016** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:24 | 2 |
| **Cobalt** | **0.0064** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:24 | 2 |
| Lead | ND | D1 | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:24 | 2 |
| **Molybdenum** | **0.063** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:24 | 2 |
| **Selenium** | **0.068** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:24 | 2 |
| **Thallium** | **0.00034** | **D1** | 0.00020 | mg/L | | 08/24/16 09:58 | 09/06/16 16:24 | 2 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | mg/L | | 08/24/16 13:05 | 08/29/16 16:23 | 1 |

## Client Sample ID: FC-CCR-MW101-816

**Lab Sample ID: 550-68450-18**
**Date Collected: 08/21/16 09:37**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.40 | mg/L | | | 09/01/16 02:30 | 1 |

### Method: 200.7 Rev 4.4 - Metals (ICP)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | mg/L | | 08/23/16 16:29 | 08/24/16 20:44 | 1 |
| **Lithium** | **0.37** | | 0.20 | mg/L | | 08/23/16 16:29 | 08/24/16 20:44 | 1 |

### Method: 200.8 LL - Metals (ICP/MS)

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00024** | **D1** | 0.00020 | mg/L | | 08/24/16 09:58 | 09/06/16 16:26 | 2 |
| **Arsenic** | **0.0076** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:26 | 2 |
| **Barium** | **0.013** | **D1** | 0.0010 | mg/L | | 08/24/16 09:58 | 09/06/16 16:26 | 2 |
| Cadmium | ND | D1 | 0.00020 | mg/L | | 08/24/16 09:58 | 09/06/16 16:26 | 2 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW101-816

**Lab Sample ID: 550-68450-18**

**Date Collected: 08/21/16 09:37**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

### Method: 200.8 LL - Metals (ICP/MS) (Continued)

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | D1 | 0.0010 | | mg/L | | 08/24/16 09:58 | 09/06/16 16:26 | 2 |
| Cobalt | ND | D1 | 0.0010 | | mg/L | | 08/24/16 09:58 | 09/06/16 16:26 | 2 |
| Lead | ND | D1 | 0.0010 | | mg/L | | 08/24/16 09:58 | 09/06/16 16:26 | 2 |
| **Molybdenum** | **0.0024** | **D1** | 0.0010 | | mg/L | | 08/24/16 09:58 | 09/06/16 16:26 | 2 |
| **Selenium** | **0.25** | **D1** | 0.0010 | | mg/L | | 08/24/16 09:58 | 09/06/16 16:26 | 2 |
| **Thallium** | **0.00028** | **D1** | 0.00020 | | mg/L | | 08/24/16 09:58 | 09/06/16 16:26 | 2 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 08/24/16 13:05 | 08/29/16 16:24 | 1 |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 550-97300/2** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97300**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.40 | | mg/L | | | 08/31/16 17:37 | 1 |

**Lab Sample ID: LCS 550-97300/5** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97300**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | | | 4.00 | 4.10 | | mg/L | | 102 | 90 - 110 | | |

**Lab Sample ID: LCSD 550-97300/6** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97300**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | | | 4.00 | 4.10 | | mg/L | | 102 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 550-68450-8 MS** — **Client Sample ID: FC-CCR-MW64-816**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97300**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 | 80.0 | 84.5 | D1 | mg/L | | 103 | 80 - 120 | | |

**Lab Sample ID: 550-68450-8 MSD** — **Client Sample ID: FC-CCR-MW64-816**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97300**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 | 80.0 | 84.8 | D1 | mg/L | | 103 | 80 - 120 | 0 | 20 |

**Lab Sample ID: MB 550-97431/2** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97431**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.40 | | mg/L | | | 09/01/16 19:58 | 1 |

**Lab Sample ID: LCS 550-97431/5** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97431**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | | | 4.00 | 4.10 | | mg/L | | 102 | 90 - 110 | | |

**Lab Sample ID: LCSD 550-97431/6** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97431**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | | | 4.00 | 4.10 | | mg/L | | 102 | 90 - 110 | 0 | 20 |

# QC Sample Results

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

**Lab Sample ID: 550-68928-A-1 MS** — **Client Sample ID: Matrix Spike**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97431**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.2 | | 4.00 | 5.29 | | mg/L | | 102 | 80 - 120 | | |

**Lab Sample ID: 550-68928-A-1 MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97431**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.2 | | 4.00 | 5.29 | | mg/L | | 102 | 80 - 120 | 0 | 20 |

## Method: 200.7 Rev 4.4 - Metals (ICP)

**Lab Sample ID: MB 550-96618/1-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 96754** — **Prep Batch: 96618**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 08/23/16 16:29 | 08/24/16 19:18 | 1 |
| Lithium | ND | | 0.20 | | mg/L | | 08/23/16 16:29 | 08/24/16 19:18 | 1 |

**Lab Sample ID: LCS 550-96618/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 96754** — **Prep Batch: 96618**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | | | 1.00 | 1.02 | | mg/L | | 102 | 85 - 115 | | |
| Lithium | | | 1.00 | 1.00 | | mg/L | | 100 | 85 - 115 | | |

**Lab Sample ID: LCSD 550-96618/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 96754** — **Prep Batch: 96618**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | | | 1.00 | 1.02 | | mg/L | | 102 | 85 - 115 | 1 | 20 |
| Lithium | | | 1.00 | 1.01 | | mg/L | | 101 | 85 - 115 | 1 | 20 |

**Lab Sample ID: 550-68450-5 MS** — **Client Sample ID: FC-CCR-MW61-816**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 96754** — **Prep Batch: 96618**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 1.00 | 0.983 | | mg/L | | 98 | 70 - 130 | | |
| Lithium | 0.44 | | 1.00 | 1.56 | | mg/L | | 113 | 70 - 130 | | |

**Lab Sample ID: 550-68450-5 MSD** — **Client Sample ID: FC-CCR-MW61-816**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 96754** — **Prep Batch: 96618**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 1.00 | 0.991 | | mg/L | | 99 | 70 - 130 | 1 | 20 |
| Lithium | 0.44 | | 1.00 | 1.60 | | mg/L | | 117 | 70 - 130 | 3 | 20 |

## Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

**Lab Sample ID: MB 550-96619/1-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 96760** — **Prep Batch: 96619**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 08/23/16 16:33 | 08/25/16 00:55 | 1 |
| Lithium | ND | | 0.20 | | mg/L | | 08/23/16 16:33 | 08/25/16 00:55 | 1 |

**Lab Sample ID: LCS 550-96619/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 96760** — **Prep Batch: 96619**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | | | 1.00 | 1.01 | | mg/L | | 101 | 85 - 115 | | |
| Lithium | | | 1.00 | 0.967 | | mg/L | | 97 | 85 - 115 | | |

**Lab Sample ID: LCSD 550-96619/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 96760** — **Prep Batch: 96619**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | | | 1.00 | 1.05 | | mg/L | | 105 | 85 - 115 | 3 | 20 |
| Lithium | | | 1.00 | 1.01 | | mg/L | | 101 | 85 - 115 | 4 | 20 |

**Lab Sample ID: 550-68450-4 MS** — **Client Sample ID: FC-CCR-MW60-816**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 96760** — **Prep Batch: 96619**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 1.00 | 0.980 | | mg/L | | 98 | 70 - 130 | | |
| Lithium | 0.90 | | 1.00 | 2.02 | | mg/L | | 111 | 70 - 130 | | |

**Lab Sample ID: 550-68450-4 MSD** — **Client Sample ID: FC-CCR-MW60-816**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 96760** — **Prep Batch: 96619**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 1.00 | 1.00 | | mg/L | | 100 | 70 - 130 | 2 | 20 |
| Lithium | 0.90 | | 1.00 | 2.07 | | mg/L | | 117 | 70 - 130 | 3 | 20 |

## Method: 200.8 LL - Metals (ICP/MS)

**Lab Sample ID: MB 550-96658/1-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97486** — **Prep Batch: 96658**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.00010 | | mg/L | | 08/24/16 09:58 | 09/02/16 15:52 | 1 |
| Arsenic | ND | | 0.00050 | | mg/L | | 08/24/16 09:58 | 09/02/16 15:52 | 1 |
| Barium | ND | | 0.00050 | | mg/L | | 08/24/16 09:58 | 09/02/16 15:52 | 1 |
| Cadmium | ND | | 0.00010 | | mg/L | | 08/24/16 09:58 | 09/02/16 15:52 | 1 |
| Chromium | ND | | 0.00050 | | mg/L | | 08/24/16 09:58 | 09/02/16 15:52 | 1 |
| Cobalt | ND | | 0.00050 | | mg/L | | 08/24/16 09:58 | 09/02/16 15:52 | 1 |
| Lead | ND | | 0.00050 | | mg/L | | 08/24/16 09:58 | 09/02/16 15:52 | 1 |

## Method: 200.8 LL - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 550-96658/1-A**
**Matrix: Water**
**Analysis Batch: 97486**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 96658**

| Analyte | MB Result | MB Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Molybdenum | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 15:52 | 1 |
| Selenium | ND | | 0.00050 | mg/L | | 08/24/16 09:58 | 09/02/16 15:52 | 1 |
| Thallium | ND | | 0.00010 | mg/L | | 08/24/16 09:58 | 09/02/16 15:52 | 1 |

**Lab Sample ID: LCS 550-96658/2-A**
**Matrix: Water**
**Analysis Batch: 97486**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 96658**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.100 | 0.101 | | mg/L | | 101 | 85 - 115 |
| Arsenic | 0.100 | 0.0994 | | mg/L | | 99 | 85 - 115 |
| Barium | 0.100 | 0.100 | | mg/L | | 100 | 85 - 115 |
| Cadmium | 0.100 | 0.100 | | mg/L | | 100 | 85 - 115 |
| Chromium | 0.100 | 0.0980 | | mg/L | | 98 | 85 - 115 |
| Cobalt | 0.100 | 0.101 | | mg/L | | 101 | 85 - 115 |
| Lead | 0.100 | 0.100 | | mg/L | | 100 | 85 - 115 |
| Molybdenum | 0.100 | 0.0993 | | mg/L | | 99 | 85 - 115 |
| Selenium | 0.100 | 0.0982 | | mg/L | | 98 | 85 - 115 |
| Thallium | 0.100 | 0.100 | | mg/L | | 100 | 85 - 115 |

**Lab Sample ID: LCSD 550-96658/3-A**
**Matrix: Water**
**Analysis Batch: 97486**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 96658**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 0.100 | 0.102 | | mg/L | | 102 | 85 - 115 | 1 | 20 |
| Arsenic | 0.100 | 0.100 | | mg/L | | 100 | 85 - 115 | 1 | 20 |
| Barium | 0.100 | 0.102 | | mg/L | | 102 | 85 - 115 | 1 | 20 |
| Cadmium | 0.100 | 0.101 | | mg/L | | 101 | 85 - 115 | 1 | 20 |
| Chromium | 0.100 | 0.0993 | | mg/L | | 99 | 85 - 115 | 1 | 20 |
| Cobalt | 0.100 | 0.102 | | mg/L | | 102 | 85 - 115 | 1 | 20 |
| Lead | 0.100 | 0.101 | | mg/L | | 101 | 85 - 115 | 1 | 20 |
| Molybdenum | 0.100 | 0.101 | | mg/L | | 101 | 85 - 115 | 2 | 20 |
| Selenium | 0.100 | 0.100 | | mg/L | | 100 | 85 - 115 | 2 | 20 |
| Thallium | 0.100 | 0.102 | | mg/L | | 102 | 85 - 115 | 2 | 20 |

**Lab Sample ID: 550-68444-Q-1-C MS**
**Matrix: Water**
**Analysis Batch: 97486**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 96658**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 0.0021 | | 0.100 | 0.106 | | mg/L | | 104 | 70 - 130 |
| Arsenic | 0.010 | | 0.100 | 0.112 | | mg/L | | 102 | 70 - 130 |
| Barium | 0.31 | | 0.100 | 0.414 | | mg/L | | 106 | 70 - 130 |
| Cadmium | ND | | 0.100 | 0.0963 | | mg/L | | 96 | 70 - 130 |
| Chromium | 0.018 | | 0.100 | 0.111 | | mg/L | | 93 | 70 - 130 |
| Cobalt | ND | | 0.100 | 0.0929 | | mg/L | | 93 | 70 - 130 |
| Lead | 0.0011 | | 0.100 | 0.0953 | | mg/L | | 94 | 70 - 130 |
| Molybdenum | 0.026 | | 0.100 | 0.130 | | mg/L | | 104 | 70 - 130 |

## Method: 200.8 LL - Metals (ICP/MS) (Continued)

**Lab Sample ID: 550-68444-Q-1-C MS** — **Client Sample ID: Matrix Spike**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97486** — **Prep Batch: 96658**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 0.0061 | | 0.100 | 0.117 | | mg/L | | 111 | 70 - 130 | | |
| Thallium | ND | | 0.100 | 0.0951 | | mg/L | | 95 | 70 - 130 | | |

**Lab Sample ID: 550-68444-Q-1-D MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97486** — **Prep Batch: 96658**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 0.0021 | | 0.100 | 0.105 | | mg/L | | 103 | 70 - 130 | 1 | 20 |
| Arsenic | 0.010 | | 0.100 | 0.113 | | mg/L | | 103 | 70 - 130 | 1 | 20 |
| Barium | 0.31 | | 0.100 | 0.408 | | mg/L | | 101 | 70 - 130 | 1 | 20 |
| Cadmium | ND | | 0.100 | 0.0948 | | mg/L | | 95 | 70 - 130 | 2 | 20 |
| Chromium | 0.018 | | 0.100 | 0.113 | | mg/L | | 95 | 70 - 130 | 1 | 20 |
| Cobalt | ND | | 0.100 | 0.0929 | | mg/L | | 93 | 70 - 130 | 0 | 20 |
| Lead | 0.0011 | | 0.100 | 0.0947 | | mg/L | | 94 | 70 - 130 | 1 | 20 |
| Molybdenum | 0.026 | | 0.100 | 0.129 | | mg/L | | 103 | 70 - 130 | 1 | 20 |
| Selenium | 0.0061 | | 0.100 | 0.117 | | mg/L | | 111 | 70 - 130 | 0 | 20 |
| Thallium | ND | | 0.100 | 0.0940 | | mg/L | | 94 | 70 - 130 | 1 | 20 |

## Method: 245.1 - Mercury (CVAA)

**Lab Sample ID: MB 550-96691/1-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97041** — **Prep Batch: 96691**

| Analyte | MB Result | MB Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 08/24/16 13:05 | 08/29/16 15:47 | 1 |

**Lab Sample ID: LCS 550-96691/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97041** — **Prep Batch: 96691**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hg | | | 0.0100 | 0.0108 | | mg/L | | 108 | 85 - 115 | | |

**Lab Sample ID: LCSD 550-96691/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97041** — **Prep Batch: 96691**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hg | | | 0.0100 | 0.0114 | | mg/L | | 114 | 85 - 115 | 5 | 20 |

**Lab Sample ID: 550-68450-1 MS** — **Client Sample ID: FC-CCR-MW7-816**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 97041** — **Prep Batch: 96691**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.0100 | 0.0107 | | mg/L | | 107 | 70 - 130 | | |

## Method: 245.1 - Mercury (CVAA) (Continued)

**Lab Sample ID: 550-68450-1 MSD**
**Matrix: Water**
**Analysis Batch: 97041**

**Client Sample ID: FC-CCR-MW7-816**
**Prep Type: Total/NA**
**Prep Batch: 96691**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.0100 | 0.0103 | | mg/L | | 103 | 70 - 130 | 4 | 20 |

# QC Association Summary

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## HPLC/IC

### Analysis Batch: 97300

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-68450-1 | FC-CCR-MW7-816 | Total/NA | Water | 300.0 | |
| 550-68450-2 | FC-CCR-MW8-816 | Total/NA | Water | 300.0 | |
| 550-68450-3 | FC-CCR-MW49A-816 | Total/NA | Water | 300.0 | |
| 550-68450-4 | FC-CCR-MW60-816 | Total/NA | Water | 300.0 | |
| 550-68450-5 | FC-CCR-MW61-816 | Total/NA | Water | 300.0 | |
| 550-68450-6 | FC-CCR-MW62-816 | Total/NA | Water | 300.0 | |
| 550-68450-7 | FC-CCR-MW63-816 | Total/NA | Water | 300.0 | |
| 550-68450-8 | FC-CCR-MW64-816 | Total/NA | Water | 300.0 | |
| 550-68450-9 | FC-CCR-MW65-816 | Total/NA | Water | 300.0 | |
| 550-68450-10 | FC-CCR-MW66-816 | Total/NA | Water | 300.0 | |
| 550-68450-11 | FC-CCR-MW67-816 | Total/NA | Water | 300.0 | |
| 550-68450-12 | FC-CCR-MW68-816 | Total/NA | Water | 300.0 | |
| 550-68450-13 | FC-CCR-MW69-816 | Total/NA | Water | 300.0 | |
| 550-68450-15 | FC-CCR-MW71-816 | Total/NA | Water | 300.0 | |
| 550-68450-16 | FC-CCR-MW72-816 | Total/NA | Water | 300.0 | |
| 550-68450-17 | FC-CCR-MW100-816 | Total/NA | Water | 300.0 | |
| 550-68450-18 | FC-CCR-MW101-816 | Total/NA | Water | 300.0 | |
| MB 550-97300/2 | Method Blank | Total/NA | Water | 300.0 | |
| LCS 550-97300/5 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCSD 550-97300/6 | Lab Control Sample Dup | Total/NA | Water | 300.0 | |
| 550-68450-8 MS | FC-CCR-MW64-816 | Total/NA | Water | 300.0 | |
| 550-68450-8 MSD | FC-CCR-MW64-816 | Total/NA | Water | 300.0 | |

### Analysis Batch: 97431

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-68450-14 | FC-CCR-MW70-816 | Total/NA | Water | 300.0 | |
| MB 550-97431/2 | Method Blank | Total/NA | Water | 300.0 | |
| LCS 550-97431/5 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCSD 550-97431/6 | Lab Control Sample Dup | Total/NA | Water | 300.0 | |
| 550-68928-A-1 MS | Matrix Spike | Total/NA | Water | 300.0 | |
| 550-68928-A-1 MSD | Matrix Spike Duplicate | Total/NA | Water | 300.0 | |

## Metals

### Prep Batch: 96618

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-68450-5 | FC-CCR-MW61-816 | Total/NA | Water | 200.7 | |
| 550-68450-6 | FC-CCR-MW62-816 | Total/NA | Water | 200.7 | |
| 550-68450-7 | FC-CCR-MW63-816 | Total/NA | Water | 200.7 | |
| 550-68450-8 | FC-CCR-MW64-816 | Total/NA | Water | 200.7 | |
| 550-68450-9 | FC-CCR-MW65-816 | Total/NA | Water | 200.7 | |
| 550-68450-10 | FC-CCR-MW66-816 | Total/NA | Water | 200.7 | |
| 550-68450-11 | FC-CCR-MW67-816 | Total/NA | Water | 200.7 | |
| 550-68450-12 | FC-CCR-MW68-816 | Total/NA | Water | 200.7 | |
| 550-68450-13 | FC-CCR-MW69-816 | Total/NA | Water | 200.7 | |
| 550-68450-14 | FC-CCR-MW70-816 | Total/NA | Water | 200.7 | |
| 550-68450-15 | FC-CCR-MW71-816 | Total/NA | Water | 200.7 | |
| 550-68450-16 | FC-CCR-MW72-816 | Total/NA | Water | 200.7 | |
| 550-68450-17 | FC-CCR-MW100-816 | Total/NA | Water | 200.7 | |
| 550-68450-18 | FC-CCR-MW101-816 | Total/NA | Water | 200.7 | |

## Metals (Continued)

### Prep Batch: 96618 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 550-96618/1-A | Method Blank | Total/NA | Water | 200.7 | |
| LCS 550-96618/2-A | Lab Control Sample | Total/NA | Water | 200.7 | |
| LCSD 550-96618/3-A | Lab Control Sample Dup | Total/NA | Water | 200.7 | |
| 550-68450-5 MS | FC-CCR-MW61-816 | Total/NA | Water | 200.7 | |
| 550-68450-5 MSD | FC-CCR-MW61-816 | Total/NA | Water | 200.7 | |

### Prep Batch: 96619

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-68450-1 | FC-CCR-MW7-816 | Total/NA | Water | 200.7 | |
| 550-68450-2 | FC-CCR-MW8-816 | Total/NA | Water | 200.7 | |
| 550-68450-3 | FC-CCR-MW49A-816 | Total/NA | Water | 200.7 | |
| 550-68450-4 | FC-CCR-MW60-816 | Total/NA | Water | 200.7 | |
| MB 550-96619/1-A | Method Blank | Total/NA | Water | 200.7 | |
| LCS 550-96619/2-A | Lab Control Sample | Total/NA | Water | 200.7 | |
| LCSD 550-96619/3-A | Lab Control Sample Dup | Total/NA | Water | 200.7 | |
| 550-68450-4 MS | FC-CCR-MW60-816 | Total/NA | Water | 200.7 | |
| 550-68450-4 MSD | FC-CCR-MW60-816 | Total/NA | Water | 200.7 | |

### Prep Batch: 96658

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-68450-1 | FC-CCR-MW7-816 | Total/NA | Water | 200.8 | |
| 550-68450-2 | FC-CCR-MW8-816 | Total/NA | Water | 200.8 | |
| 550-68450-3 | FC-CCR-MW49A-816 | Total/NA | Water | 200.8 | |
| 550-68450-4 | FC-CCR-MW60-816 | Total/NA | Water | 200.8 | |
| 550-68450-5 | FC-CCR-MW61-816 | Total/NA | Water | 200.8 | |
| 550-68450-6 | FC-CCR-MW62-816 | Total/NA | Water | 200.8 | |
| 550-68450-7 | FC-CCR-MW63-816 | Total/NA | Water | 200.8 | |
| 550-68450-8 | FC-CCR-MW64-816 | Total/NA | Water | 200.8 | |
| 550-68450-9 | FC-CCR-MW65-816 | Total/NA | Water | 200.8 | |
| 550-68450-10 | FC-CCR-MW66-816 | Total/NA | Water | 200.8 | |
| 550-68450-11 | FC-CCR-MW67-816 | Total/NA | Water | 200.8 | |
| 550-68450-12 | FC-CCR-MW68-816 | Total/NA | Water | 200.8 | |
| 550-68450-13 | FC-CCR-MW69-816 | Total/NA | Water | 200.8 | |
| 550-68450-14 | FC-CCR-MW70-816 | Total/NA | Water | 200.8 | |
| 550-68450-15 | FC-CCR-MW71-816 | Total/NA | Water | 200.8 | |
| 550-68450-16 | FC-CCR-MW72-816 | Total/NA | Water | 200.8 | |
| 550-68450-17 | FC-CCR-MW100-816 | Total/NA | Water | 200.8 | |
| 550-68450-18 | FC-CCR-MW101-816 | Total/NA | Water | 200.8 | |
| MB 550-96658/1-A | Method Blank | Total/NA | Water | 200.8 | |
| LCS 550-96658/2-A | Lab Control Sample | Total/NA | Water | 200.8 | |
| LCSD 550-96658/3-A | Lab Control Sample Dup | Total/NA | Water | 200.8 | |
| 550-68444-Q-1-C MS | Matrix Spike | Total/NA | Water | 200.8 | |
| 550-68444-Q-1-D MSD | Matrix Spike Duplicate | Total/NA | Water | 200.8 | |

### Prep Batch: 96691

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-68450-1 | FC-CCR-MW7-816 | Total/NA | Water | 245.1 | |
| 550-68450-2 | FC-CCR-MW8-816 | Total/NA | Water | 245.1 | |
| 550-68450-3 | FC-CCR-MW49A-816 | Total/NA | Water | 245.1 | |
| 550-68450-4 | FC-CCR-MW60-816 | Total/NA | Water | 245.1 | |
| 550-68450-5 | FC-CCR-MW61-816 | Total/NA | Water | 245.1 | |

## Metals (Continued)

### Prep Batch: 96691 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-68450-6 | FC-CCR-MW62-816 | Total/NA | Water | 245.1 | |
| 550-68450-7 | FC-CCR-MW63-816 | Total/NA | Water | 245.1 | |
| 550-68450-8 | FC-CCR-MW64-816 | Total/NA | Water | 245.1 | |
| 550-68450-9 | FC-CCR-MW65-816 | Total/NA | Water | 245.1 | |
| 550-68450-10 | FC-CCR-MW66-816 | Total/NA | Water | 245.1 | |
| 550-68450-11 | FC-CCR-MW67-816 | Total/NA | Water | 245.1 | |
| 550-68450-12 | FC-CCR-MW68-816 | Total/NA | Water | 245.1 | |
| 550-68450-13 | FC-CCR-MW69-816 | Total/NA | Water | 245.1 | |
| 550-68450-14 | FC-CCR-MW70-816 | Total/NA | Water | 245.1 | |
| 550-68450-15 | FC-CCR-MW71-816 | Total/NA | Water | 245.1 | |
| 550-68450-16 | FC-CCR-MW72-816 | Total/NA | Water | 245.1 | |
| 550-68450-17 | FC-CCR-MW100-816 | Total/NA | Water | 245.1 | |
| 550-68450-18 | FC-CCR-MW101-816 | Total/NA | Water | 245.1 | |
| MB 550-96691/1-A | Method Blank | Total/NA | Water | 245.1 | |
| LCS 550-96691/2-A | Lab Control Sample | Total/NA | Water | 245.1 | |
| LCSD 550-96691/3-A | Lab Control Sample Dup | Total/NA | Water | 245.1 | |
| 550-68450-1 MS | FC-CCR-MW7-816 | Total/NA | Water | 245.1 | |
| 550-68450-1 MSD | FC-CCR-MW7-816 | Total/NA | Water | 245.1 | |

### Analysis Batch: 96754

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-68450-5 | FC-CCR-MW61-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-6 | FC-CCR-MW62-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-7 | FC-CCR-MW63-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-8 | FC-CCR-MW64-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-9 | FC-CCR-MW65-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-10 | FC-CCR-MW66-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-11 | FC-CCR-MW67-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-12 | FC-CCR-MW68-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-13 | FC-CCR-MW69-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-14 | FC-CCR-MW70-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-15 | FC-CCR-MW71-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-16 | FC-CCR-MW72-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-17 | FC-CCR-MW100-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-18 | FC-CCR-MW101-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| MB 550-96618/1-A | Method Blank | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| LCS 550-96618/2-A | Lab Control Sample | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| LCSD 550-96618/3-A | Lab Control Sample Dup | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-5 MS | FC-CCR-MW61-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |
| 550-68450-5 MSD | FC-CCR-MW61-816 | Total/NA | Water | 200.7 Rev 4.4 | 96618 |

### Analysis Batch: 96760

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-68450-1 | FC-CCR-MW7-816 | Total/NA | Water | 200.7 Rev 4.4 | 96619 |
| 550-68450-2 | FC-CCR-MW8-816 | Total/NA | Water | 200.7 Rev 4.4 | 96619 |
| 550-68450-3 | FC-CCR-MW49A-816 | Total/NA | Water | 200.7 Rev 4.4 | 96619 |
| 550-68450-4 | FC-CCR-MW60-816 | Total/NA | Water | 200.7 Rev 4.4 | 96619 |
| MB 550-96619/1-A | Method Blank | Total/NA | Water | 200.7 Rev 4.4 | 96619 |
| LCS 550-96619/2-A | Lab Control Sample | Total/NA | Water | 200.7 Rev 4.4 | 96619 |
| LCSD 550-96619/3-A | Lab Control Sample Dup | Total/NA | Water | 200.7 Rev 4.4 | 96619 |
| 550-68450-4 MS | FC-CCR-MW60-816 | Total/NA | Water | 200.7 Rev 4.4 | 96619 |

## Metals (Continued)

### Analysis Batch: 96760 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-68450-4 MSD | FC-CCR-MW60-816 | Total/NA | Water | 200.7 Rev 4.4 | 96619 |

### Analysis Batch: 97041

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-68450-1 | FC-CCR-MW7-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-2 | FC-CCR-MW8-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-3 | FC-CCR-MW49A-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-4 | FC-CCR-MW60-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-5 | FC-CCR-MW61-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-6 | FC-CCR-MW62-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-7 | FC-CCR-MW63-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-8 | FC-CCR-MW64-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-9 | FC-CCR-MW65-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-10 | FC-CCR-MW66-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-11 | FC-CCR-MW67-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-12 | FC-CCR-MW68-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-13 | FC-CCR-MW69-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-14 | FC-CCR-MW70-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-15 | FC-CCR-MW71-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-16 | FC-CCR-MW72-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-17 | FC-CCR-MW100-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-18 | FC-CCR-MW101-816 | Total/NA | Water | 245.1 | 96691 |
| MB 550-96691/1-A | Method Blank | Total/NA | Water | 245.1 | 96691 |
| LCS 550-96691/2-A | Lab Control Sample | Total/NA | Water | 245.1 | 96691 |
| LCSD 550-96691/3-A | Lab Control Sample Dup | Total/NA | Water | 245.1 | 96691 |
| 550-68450-1 MS | FC-CCR-MW7-816 | Total/NA | Water | 245.1 | 96691 |
| 550-68450-1 MSD | FC-CCR-MW7-816 | Total/NA | Water | 245.1 | 96691 |

### Analysis Batch: 97486

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-68450-1 | FC-CCR-MW7-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-2 | FC-CCR-MW8-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-3 | FC-CCR-MW49A-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-4 | FC-CCR-MW60-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-5 | FC-CCR-MW61-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-6 | FC-CCR-MW62-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-7 | FC-CCR-MW63-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-8 | FC-CCR-MW64-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-9 | FC-CCR-MW65-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-10 | FC-CCR-MW66-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-11 | FC-CCR-MW67-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-12 | FC-CCR-MW68-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-13 | FC-CCR-MW69-816 | Total/NA | Water | 200.8 LL | 96658 |
| MB 550-96658/1-A | Method Blank | Total/NA | Water | 200.8 LL | 96658 |
| LCS 550-96658/2-A | Lab Control Sample | Total/NA | Water | 200.8 LL | 96658 |
| LCSD 550-96658/3-A | Lab Control Sample Dup | Total/NA | Water | 200.8 LL | 96658 |
| 550-68444-Q-1-C MS | Matrix Spike | Total/NA | Water | 200.8 LL | 96658 |
| 550-68444-Q-1-D MSD | Matrix Spike Duplicate | Total/NA | Water | 200.8 LL | 96658 |

## Metals (Continued)

### Analysis Batch: 97632

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-68450-14 | FC-CCR-MW70-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-15 | FC-CCR-MW71-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-16 | FC-CCR-MW72-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-17 | FC-CCR-MW100-816 | Total/NA | Water | 200.8 LL | 96658 |
| 550-68450-18 | FC-CCR-MW101-816 | Total/NA | Water | 200.8 LL | 96658 |

# Lab Chronicle

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW7-816 — Lab Sample ID: 550-68450-1

**Date Collected: 08/21/16 13:36** — **Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 97300 | 08/31/16 19:09 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96619 | 08/23/16 16:33 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96760 | 08/25/16 02:46 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 97486 | 09/02/16 16:07 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 15:54 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW8-816 — Lab Sample ID: 550-68450-2

**Date Collected: 08/21/16 12:42** — **Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 97300 | 08/31/16 19:27 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96619 | 08/23/16 16:33 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96760 | 08/25/16 02:52 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 97486 | 09/02/16 16:09 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 15:56 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW49A-816 — Lab Sample ID: 550-68450-3

**Date Collected: 08/21/16 14:38** — **Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 2 | 97300 | 08/31/16 19:45 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96619 | 08/23/16 16:33 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96760 | 08/25/16 02:57 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 97486 | 09/02/16 16:12 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 15:58 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW60-816 — Lab Sample ID: 550-68450-4

**Date Collected: 08/21/16 10:47** — **Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 97300 | 08/31/16 20:04 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96619 | 08/23/16 16:33 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96760 | 08/25/16 01:13 | CJD | TAL PHX |

# Lab Chronicle

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW60-816

**Lab Sample ID: 550-68450-4**
**Date Collected: 08/21/16 10:47**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 97486 | 09/02/16 16:14 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 15:59 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW61-816

**Lab Sample ID: 550-68450-5**
**Date Collected: 08/21/16 11:45**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 97300 | 08/31/16 20:22 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96618 | 08/23/16 16:29 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96754 | 08/24/16 19:35 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 97486 | 09/02/16 16:16 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 16:01 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW62-816

**Lab Sample ID: 550-68450-6**
**Date Collected: 08/20/16 16:36**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 97300 | 08/31/16 20:41 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96618 | 08/23/16 16:29 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96754 | 08/24/16 19:41 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 97486 | 09/02/16 16:18 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 16:02 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW63-816

**Lab Sample ID: 550-68450-7**
**Date Collected: 08/20/16 10:58**
**Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 97300 | 08/31/16 22:49 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96618 | 08/23/16 16:29 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96754 | 08/24/16 19:46 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 97486 | 09/02/16 16:24 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 16:04 | JTG | TAL PHX |

# Lab Chronicle

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW64-816 — Lab Sample ID: 550-68450-8

**Date Collected: 08/20/16 12:45** — **Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 97300 | 08/31/16 20:59 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96618 | 08/23/16 16:29 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96754 | 08/24/16 19:51 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 97486 | 09/02/16 16:27 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 16:05 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW65-816 — Lab Sample ID: 550-68450-9

**Date Collected: 08/20/16 15:50** — **Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 97300 | 08/31/16 23:08 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96618 | 08/23/16 16:29 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96754 | 08/24/16 19:58 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 97486 | 09/02/16 16:29 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 16:07 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW66-816 — Lab Sample ID: 550-68450-10

**Date Collected: 08/20/16 13:53** — **Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 10 | 97300 | 08/31/16 23:26 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96618 | 08/23/16 16:29 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96754 | 08/24/16 20:01 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 97486 | 09/02/16 16:31 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 16:08 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW67-816 — Lab Sample ID: 550-68450-11

**Date Collected: 08/20/16 19:27** — **Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 10 | 97300 | 08/31/16 23:45 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96618 | 08/23/16 16:29 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96754 | 08/24/16 20:06 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |

# Lab Chronicle

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW67-816 — Lab Sample ID: 550-68450-11

**Date Collected: 08/20/16 19:27**
**Date Received: 08/23/16 09:56**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 200.8 LL | | 1 | 97486 | 09/02/16 16:33 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 16:13 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW68-816 — Lab Sample ID: 550-68450-12

**Date Collected: 08/20/16 17:20**
**Date Received: 08/23/16 09:56**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 10 | 97300 | 09/01/16 00:03 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96618 | 08/23/16 16:29 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96754 | 08/24/16 20:11 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 97486 | 09/02/16 16:35 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 16:15 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW69-816 — Lab Sample ID: 550-68450-13

**Date Collected: 08/21/16 15:41**
**Date Received: 08/23/16 09:56**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 10 | 97300 | 09/01/16 00:22 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96618 | 08/23/16 16:29 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96754 | 08/24/16 20:17 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 97486 | 09/02/16 16:37 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 16:16 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW70-816 — Lab Sample ID: 550-68450-14

**Date Collected: 08/20/16 14:55**
**Date Received: 08/23/16 09:56**
**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 2 | 97431 | 09/02/16 02:43 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96618 | 08/23/16 16:29 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96754 | 08/24/16 20:22 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 2 | 97632 | 09/06/16 16:18 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 16:18 | JTG | TAL PHX |

# Lab Chronicle

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW71-816 — Lab Sample ID: 550-68450-15

**Date Collected: 08/21/16 09:37** — **Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 2 | 97300 | 09/01/16 00:58 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96618 | 08/23/16 16:29 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96754 | 08/24/16 20:28 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 2 | 97632 | 09/06/16 16:20 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 16:19 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW72-816 — Lab Sample ID: 550-68450-16

**Date Collected: 08/21/16 08:49** — **Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 97300 | 09/01/16 01:17 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96618 | 08/23/16 16:29 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96754 | 08/24/16 20:33 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 2 | 97632 | 09/06/16 16:22 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 16:21 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW100-816 — Lab Sample ID: 550-68450-17

**Date Collected: 08/20/16 19:27** — **Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 10 | 97300 | 09/01/16 01:35 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96618 | 08/23/16 16:29 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96754 | 08/24/16 20:38 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 2 | 97632 | 09/06/16 16:24 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 16:23 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW101-816 — Lab Sample ID: 550-68450-18

**Date Collected: 08/21/16 09:37** — **Matrix: Water**
**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 97300 | 09/01/16 02:30 | BCB | TAL PHX |
| Total/NA | Prep | 200.7 | | | 96618 | 08/23/16 16:29 | EXZ | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 96754 | 08/24/16 20:44 | CJD | TAL PHX |
| Total/NA | Prep | 200.8 | | | 96658 | 08/24/16 09:58 | SGO | TAL PHX |

# Lab Chronicle

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Client Sample ID: FC-CCR-MW101-816

**Lab Sample ID: 550-68450-18**

**Date Collected: 08/21/16 09:37**

**Matrix: Water**

**Date Received: 08/23/16 09:56**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 200.8 LL | | 2 | 97632 | 09/06/16 16:26 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 96691 | 08/24/16 13:05 | EXZ | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 97041 | 08/29/16 16:24 | JTG | TAL PHX |

**Laboratory References:**

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

# Certification Summary

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

## Laboratory: TestAmerica Phoenix

The certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|---|---|---|---|---|
| Arizona | State Program | 9 | AZ0728 | 06-09-17 |

# Method Summary

Client: Arizona Public Service Company
Project/Site: CCR

TestAmerica Job ID: 550-68450-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 300.0 | Anions, Ion Chromatography | MCAWW | TAL PHX |
| 200.7 Rev 4.4 | Metals (ICP) | 40CFR136A | TAL PHX |
| 200.8 LL | Metals (ICP/MS) | EPA | TAL PHX |
| 245.1 | Mercury (CVAA) | EPA | TAL PHX |

**Protocol References:**

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.
EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

**Laboratory References:**

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

**TestAmerica Phoenix**
4625 E Cotton Center Blvd
Suite 189
Phoenix, AZ 85040
phone 602.437.3340 fax 602.454.9303

# Chain of Custody Record

68450

**Regulatory Program:** CCR

**TestAmerica Laboratories, Inc.**

9/7/2016

| | | | |
|---|---|---|---|
| **Client Contact** | **Doug Lavarnway** | **Doug Lavarnway** | **Date:** |
| APS Four Corners | **928-587-0319** | **Lab Contact:** | **Carrier:** |
| End of County Road 6675 | **Analysis Turnaround Time** | | |
| Fruitland, New Mexico 87416 | | | |
| (928) 587-0319 Phone | TAT if different from Below _____ | | |
| (xxx) xxx-xxxx FAX | | | |
| Project Name: CCR | | | |
| Site: Four Corners (FC) Power Plant | | | |
| P O # | | | |

COC No: 3 of 6 COCs

Sampler:

**For Lab Use Only:**
Walk-in Client:
Lab Sampling:

Job / SDG No.:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS/MSD (Y/N) | EPA 200.7 (Be, Li) | 200.8 (Sb, As, Ba, Cd, Cr, Co, Pb, Mo, Se, Tl) | EPA 245.1 (Hg) | EPA 300.0 (F) | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -01 FC-CCR-MW7-816 | 8/21/16 | 1336 | G | W | 6 | N | x | x | x | x | x | |
| -02 FC-CCR-MW8-816 | 8/21/16 | 1242 | G | W | 6 | N | x | x | x | x | x | |
| -03 FC-CCR-MW49A-816 | 8/21/16 | 1438 | G | W | 6 | N | x | x | x | x | x | |
| -04 FC-CCR-MW60-816 | 8/21/16 | 1047 | G | W | 6 | N | x | x | x | x | x | |
| -05 FC-CCR-MW61-816 | 8/21/16 | 1145 | G | W | 6 | N | x | x | x | x | x | |
| -06 FC-CCR-MW62-816 | 8/20/16 | 1636 | G | W | 6 | N | x | x | x | x | x | |
| -07 FC-CCR-MW63-816 | 8/20/16 | 1058 | G | W | 6 | N | x | x | x | x | x | |
| -08 FC-CCR-MW64-816 | 8/20/16 | 1245 | G | W | 6 | N | x | x | x | x | x | |
| -09 FC-CCR-MW65-816 | 8/20/16 | 1550 | G | W | 6 | N | x | x | x | x | x | |
| -10 FC-CCR-MW66-816 | 8/20/16 | 1353 | G | W | 6 | N | x | x | x | x | x | |
| -11 FC-CCR-MW67-816 | 8/20/16 | 1927 | G | W | 6 | N | x | x | x | x | x | |
| -12 FC-CCR-MW68-816 | 8/20/16 | 1720 | G | W | 6 | N | x | x | x | x | x | |

550-68450 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.

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

**Special Instructions/QC Requirements & Comments:**

**Method 200.8 with collision cell**

3, 1, 1.6, 0.1, 0.4, 0.7

Custody Seals Intact: Custody Seal No.: Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| Doug Lavarnway | APS | 8/22/16 1520 | Jeff Coling | APS | 8/22/16 1520 |
| Jeff Coling | APS | 8/23/16 0956 | | | |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: |
| | | | | | 8-23-16 0956 |

cob

**TestAmerica Phoenix**
4625 E Cotton Center Blvd
Suite 189
Phoenix, AZ 85040
phone 602.437.3340 fax 602.454.9303

# Chain of Custody Record

68450

**Regulatory Program:** CCR

**TestAmerica Laboratories, Inc.**

9/7/2016

| | | | | |
|---|---|---|---|---|
| **Client Contact** | **Doug Lavarnway** | **Doug Lavarnway** | **Date:** | COC No: |
| APS Four Corners | **928-587-0319** | **Lab Contact:** | **Carrier:** | 4 of 6 COCs |
| End of County Road 6675 | **Analysis Turnaround Time** | | | Sampler: |
| Fruitland, New Mexico 87416 | | | | **For Lab Use Only:** |
| (928) 587-0319 Phone | TAT if different from Below _____ | | | Walk-in Client: |
| (xxx) xxx-xxxx FAX | | | | Lab Sampling: |
| Project Name: CCR | | | | |
| Site: Four Corners (FC) Power Plant | | | | Job / SDG No.: |
| P O # | | | | |

| | Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Filtered Sample (Y/N) | Perform MS/MSD (Y/N) | EPA 200.7 (Be, Li) | 200.8 (Sb, As, Ba, Cd, Cr, Co, Pb, Mo, Se, Tl) | EPA 245.1 (Hg) | EPA 300.0 (F) | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -13 | FC-CCR-MW69-816 | 8/21/16 | 1541 | G | W | 6 | N | x | x | x | x | x | |
| -14 | FC-CCR-MW70-816 | 8/20/16 | 1455 | G | W | 6 | N | x | x | x | x | x | |
| -15 | FC-CCR-MW71-816 | 8/21/16 | 937 | G | W | 6 | N | x | x | x | x | x | |
| -16 | FC-CCR-MW72-816 | 8/21/16 | 849 | G | W | 6 | N | x | x | x | x | x | |
| -17 | FC-CCR-MW100-816 | 8/20/16 | 1927 | G | W | 6 | N | x | x | x | x | x | |
| -18 | FC-CCR-MW101-816 | 8/21/16 | 937 | G | W | 6 | N | x | x | x | x | x | |

**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.

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**

**Special Instructions/QC Requirements & Comments:**

**Method 200.8 with collision cell**

Custody Seals Intact: | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
|---|---|---|---|---|---|
| Doug Lavarnway | APS | 8/22/16 1520 | Jeff Coking | APS | 8/22/16 1528 |
| Jeff Coking | APS | 8/22/16 0900 | | | |
| | | | Received in Laboratory by: | | 8-22-16 0956 |

**Form No. CA-C-WI-002, Rev. 4.2, dated 04/02/2013**

# Login Sample Receipt Checklist

Client: Arizona Public Service Company

Job Number: 550-68450-1

**Login Number: 68450**
**List Number: 1**
**Creator: Gravlin, Andrea**

**List Source: TestAmerica Phoenix**

| 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? | False | |
| There are no discrepancies between the containers received and the COC. | False | Refer to Job Narrative for details. |
| 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 | Check done at department level as required. |