TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# ANALYTICAL REPORT

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TestAmerica Job ID: 550-83572-2
TestAmerica Sample Delivery Group: Cholla
Client Project/Site: APS - Four Corners CCR
Revision: 2

For:
Arizona Public Service Company
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Joseph City, Arizona 86032

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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: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## 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. |
| E8 | Analyte reported to MDL per project specification. Target analyte was not detected in the sample. |
| E4 | Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL. |

## Glossary

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

## Job ID: 550-83572-2

### Laboratory: TestAmerica Phoenix

**Narrative**

**Job Narrative**
**550-83572-2**

**Comments**
This report was revised on 10/13/17 to report the results for 200.8 down to the MDL where requested. This final report replaces the report generated on 9/27/17 at 4:34 pm.

**Receipt**
The samples were received on 5/31/2017 1:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 0.2º C, 0.4º C, 1.1º C, 1.1º C and 1.5º 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: The following samples was diluted due to the nature of the sample matrix causing the Internal Standards to fail: FC-CCR-MW7-53017 (550-83572-1), FC-CCR-MW7-53017 (550-83572-1[MS]), FC-CCR-MW7-53017 (550-83572-1[MSD]), FC-CCR-MW8-53017 (550-83572-2), FC-CCR-MW49A-53017 (550-83572-3), FC-CCR-MW60-53017 (550-83572-4), FC-CCR-MW61-53017 (550-83572-5), FC-CCR-MW62-52917 (550-83572-6), FC-CCR-MW63-52817 (550-83572-7), FC-CCR-FD01-52817 (550-83572-8), FC-CCR-MW64-52817 (550-83572-9), FC-CCR-MW65-52917 (550-83572-10), FC-CCR-FD02-52917 (550-83572-11), FC-CCR-MW66-52917 (550-83572-12), FC-CCR-MW67-52917 (550-83572-13), FC-CCR-MW68-52917 (550-83572-14), FC-CCR-MW69-52917 (550-83572-15), FC-CCR-MW70-52917 (550-83572-16), FC-CCR-MW71-52917 (550-83572-17), FC-CCR-MW72-52917 (550-83572-18), FC-CCR-MW73-52917 (550-83572-19) and FC-CCR-MW74-52917 (550-83572-20). Elevated reporting limits (RLs) are provided.

Method(s) 200.8 LL: The following samples were diluted due to the nature of the sample matrix: FC-CCR-FD02-52917 (550-83572-11), FC-CCR-MW66-52917 (550-83572-12), FC-CCR-MW67-52917 (550-83572-13), FC-CCR-MW68-52917 (550-83572-14), FC-CCR-MW69-52917 (550-83572-15), FC-CCR-MW70-52917 (550-83572-16), FC-CCR-MW71-52917 (550-83572-17), FC-CCR-MW72-52917 (550-83572-18), FC-CCR-MW73-52917 (550-83572-19) and FC-CCR-MW74-52917 (550-83572-20). Elevated reporting limits (RLs) are provided. Samples contain high levels of total dissolved solids that caused all internal standards to fail at x1, x2 and x4 dilutions. A x10 dilution is reported.

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: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---|---|---|---|---|
| 550-83572-1 | FC-CCR-MW7-53017 | Water | 05/30/17 11:09 | 05/31/17 13:10 |
| 550-83572-2 | FC-CCR-MW8-53017 | Water | 05/30/17 10:14 | 05/31/17 13:10 |
| 550-83572-3 | FC-CCR-MW49A-53017 | Water | 05/30/17 12:01 | 05/31/17 13:10 |
| 550-83572-4 | FC-CCR-MW60-53017 | Water | 05/30/17 09:35 | 05/31/17 13:10 |
| 550-83572-5 | FC-CCR-MW61-53017 | Water | 05/30/17 08:24 | 05/31/17 13:10 |
| 550-83572-6 | FC-CCR-MW62-52917 | Water | 05/29/17 09:08 | 05/31/17 13:10 |
| 550-83572-7 | FC-CCR-MW63-52817 | Water | 05/28/17 14:55 | 05/31/17 13:10 |
| 550-83572-8 | FC-CCR-FD01-52817 | Water | 05/28/17 14:55 | 05/31/17 13:10 |
| 550-83572-9 | FC-CCR-MW64-52817 | Water | 05/28/17 14:09 | 05/31/17 13:10 |
| 550-83572-10 | FC-CCR-MW65-52917 | Water | 05/29/17 08:19 | 05/31/17 13:10 |
| 550-83572-11 | FC-CCR-FD02-52917 | Water | 05/29/17 08:19 | 05/31/17 13:10 |
| 550-83572-12 | FC-CCR-MW66-52917 | Water | 05/29/17 09:38 | 05/31/17 13:10 |
| 550-83572-13 | FC-CCR-MW67-52917 | Water | 05/29/17 12:19 | 05/31/17 13:10 |
| 550-83572-14 | FC-CCR-MW68-52917 | Water | 05/29/17 12:53 | 05/31/17 13:10 |
| 550-83572-15 | FC-CCR-MW69-52917 | Water | 05/29/17 13:23 | 05/31/17 13:10 |
| 550-83572-16 | FC-CCR-MW70-52917 | Water | 05/29/17 10:15 | 05/31/17 13:10 |
| 550-83572-17 | FC-CCR-MW71-52917 | Water | 05/29/17 11:24 | 05/31/17 13:10 |
| 550-83572-18 | FC-CCR-MW72-52917 | Water | 05/29/17 10:56 | 05/31/17 13:10 |
| 550-83572-19 | FC-CCR-MW73-52917 | Water | 05/29/17 14:03 | 05/31/17 13:10 |
| 550-83572-20 | FC-CCR-MW74-52917 | Water | 05/29/17 14:38 | 05/31/17 13:10 |
| 550-83572-21 | FC-CCR-MW75-53017 | Water | 05/30/17 08:52 | 05/31/17 13:10 |

# Detection Summary

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-MW7-53017 — Lab Sample ID: 550-83572-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.79 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Arsenic | 0.00050 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.015 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.0025 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.0041 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Selenium | 0.0098 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Thallium | 0.00015 | | 0.00010 | | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW8-53017 — Lab Sample ID: 550-83572-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 1.1 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Arsenic | 0.00070 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.013 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cadmium | 0.00013 | | 0.00010 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.00077 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.016 | | 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-53017 — Lab Sample ID: 550-83572-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 1.1 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | 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 | 0.00024 | | 0.00010 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.00069 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0036 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.028 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Selenium | 0.0017 | | 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-MW60-53017 — Lab Sample ID: 550-83572-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 7.0 | D1 | 0.80 | | mg/L | 2 | | 300.0 | Total/NA |
| Lithium | 0.74 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Arsenic | 0.00076 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.017 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cadmium | 0.00070 | | 0.00010 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Chromium | 0.0023 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.28 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.17 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Selenium | 0.00051 | | 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-MW61-53017 — Lab Sample ID: 550-83572-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.2 | | 0.40 | | mg/L | 1 | | 300.0 | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-MW61-53017 (Continued) — Lab Sample ID: 550-83572-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.36 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Barium | 0.014 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cadmium | 0.00092 | | 0.00010 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.015 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Lead | 0.00089 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.079 | | 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-MW62-52917 — Lab Sample ID: 550-83572-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.2 | | 0.40 | | mg/L | 1 | | 300.0 | Total/NA |
| Arsenic | 0.00067 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Barium | 0.021 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0073 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.0030 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW63-52817 — Lab Sample ID: 550-83572-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.6 | | 0.40 | | mg/L | 1 | | 300.0 | Total/NA |
| Barium | 0.017 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0056 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.0024 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-FD01-52817 — Lab Sample ID: 550-83572-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.6 | | 0.40 | | mg/L | 1 | | 300.0 | Total/NA |
| Barium | 0.017 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0056 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.0023 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW64-52817 — Lab Sample ID: 550-83572-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.5 | | 0.40 | | mg/L | 1 | | 300.0 | Total/NA |
| Barium | 0.025 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0011 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.0045 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW65-52917 — Lab Sample ID: 550-83572-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.8 | | 0.40 | | mg/L | 1 | | 300.0 | Total/NA |
| Barium | 0.021 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.0010 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.010 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-FD02-52917 — Lab Sample ID: 550-83572-11

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-FD02-52917 (Continued) — Lab Sample ID: 550-83572-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.8 | | 0.40 | | mg/L | 1 | | 300.0 | Total/NA |
| Barium | 0.023 | D1 | 0.0050 | 0.0026 | mg/L | 10 | | 200.8 LL | Total/NA |
| Cadmium | 0.00024 | D1 E4 | 0.0010 | 0.00023 | mg/L | 10 | | 200.8 LL | Total/NA |
| Cobalt | 0.0014 | D1 E4 | 0.0050 | 0.00063 | mg/L | 10 | | 200.8 LL | Total/NA |
| Molybdenum | 0.010 | D1 | 0.0050 | 0.0020 | mg/L | 10 | | 200.8 LL | Total/NA |
| Thallium | 0.00028 | D1 E4 | 0.0010 | 0.00013 | mg/L | 10 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW66-52917 — Lab Sample ID: 550-83572-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 25 | D1 | 2.0 | | mg/L | 5 | | 300.0 | Total/NA |
| Lithium | 0.30 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Barium | 0.022 | D1 | 0.0050 | 0.0026 | mg/L | 10 | | 200.8 LL | Total/NA |
| Cobalt | 0.0077 | D1 | 0.0050 | 0.00063 | mg/L | 10 | | 200.8 LL | Total/NA |
| Molybdenum | 0.023 | D1 | 0.0050 | 0.0020 | mg/L | 10 | | 200.8 LL | Total/NA |
| Selenium | 0.0022 | D1 E4 | 0.0050 | 0.00074 | mg/L | 10 | | 200.8 LL | Total/NA |
| Thallium | 0.00057 | D1 E4 | 0.0010 | 0.00013 | mg/L | 10 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW67-52917 — Lab Sample ID: 550-83572-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 21 | D1 | 2.0 | | mg/L | 5 | | 300.0 | Total/NA |
| Lithium | 0.38 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Arsenic | 0.0033 | D1 E4 | 0.0050 | 0.0025 | mg/L | 10 | | 200.8 LL | Total/NA |
| Barium | 0.022 | D1 | 0.0050 | 0.0026 | mg/L | 10 | | 200.8 LL | Total/NA |
| Cobalt | 0.0060 | D1 | 0.0050 | 0.00063 | mg/L | 10 | | 200.8 LL | Total/NA |
| Molybdenum | 0.040 | D1 | 0.0050 | 0.0020 | mg/L | 10 | | 200.8 LL | Total/NA |
| Selenium | 0.030 | D1 | 0.0050 | 0.00074 | mg/L | 10 | | 200.8 LL | Total/NA |
| Thallium | 0.00074 | D1 E4 | 0.0010 | 0.00013 | mg/L | 10 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW68-52917 — Lab Sample ID: 550-83572-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 8.3 | D1 | 2.0 | | mg/L | 5 | | 300.0 | Total/NA |
| Lithium | 0.32 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Arsenic | 0.0085 | D1 | 0.0050 | 0.0025 | mg/L | 10 | | 200.8 LL | Total/NA |
| Barium | 0.0086 | D1 | 0.0050 | 0.0026 | mg/L | 10 | | 200.8 LL | Total/NA |
| Cadmium | 0.00025 | D1 E4 | 0.0010 | 0.00023 | mg/L | 10 | | 200.8 LL | Total/NA |
| Cobalt | 0.0017 | D1 E4 | 0.0050 | 0.00063 | mg/L | 10 | | 200.8 LL | Total/NA |
| Molybdenum | 0.0054 | D1 | 0.0050 | 0.0020 | mg/L | 10 | | 200.8 LL | Total/NA |
| Selenium | 0.29 | D1 | 0.0050 | 0.00074 | mg/L | 10 | | 200.8 LL | Total/NA |
| Thallium | 0.00078 | D1 E4 | 0.0010 | 0.00013 | mg/L | 10 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW69-52917 — Lab Sample ID: 550-83572-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 16 | D1 | 2.0 | | mg/L | 5 | | 300.0 | Total/NA |
| Lithium | 0.37 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Arsenic | 0.0076 | D1 | 0.0050 | 0.0025 | mg/L | 10 | | 200.8 LL | Total/NA |
| Barium | 0.018 | D1 | 0.0050 | 0.0026 | mg/L | 10 | | 200.8 LL | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: FC-CCR-MW69-52917 (Continued) — Lab Sample ID: 550-83572-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 0.0042 | D1 E4 | 0.0050 | 0.00063 | mg/L | 10 | | 200.8 LL | Total/NA |
| Molybdenum | 0.016 | D1 | 0.0050 | 0.0020 | mg/L | 10 | | 200.8 LL | Total/NA |
| Selenium | 0.013 | D1 | 0.0050 | 0.00074 | mg/L | 10 | | 200.8 LL | Total/NA |
| Thallium | 0.00032 | D1 E4 | 0.0010 | 0.00013 | mg/L | 10 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW70-52917 — Lab Sample ID: 550-83572-16

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 2.6 | D1 | 0.80 | | mg/L | 2 | | 300.0 | Total/NA |
| Lithium | 0.31 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Arsenic | 0.0028 | D1 E4 | 0.0050 | 0.0025 | mg/L | 10 | | 200.8 LL | Total/NA |
| Barium | 0.014 | D1 | 0.0050 | 0.0026 | mg/L | 10 | | 200.8 LL | Total/NA |
| Cadmium | 0.00024 | D1 E4 | 0.0010 | 0.00023 | mg/L | 10 | | 200.8 LL | Total/NA |
| Cobalt | 0.0071 | D1 | 0.0050 | 0.00063 | mg/L | 10 | | 200.8 LL | Total/NA |
| Molybdenum | 0.0090 | D1 | 0.0050 | 0.0020 | mg/L | 10 | | 200.8 LL | Total/NA |
| Selenium | 0.18 | D1 | 0.0050 | 0.00074 | mg/L | 10 | | 200.8 LL | Total/NA |
| Thallium | 0.00050 | D1 E4 | 0.0010 | 0.00013 | mg/L | 10 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW71-52917 — Lab Sample ID: 550-83572-17

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.33 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Arsenic | 0.0070 | D1 | 0.0050 | 0.0025 | mg/L | 10 | | 200.8 LL | Total/NA |
| Barium | 0.010 | D1 | 0.0050 | 0.0026 | mg/L | 10 | | 200.8 LL | Total/NA |
| Selenium | 0.21 | D1 | 0.0050 | 0.00074 | mg/L | 10 | | 200.8 LL | Total/NA |
| Thallium | 0.00029 | D1 E4 | 0.0010 | 0.00013 | mg/L | 10 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW72-52917 — Lab Sample ID: 550-83572-18

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.37 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Arsenic | 0.0030 | D1 E4 | 0.0050 | 0.0025 | mg/L | 10 | | 200.8 LL | Total/NA |
| Barium | 0.0093 | D1 | 0.0050 | 0.0026 | mg/L | 10 | | 200.8 LL | Total/NA |
| Cobalt | 0.0026 | D1 E4 | 0.0050 | 0.00063 | mg/L | 10 | | 200.8 LL | Total/NA |
| Selenium | 0.11 | D1 | 0.0050 | 0.00074 | mg/L | 10 | | 200.8 LL | Total/NA |
| Thallium | 0.0011 | D1 | 0.0010 | 0.00013 | mg/L | 10 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW73-52917 — Lab Sample ID: 550-83572-19

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.028 | D1 | 0.0050 | 0.0026 | mg/L | 10 | | 200.8 LL | Total/NA |
| Cadmium | 0.00030 | D1 E4 | 0.0010 | 0.00023 | mg/L | 10 | | 200.8 LL | Total/NA |
| Cobalt | 0.0034 | D1 E4 | 0.0050 | 0.00063 | mg/L | 10 | | 200.8 LL | Total/NA |
| Molybdenum | 0.0025 | D1 E4 | 0.0050 | 0.0020 | mg/L | 10 | | 200.8 LL | Total/NA |
| Selenium | 0.043 | D1 | 0.0050 | 0.00074 | mg/L | 10 | | 200.8 LL | Total/NA |
| Thallium | 0.00027 | D1 E4 | 0.0010 | 0.00013 | mg/L | 10 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW74-52917 — Lab Sample ID: 550-83572-20

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-MW74-52917 (Continued) — Lab Sample ID: 550-83572-20

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.9 | D1 | 0.80 | | mg/L | 2 | | 300.0 | Total/NA |
| Lithium | 0.37 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Antimony | 0.00048 | D1 E4 | 0.010 | 0.00043 | mg/L | 10 | | 200.8 LL | Total/NA |
| Arsenic | 0.0045 | D1 E4 | 0.0050 | 0.0025 | mg/L | 10 | | 200.8 LL | Total/NA |
| Barium | 0.022 | D1 | 0.0050 | 0.0026 | mg/L | 10 | | 200.8 LL | Total/NA |
| Cadmium | 0.00028 | D1 E4 | 0.0010 | 0.00023 | mg/L | 10 | | 200.8 LL | Total/NA |
| Cobalt | 0.00064 | D1 E4 | 0.0050 | 0.00063 | mg/L | 10 | | 200.8 LL | Total/NA |
| Molybdenum | 0.028 | D1 | 0.0050 | 0.0020 | mg/L | 10 | | 200.8 LL | Total/NA |
| Selenium | 0.062 | D1 | 0.0050 | 0.00074 | mg/L | 10 | | 200.8 LL | Total/NA |
| Thallium | 0.00035 | D1 E4 | 0.0010 | 0.00013 | mg/L | 10 | | 200.8 LL | Total/NA |

## Client Sample ID: FC-CCR-MW75-53017 — Lab Sample ID: 550-83572-21

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Lithium | 0.43 | | 0.20 | | mg/L | 1 | | 200.7 Rev 4.4 | Total/NA |
| Barium | 0.017 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cadmium | 0.0019 | | 0.00010 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Cobalt | 0.039 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Lead | 0.0028 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Molybdenum | 0.16 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Selenium | 0.0025 | | 0.00050 | | mg/L | 1 | | 200.8 LL | Total/NA |
| Thallium | 0.00017 | | 0.00010 | | mg/L | 1 | | 200.8 LL | Total/NA |

This Detection Summary does not include radiochemical test results.

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-MW7-53017

**Lab Sample ID: 550-83572-1**
**Date Collected: 05/30/17 11:09**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 D5 | 0.80 | | mg/L | | | 06/12/17 17:15 | 2 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:11 | 1 |
| **Lithium** | **0.79** | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:11 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.0010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:24 | 1 |
| **Arsenic** | **0.00050** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:24 | 1 |
| **Barium** | **0.015** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:24 | 1 |
| Cadmium | ND | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:24 | 1 |
| **Chromium** | **0.0025** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:24 | 1 |
| Cobalt | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:24 | 1 |
| Lead | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:24 | 1 |
| **Molybdenum** | **0.0041** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:24 | 1 |
| **Selenium** | **0.0098** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:24 | 1 |
| **Thallium** | **0.00015** | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:24 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/07/17 10:15 | 06/08/17 12:47 | 1 |

## Client Sample ID: FC-CCR-MW8-53017

**Lab Sample ID: 550-83572-2**
**Date Collected: 05/30/17 10:14**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 D5 | 2.0 | | mg/L | | | 06/12/17 19:06 | 5 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:17 | 1 |
| **Lithium** | **1.1** | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:17 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.0010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:31 | 1 |
| **Arsenic** | **0.00070** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:31 | 1 |
| **Barium** | **0.013** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:31 | 1 |
| **Cadmium** | **0.00013** | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:31 | 1 |
| **Chromium** | **0.00077** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:31 | 1 |
| Cobalt | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:31 | 1 |
| Lead | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:31 | 1 |
| **Molybdenum** | **0.016** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:31 | 1 |
| **Selenium** | **0.0016** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:31 | 1 |
| Thallium | ND | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:31 | 1 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-MW8-53017

**Lab Sample ID: 550-83572-2**
**Date Collected: 05/30/17 10:14**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 14:00 | 06/06/17 13:11 | 1 |

## Client Sample ID: FC-CCR-MW49A-53017

**Lab Sample ID: 550-83572-3**
**Date Collected: 05/30/17 12:01**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 D5 | 2.0 | | mg/L | | | 06/12/17 20:19 | 5 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:23 | 1 |
| **Lithium** | **1.1** | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:23 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.0010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:33 | 1 |
| **Arsenic** | **0.0011** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:33 | 1 |
| **Barium** | **0.022** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:33 | 1 |
| **Cadmium** | **0.00024** | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:33 | 1 |
| **Chromium** | **0.00069** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:33 | 1 |
| **Cobalt** | **0.0036** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:33 | 1 |
| Lead | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:33 | 1 |
| **Molybdenum** | **0.028** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:33 | 1 |
| **Selenium** | **0.0017** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:33 | 1 |
| **Thallium** | **0.0015** | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:33 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 14:00 | 06/06/17 13:13 | 1 |

## Client Sample ID: FC-CCR-MW60-53017

**Lab Sample ID: 550-83572-4**
**Date Collected: 05/30/17 09:35**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **7.0** | **D1** | 0.80 | | mg/L | | | 06/12/17 20:56 | 2 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:29 | 1 |
| **Lithium** | **0.74** | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:29 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.0010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:40 | 1 |
| **Arsenic** | **0.00076** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:40 | 1 |
| **Barium** | **0.017** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:40 | 1 |
| **Cadmium** | **0.00070** | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:40 | 1 |

## Client Sample ID: FC-CCR-MW60-53017

**Lab Sample ID: 550-83572-4**
**Date Collected: 05/30/17 09:35**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chromium | 0.0023 | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:40 | 1 |
| Cobalt | 0.28 | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:40 | 1 |
| Lead | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:40 | 1 |
| Molybdenum | 0.17 | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:40 | 1 |
| Selenium | 0.00051 | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:40 | 1 |
| Thallium | 0.00024 | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:40 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 14:00 | 06/06/17 13:14 | 1 |

## Client Sample ID: FC-CCR-MW61-53017

**Lab Sample ID: 550-83572-5**
**Date Collected: 05/30/17 08:24**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.2 | | 0.40 | | mg/L | | | 06/12/17 21:33 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:35 | 1 |
| Lithium | 0.36 | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:35 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.0010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:43 | 1 |
| Arsenic | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:43 | 1 |
| Barium | 0.014 | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:43 | 1 |
| Cadmium | 0.00092 | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:43 | 1 |
| Chromium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:43 | 1 |
| Cobalt | 0.015 | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:43 | 1 |
| Lead | 0.00089 | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:43 | 1 |
| Molybdenum | 0.079 | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:43 | 1 |
| Selenium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:43 | 1 |
| Thallium | 0.00016 | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:43 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 14:00 | 06/06/17 13:17 | 1 |

## Client Sample ID: FC-CCR-MW62-52917

**Lab Sample ID: 550-83572-6**
**Date Collected: 05/29/17 09:08**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.2 | | 0.40 | | mg/L | | | 06/12/17 22:10 | 1 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-MW62-52917

**Lab Sample ID: 550-83572-6**
**Date Collected: 05/29/17 09:08**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:41 | 1 |
| Lithium | ND | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:41 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.0010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:45 | 1 |
| **Arsenic** | **0.00067** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:45 | 1 |
| **Barium** | **0.021** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:45 | 1 |
| Cadmium | ND | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:45 | 1 |
| Chromium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:45 | 1 |
| **Cobalt** | **0.0073** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:45 | 1 |
| Lead | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:45 | 1 |
| **Molybdenum** | **0.0030** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:45 | 1 |
| Selenium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:45 | 1 |
| Thallium | ND | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:45 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 16:42 | 1 |

## Client Sample ID: FC-CCR-MW63-52817

**Lab Sample ID: 550-83572-7**
**Date Collected: 05/28/17 14:55**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **1.6** | | 0.40 | | mg/L | | | 06/12/17 22:47 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:47 | 1 |
| Lithium | ND | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:47 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.0010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:52 | 1 |
| Arsenic | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:52 | 1 |
| **Barium** | **0.017** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:52 | 1 |
| Cadmium | ND | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:52 | 1 |
| Chromium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:52 | 1 |
| **Cobalt** | **0.0056** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:52 | 1 |
| Lead | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:52 | 1 |
| **Molybdenum** | **0.0024** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:52 | 1 |
| Selenium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:52 | 1 |
| Thallium | ND | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:52 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 16:44 | 1 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-FD01-52817

**Lab Sample ID: 550-83572-8**
**Date Collected: 05/28/17 14:55**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **1.6** | | 0.40 | | mg/L | | | 06/13/17 00:00 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:53 | 1 |
| Lithium | ND | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:53 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.0010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:55 | 1 |
| Arsenic | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:55 | 1 |
| **Barium** | **0.017** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:55 | 1 |
| Cadmium | ND | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:55 | 1 |
| Chromium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:55 | 1 |
| **Cobalt** | **0.0056** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:55 | 1 |
| Lead | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:55 | 1 |
| **Molybdenum** | **0.0023** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:55 | 1 |
| Selenium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:55 | 1 |
| Thallium | ND | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:55 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 16:46 | 1 |

## Client Sample ID: FC-CCR-MW64-52817

**Lab Sample ID: 550-83572-9**
**Date Collected: 05/28/17 14:09**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **1.5** | | 0.40 | | mg/L | | | 06/13/17 00:37 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:59 | 1 |
| Lithium | ND | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 19:59 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.0010 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:02 | 1 |
| Arsenic | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:02 | 1 |
| **Barium** | **0.025** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:02 | 1 |
| Cadmium | ND | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:02 | 1 |
| Chromium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:02 | 1 |
| **Cobalt** | **0.0011** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:02 | 1 |
| Lead | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:02 | 1 |
| **Molybdenum** | **0.0045** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:02 | 1 |
| Selenium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:02 | 1 |
| Thallium | ND | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:02 | 1 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-MW64-52817
**Lab Sample ID: 550-83572-9**
**Date Collected: 05/28/17 14:09**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 16:47 | 1 |

## Client Sample ID: FC-CCR-MW65-52917
**Lab Sample ID: 550-83572-10**
**Date Collected: 05/29/17 08:19**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **1.8** | | 0.40 | | mg/L | | | 06/13/17 01:14 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:02 | 1 |
| Lithium | ND | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:02 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.0010 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:04 | 1 |
| Arsenic | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:04 | 1 |
| **Barium** | **0.021** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:04 | 1 |
| Cadmium | ND | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:04 | 1 |
| Chromium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:04 | 1 |
| **Cobalt** | **0.0010** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:04 | 1 |
| Lead | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:04 | 1 |
| **Molybdenum** | **0.010** | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:04 | 1 |
| Selenium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:04 | 1 |
| Thallium | ND | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 18:04 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 16:49 | 1 |

## Client Sample ID: FC-CCR-FD02-52917
**Lab Sample ID: 550-83572-11**
**Date Collected: 05/29/17 08:19**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **1.8** | | 0.40 | | mg/L | | | 06/13/17 01:51 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:10 | 1 |
| Lithium | ND | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:10 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | D1 E8 | 0.010 | 0.00043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:08 | 10 |
| Arsenic | ND | D1 E8 | 0.0050 | 0.0025 | mg/L | | 06/06/17 07:39 | 07/09/17 17:08 | 10 |
| **Barium** | **0.023** | **D1** | 0.0050 | 0.0026 | mg/L | | 06/06/17 07:39 | 07/09/17 17:08 | 10 |
| **Cadmium** | **0.00024** | **D1 E4** | 0.0010 | 0.00023 | mg/L | | 06/06/17 07:39 | 07/09/17 17:08 | 10 |

## Client Sample ID: FC-CCR-FD02-52917

**Lab Sample ID: 550-83572-11**
**Date Collected: 05/29/17 08:19**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | D1 E8 | 0.0050 | 0.0043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:08 | 10 |
| **Cobalt** | **0.0014** | **D1 E4** | 0.0050 | 0.00063 | mg/L | | 06/06/17 07:39 | 07/09/17 17:08 | 10 |
| Lead | ND | D1 E8 | 0.0050 | 0.0022 | mg/L | | 06/06/17 07:39 | 07/09/17 17:08 | 10 |
| **Molybdenum** | **0.010** | **D1** | 0.0050 | 0.0020 | mg/L | | 06/06/17 07:39 | 07/09/17 17:08 | 10 |
| Selenium | ND | D1 E8 | 0.0050 | 0.00074 | mg/L | | 06/06/17 07:39 | 07/09/17 17:08 | 10 |
| **Thallium** | **0.00028** | **D1 E4** | 0.0010 | 0.00013 | mg/L | | 06/06/17 07:39 | 07/09/17 17:08 | 10 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 16:50 | 1 |

## Client Sample ID: FC-CCR-MW66-52917

**Lab Sample ID: 550-83572-12**
**Date Collected: 05/29/17 09:38**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **25** | **D1** | 2.0 | | mg/L | | | 06/13/17 02:27 | 5 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:13 | 1 |
| **Lithium** | **0.30** | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:13 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | D1 E8 | 0.010 | 0.00043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:10 | 10 |
| Arsenic | ND | D1 E8 | 0.0050 | 0.0025 | mg/L | | 06/06/17 07:39 | 07/09/17 17:10 | 10 |
| **Barium** | **0.022** | **D1** | 0.0050 | 0.0026 | mg/L | | 06/06/17 07:39 | 07/09/17 17:10 | 10 |
| Cadmium | ND | D1 E8 | 0.0010 | 0.00023 | mg/L | | 06/06/17 07:39 | 07/09/17 17:10 | 10 |
| Chromium | ND | D1 E8 | 0.0050 | 0.0043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:10 | 10 |
| **Cobalt** | **0.0077** | **D1** | 0.0050 | 0.00063 | mg/L | | 06/06/17 07:39 | 07/09/17 17:10 | 10 |
| Lead | ND | D1 E8 | 0.0050 | 0.0022 | mg/L | | 06/06/17 07:39 | 07/09/17 17:10 | 10 |
| **Molybdenum** | **0.023** | **D1** | 0.0050 | 0.0020 | mg/L | | 06/06/17 07:39 | 07/09/17 17:10 | 10 |
| **Selenium** | **0.0022** | **D1 E4** | 0.0050 | 0.00074 | mg/L | | 06/06/17 07:39 | 07/09/17 17:10 | 10 |
| **Thallium** | **0.00057** | **D1 E4** | 0.0010 | 0.00013 | mg/L | | 06/06/17 07:39 | 07/09/17 17:10 | 10 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 16:52 | 1 |

## Client Sample ID: FC-CCR-MW67-52917

**Lab Sample ID: 550-83572-13**
**Date Collected: 05/29/17 12:19**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **21** | **D1** | 2.0 | | mg/L | | | 06/13/17 03:41 | 5 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-MW67-52917

**Lab Sample ID: 550-83572-13**
**Date Collected: 05/29/17 12:19**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:19 | 1 |
| **Lithium** | **0.38** | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:19 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | D1 E8 | 0.010 | 0.00043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:13 | 10 |
| **Arsenic** | **0.0033** | **D1 E4** | 0.0050 | 0.0025 | mg/L | | 06/06/17 07:39 | 07/09/17 17:13 | 10 |
| **Barium** | **0.022** | **D1** | 0.0050 | 0.0026 | mg/L | | 06/06/17 07:39 | 07/09/17 17:13 | 10 |
| Cadmium | ND | D1 E8 | 0.0010 | 0.00023 | mg/L | | 06/06/17 07:39 | 07/09/17 17:13 | 10 |
| Chromium | ND | D1 E8 | 0.0050 | 0.0043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:13 | 10 |
| **Cobalt** | **0.0060** | **D1** | 0.0050 | 0.00063 | mg/L | | 06/06/17 07:39 | 07/09/17 17:13 | 10 |
| Lead | ND | D1 E8 | 0.0050 | 0.0022 | mg/L | | 06/06/17 07:39 | 07/09/17 17:13 | 10 |
| **Molybdenum** | **0.040** | **D1** | 0.0050 | 0.0020 | mg/L | | 06/06/17 07:39 | 07/09/17 17:13 | 10 |
| **Selenium** | **0.030** | **D1** | 0.0050 | 0.00074 | mg/L | | 06/06/17 07:39 | 07/09/17 17:13 | 10 |
| **Thallium** | **0.00074** | **D1 E4** | 0.0010 | 0.00013 | mg/L | | 06/06/17 07:39 | 07/09/17 17:13 | 10 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 16:53 | 1 |

## Client Sample ID: FC-CCR-MW68-52917

**Lab Sample ID: 550-83572-14**
**Date Collected: 05/29/17 12:53**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **8.3** | **D1** | 2.0 | | mg/L | | | 06/13/17 04:18 | 5 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:25 | 1 |
| **Lithium** | **0.32** | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:25 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | D1 E8 | 0.010 | 0.00043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:17 | 10 |
| **Arsenic** | **0.0085** | **D1** | 0.0050 | 0.0025 | mg/L | | 06/06/17 07:39 | 07/09/17 17:17 | 10 |
| **Barium** | **0.0086** | **D1** | 0.0050 | 0.0026 | mg/L | | 06/06/17 07:39 | 07/09/17 17:17 | 10 |
| **Cadmium** | **0.00025** | **D1 E4** | 0.0010 | 0.00023 | mg/L | | 06/06/17 07:39 | 07/09/17 17:17 | 10 |
| Chromium | ND | D1 E8 | 0.0050 | 0.0043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:17 | 10 |
| **Cobalt** | **0.0017** | **D1 E4** | 0.0050 | 0.00063 | mg/L | | 06/06/17 07:39 | 07/09/17 17:17 | 10 |
| Lead | ND | D1 E8 | 0.0050 | 0.0022 | mg/L | | 06/06/17 07:39 | 07/09/17 17:17 | 10 |
| **Molybdenum** | **0.0054** | **D1** | 0.0050 | 0.0020 | mg/L | | 06/06/17 07:39 | 07/09/17 17:17 | 10 |
| **Selenium** | **0.29** | **D1** | 0.0050 | 0.00074 | mg/L | | 06/06/17 07:39 | 07/09/17 17:17 | 10 |
| **Thallium** | **0.00078** | **D1 E4** | 0.0010 | 0.00013 | mg/L | | 06/06/17 07:39 | 07/09/17 17:17 | 10 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 16:55 | 1 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-MW69-52917

**Lab Sample ID: 550-83572-15**
**Date Collected: 05/29/17 13:23**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **16** | **D1** | 2.0 | | mg/L | | | 06/13/17 04:55 | 5 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:31 | 1 |
| **Lithium** | **0.37** | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:31 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | D1 E8 | 0.010 | 0.00043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:20 | 10 |
| **Arsenic** | **0.0076** | **D1** | 0.0050 | 0.0025 | mg/L | | 06/06/17 07:39 | 07/09/17 17:20 | 10 |
| **Barium** | **0.018** | **D1** | 0.0050 | 0.0026 | mg/L | | 06/06/17 07:39 | 07/09/17 17:20 | 10 |
| Cadmium | ND | D1 E8 | 0.0010 | 0.00023 | mg/L | | 06/06/17 07:39 | 07/09/17 17:20 | 10 |
| Chromium | ND | D1 E8 | 0.0050 | 0.0043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:20 | 10 |
| **Cobalt** | **0.0042** | **D1 E4** | 0.0050 | 0.00063 | mg/L | | 06/06/17 07:39 | 07/09/17 17:20 | 10 |
| Lead | ND | D1 E8 | 0.0050 | 0.0022 | mg/L | | 06/06/17 07:39 | 07/09/17 17:20 | 10 |
| **Molybdenum** | **0.016** | **D1** | 0.0050 | 0.0020 | mg/L | | 06/06/17 07:39 | 07/09/17 17:20 | 10 |
| **Selenium** | **0.013** | **D1** | 0.0050 | 0.00074 | mg/L | | 06/06/17 07:39 | 07/09/17 17:20 | 10 |
| **Thallium** | **0.00032** | **D1 E4** | 0.0010 | 0.00013 | mg/L | | 06/06/17 07:39 | 07/09/17 17:20 | 10 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 16:56 | 1 |

## Client Sample ID: FC-CCR-MW70-52917

**Lab Sample ID: 550-83572-16**
**Date Collected: 05/29/17 10:15**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **2.6** | **D1** | 0.80 | | mg/L | | | 06/13/17 05:31 | 2 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:37 | 1 |
| **Lithium** | **0.31** | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:37 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | D1 E8 | 0.010 | 0.00043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:22 | 10 |
| **Arsenic** | **0.0028** | **D1 E4** | 0.0050 | 0.0025 | mg/L | | 06/06/17 07:39 | 07/09/17 17:22 | 10 |
| **Barium** | **0.014** | **D1** | 0.0050 | 0.0026 | mg/L | | 06/06/17 07:39 | 07/09/17 17:22 | 10 |
| **Cadmium** | **0.00024** | **D1 E4** | 0.0010 | 0.00023 | mg/L | | 06/06/17 07:39 | 07/09/17 17:22 | 10 |
| Chromium | ND | D1 E8 | 0.0050 | 0.0043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:22 | 10 |
| **Cobalt** | **0.0071** | **D1** | 0.0050 | 0.00063 | mg/L | | 06/06/17 07:39 | 07/09/17 17:22 | 10 |
| Lead | ND | D1 E8 | 0.0050 | 0.0022 | mg/L | | 06/06/17 07:39 | 07/09/17 17:22 | 10 |
| **Molybdenum** | **0.0090** | **D1** | 0.0050 | 0.0020 | mg/L | | 06/06/17 07:39 | 07/09/17 17:22 | 10 |
| **Selenium** | **0.18** | **D1** | 0.0050 | 0.00074 | mg/L | | 06/06/17 07:39 | 07/09/17 17:22 | 10 |
| **Thallium** | **0.00050** | **D1 E4** | 0.0010 | 0.00013 | mg/L | | 06/06/17 07:39 | 07/09/17 17:22 | 10 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-MW70-52917

**Lab Sample ID: 550-83572-16**
**Date Collected: 05/29/17 10:15**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 17:01 | 1 |

## Client Sample ID: FC-CCR-MW71-52917

**Lab Sample ID: 550-83572-17**
**Date Collected: 05/29/17 11:24**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 D5 | 2.0 | | mg/L | | | 06/13/17 07:59 | 5 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:43 | 1 |
| **Lithium** | **0.33** | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:43 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | D1 E8 | 0.010 | 0.00043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:27 | 10 |
| **Arsenic** | **0.0070** | **D1** | 0.0050 | 0.0025 | mg/L | | 06/06/17 07:39 | 07/09/17 17:27 | 10 |
| **Barium** | **0.010** | **D1** | 0.0050 | 0.0026 | mg/L | | 06/06/17 07:39 | 07/09/17 17:27 | 10 |
| Cadmium | ND | D1 E8 | 0.0010 | 0.00023 | mg/L | | 06/06/17 07:39 | 07/09/17 17:27 | 10 |
| Chromium | ND | D1 E8 | 0.0050 | 0.0043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:27 | 10 |
| Cobalt | ND | D1 E8 | 0.0050 | 0.00063 | mg/L | | 06/06/17 07:39 | 07/09/17 17:27 | 10 |
| Lead | ND | D1 E8 | 0.0050 | 0.0022 | mg/L | | 06/06/17 07:39 | 07/09/17 17:27 | 10 |
| Molybdenum | ND | D1 E8 | 0.0050 | 0.0020 | mg/L | | 06/06/17 07:39 | 07/09/17 17:27 | 10 |
| **Selenium** | **0.21** | **D1** | 0.0050 | 0.00074 | mg/L | | 06/06/17 07:39 | 07/09/17 17:27 | 10 |
| **Thallium** | **0.00029** | **D1 E4** | 0.0010 | 0.00013 | mg/L | | 06/06/17 07:39 | 07/09/17 17:27 | 10 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 17:02 | 1 |

## Client Sample ID: FC-CCR-MW72-52917

**Lab Sample ID: 550-83572-18**
**Date Collected: 05/29/17 10:56**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 D5 | 2.0 | | mg/L | | | 06/13/17 09:49 | 5 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:49 | 1 |
| **Lithium** | **0.37** | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:49 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | D1 E8 | 0.010 | 0.00043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:29 | 10 |
| **Arsenic** | **0.0030** | **D1 E4** | 0.0050 | 0.0025 | mg/L | | 06/06/17 07:39 | 07/09/17 17:29 | 10 |
| **Barium** | **0.0093** | **D1** | 0.0050 | 0.0026 | mg/L | | 06/06/17 07:39 | 07/09/17 17:29 | 10 |
| Cadmium | ND | D1 E8 | 0.0010 | 0.00023 | mg/L | | 06/06/17 07:39 | 07/09/17 17:29 | 10 |

## Client Sample ID: FC-CCR-MW72-52917 — Lab Sample ID: 550-83572-18

**Date Collected: 05/29/17 10:56** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | D1 E8 | 0.0050 | 0.0043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:29 | 10 |
| **Cobalt** | **0.0026** | **D1 E4** | 0.0050 | 0.00063 | mg/L | | 06/06/17 07:39 | 07/09/17 17:29 | 10 |
| Lead | ND | D1 E8 | 0.0050 | 0.0022 | mg/L | | 06/06/17 07:39 | 07/09/17 17:29 | 10 |
| Molybdenum | ND | D1 E8 | 0.0050 | 0.0020 | mg/L | | 06/06/17 07:39 | 07/09/17 17:29 | 10 |
| **Selenium** | **0.11** | **D1** | 0.0050 | 0.00074 | mg/L | | 06/06/17 07:39 | 07/09/17 17:29 | 10 |
| **Thallium** | **0.0011** | **D1** | 0.0010 | 0.00013 | mg/L | | 06/06/17 07:39 | 07/09/17 17:29 | 10 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 17:04 | 1 |

## Client Sample ID: FC-CCR-MW73-52917 — Lab Sample ID: 550-83572-19

**Date Collected: 05/29/17 14:03** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 D5 | 0.80 | | mg/L | | | 06/13/17 10:26 | 2 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:55 | 1 |
| Lithium | ND | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 20:55 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | D1 E8 | 0.010 | 0.00043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:32 | 10 |
| Arsenic | ND | D1 E8 | 0.0050 | 0.0025 | mg/L | | 06/06/17 07:39 | 07/09/17 17:32 | 10 |
| **Barium** | **0.028** | **D1** | 0.0050 | 0.0026 | mg/L | | 06/06/17 07:39 | 07/09/17 17:32 | 10 |
| **Cadmium** | **0.00030** | **D1 E4** | 0.0010 | 0.00023 | mg/L | | 06/06/17 07:39 | 07/09/17 17:32 | 10 |
| Chromium | ND | D1 E8 | 0.0050 | 0.0043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:32 | 10 |
| **Cobalt** | **0.0034** | **D1 E4** | 0.0050 | 0.00063 | mg/L | | 06/06/17 07:39 | 07/09/17 17:32 | 10 |
| Lead | ND | D1 E8 | 0.0050 | 0.0022 | mg/L | | 06/06/17 07:39 | 07/09/17 17:32 | 10 |
| **Molybdenum** | **0.0025** | **D1 E4** | 0.0050 | 0.0020 | mg/L | | 06/06/17 07:39 | 07/09/17 17:32 | 10 |
| **Selenium** | **0.043** | **D1** | 0.0050 | 0.00074 | mg/L | | 06/06/17 07:39 | 07/09/17 17:32 | 10 |
| **Thallium** | **0.00027** | **D1 E4** | 0.0010 | 0.00013 | mg/L | | 06/06/17 07:39 | 07/09/17 17:32 | 10 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 17:06 | 1 |

## Client Sample ID: FC-CCR-MW74-52917 — Lab Sample ID: 550-83572-20

**Date Collected: 05/29/17 14:38** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Fluoride** | **1.9** | **D1** | 0.80 | | mg/L | | | 06/13/17 11:40 | 2 |

# Client Sample Results

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-MW74-52917

**Lab Sample ID: 550-83572-20**
**Date Collected: 05/29/17 14:38**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 21:01 | 1 |
| **Lithium** | **0.37** | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 21:01 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Antimony** | **0.00048** | **D1 E4** | 0.010 | 0.00043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:34 | 10 |
| **Arsenic** | **0.0045** | **D1 E4** | 0.0050 | 0.0025 | mg/L | | 06/06/17 07:39 | 07/09/17 17:34 | 10 |
| **Barium** | **0.022** | **D1** | 0.0050 | 0.0026 | mg/L | | 06/06/17 07:39 | 07/09/17 17:34 | 10 |
| **Cadmium** | **0.00028** | **D1 E4** | 0.0010 | 0.00023 | mg/L | | 06/06/17 07:39 | 07/09/17 17:34 | 10 |
| Chromium | ND | D1 E8 | 0.0050 | 0.0043 | mg/L | | 06/06/17 07:39 | 07/09/17 17:34 | 10 |
| **Cobalt** | **0.00064** | **D1 E4** | 0.0050 | 0.00063 | mg/L | | 06/06/17 07:39 | 07/09/17 17:34 | 10 |
| Lead | ND | D1 E8 | 0.0050 | 0.0022 | mg/L | | 06/06/17 07:39 | 07/09/17 17:34 | 10 |
| **Molybdenum** | **0.028** | **D1** | 0.0050 | 0.0020 | mg/L | | 06/06/17 07:39 | 07/09/17 17:34 | 10 |
| **Selenium** | **0.062** | **D1** | 0.0050 | 0.00074 | mg/L | | 06/06/17 07:39 | 07/09/17 17:34 | 10 |
| **Thallium** | **0.00035** | **D1 E4** | 0.0010 | 0.00013 | mg/L | | 06/06/17 07:39 | 07/09/17 17:34 | 10 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 17:07 | 1 |

## Client Sample ID: FC-CCR-MW75-53017

**Lab Sample ID: 550-83572-21**
**Date Collected: 05/30/17 08:52**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

### Method: 300.0 - Anions, Ion Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 D5 | 2.0 | | mg/L | | | 06/13/17 12:16 | 5 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:26 | 06/06/17 17:35 | 1 |
| **Lithium** | **0.43** | | 0.20 | | mg/L | | 06/05/17 11:26 | 06/06/17 17:35 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.0010 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:53 | 1 |
| Arsenic | ND | | 0.00050 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:53 | 1 |
| **Barium** | **0.017** | | 0.00050 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:53 | 1 |
| **Cadmium** | **0.0019** | | 0.00010 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:53 | 1 |
| Chromium | ND | | 0.00050 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:53 | 1 |
| **Cobalt** | **0.039** | | 0.00050 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:53 | 1 |
| **Lead** | **0.0028** | | 0.00050 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:53 | 1 |
| **Molybdenum** | **0.16** | | 0.00050 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:53 | 1 |
| **Selenium** | **0.0025** | | 0.00050 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:53 | 1 |
| **Thallium** | **0.00017** | | 0.00010 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:53 | 1 |

### Method: 245.1 - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 14:00 | 06/06/17 12:46 | 1 |

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 550-119812/2** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119812**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.40 | | mg/L | | | 06/12/17 15:06 | 1 |

**Lab Sample ID: LCS 550-119812/5** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119812**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 4.00 | 4.23 | | mg/L | | 106 | 90 - 110 |

**Lab Sample ID: LCSD 550-119812/6** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119812**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 4.00 | 4.22 | | mg/L | | 106 | 90 - 110 | 0 | 20 |

**Lab Sample ID: 550-83572-1 MS** — **Client Sample ID: FC-CCR-MW7-53017**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119812**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 D5 | 8.00 | 8.12 | D1 | mg/L | | 97 | 80 - 120 |

**Lab Sample ID: 550-83572-1 MSD** — **Client Sample ID: FC-CCR-MW7-53017**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119812**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 D5 | 8.00 | 8.18 | D1 | mg/L | | 98 | 80 - 120 | 1 | 20 |

**Lab Sample ID: MB 550-119813/52** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119813**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | | 0.40 | | mg/L | | | 06/13/17 06:27 | 1 |

**Lab Sample ID: LCS 550-119813/55** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119813**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Fluoride | 4.00 | 4.18 | | mg/L | | 104 | 90 - 110 |

**Lab Sample ID: LCSD 550-119813/56** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119813**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 4.00 | 4.24 | | mg/L | | 106 | 90 - 110 | 1 | 20 |

**Lab Sample ID: 550-83572-17 MS** — **Client Sample ID: FC-CCR-MW71-52917**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119813**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 D5 | 20.0 | 20.5 | D1 | mg/L | | 100 | 80 - 120 |

**Lab Sample ID: 550-83572-17 MSD** — **Client Sample ID: FC-CCR-MW71-52917**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119813**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | D1 D5 | 20.0 | 20.7 | D1 | mg/L | | 101 | 80 - 120 | 1 | 20 |

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

**Lab Sample ID: MB 550-119101/1-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119317** — **Prep Batch: 119101**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:18 | 06/06/17 18:51 | 1 |
| Lithium | ND | | 0.20 | | mg/L | | 06/05/17 11:18 | 06/06/17 18:51 | 1 |

**Lab Sample ID: LCS 550-119101/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119317** — **Prep Batch: 119101**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Beryllium | 1.00 | 1.03 | | mg/L | | 103 | 85 - 115 |
| Lithium | 1.00 | 1.02 | | mg/L | | 102 | 85 - 115 |

**Lab Sample ID: LCSD 550-119101/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119317** — **Prep Batch: 119101**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | 1.00 | 0.998 | | mg/L | | 100 | 85 - 115 | 3 | 20 |
| Lithium | 1.00 | 1.01 | | mg/L | | 101 | 85 - 115 | 1 | 20 |

**Lab Sample ID: 550-83572-1 MS** — **Client Sample ID: FC-CCR-MW7-53017**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119317** — **Prep Batch: 119101**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 1.00 | 0.995 | | mg/L | | 100 | 70 - 130 |
| Lithium | 0.79 | | 1.00 | 1.79 | | mg/L | | 100 | 70 - 130 |

**Lab Sample ID: 550-83572-1 MSD** — **Client Sample ID: FC-CCR-MW7-53017**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119317** — **Prep Batch: 119101**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 1.00 | 0.992 | | mg/L | | 99 | 70 - 130 | 0 | 20 |
| Lithium | 0.79 | | 1.00 | 1.74 | | mg/L | | 94 | 70 - 130 | 3 | 20 |

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

**Lab Sample ID: MB 550-119103/1-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119316** — **Prep Batch: 119103**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 0.0010 | | mg/L | | 06/05/17 11:26 | 06/06/17 17:16 | 1 |
| Lithium | ND | | 0.20 | | mg/L | | 06/05/17 11:26 | 06/06/17 17:16 | 1 |

**Lab Sample ID: LCS 550-119103/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119316** — **Prep Batch: 119103**

| 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 | 0.962 | | mg/L | | 96 | 85 - 115 |

**Lab Sample ID: LCSD 550-119103/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119316** — **Prep Batch: 119103**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | 1.00 | 1.01 | | mg/L | | 101 | 85 - 115 | 0 | 20 |
| Lithium | 1.00 | 0.969 | | mg/L | | 97 | 85 - 115 | 1 | 20 |

**Lab Sample ID: 550-83522-A-1-B MS** — **Client Sample ID: Matrix Spike**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119316** — **Prep Batch: 119103**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 1.00 | 1.00 | | mg/L | | 100 | 70 - 130 |
| Lithium | ND | | 1.00 | 0.975 | | mg/L | | 97 | 70 - 130 |

**Lab Sample ID: 550-83522-A-1-C MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119316** — **Prep Batch: 119103**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | ND | | 1.00 | 1.01 | | mg/L | | 101 | 70 - 130 | 1 | 20 |
| Lithium | ND | | 1.00 | 0.976 | | mg/L | | 97 | 70 - 130 | 0 | 20 |

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

**Lab Sample ID: MB 550-119174/1-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 120827** — **Prep Batch: 119174**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.0010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:16 | 1 |
| Arsenic | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:16 | 1 |
| Barium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:16 | 1 |
| Cadmium | ND | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:16 | 1 |
| Chromium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:16 | 1 |
| Cobalt | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:16 | 1 |
| Lead | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:16 | 1 |

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

**Lab Sample ID: MB 550-119174/1-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 120827** — **Prep Batch: 119174**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:16 | 1 |
| Selenium | ND | | 0.00050 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:16 | 1 |
| Thallium | ND | | 0.00010 | | mg/L | | 06/06/17 07:39 | 06/25/17 17:16 | 1 |

**Lab Sample ID: LCS 550-119174/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 120827** — **Prep Batch: 119174**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.100 | 0.0963 | | mg/L | | 96 | 85 - 115 |
| Arsenic | 0.100 | 0.0963 | | mg/L | | 96 | 85 - 115 |
| Barium | 0.100 | 0.0979 | | mg/L | | 98 | 85 - 115 |
| Cadmium | 0.100 | 0.0975 | | mg/L | | 97 | 85 - 115 |
| Chromium | 0.100 | 0.0977 | | mg/L | | 98 | 85 - 115 |
| Cobalt | 0.100 | 0.0974 | | mg/L | | 97 | 85 - 115 |
| Lead | 0.100 | 0.0969 | | mg/L | | 97 | 85 - 115 |
| Molybdenum | 0.100 | 0.0972 | | mg/L | | 97 | 85 - 115 |
| Selenium | 0.100 | 0.0966 | | mg/L | | 97 | 85 - 115 |
| Thallium | 0.100 | 0.0971 | | mg/L | | 97 | 85 - 115 |

**Lab Sample ID: LCSD 550-119174/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 120827** — **Prep Batch: 119174**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 0.100 | 0.0956 | | mg/L | | 96 | 85 - 115 | 1 | 20 |
| Arsenic | 0.100 | 0.0936 | | mg/L | | 94 | 85 - 115 | 3 | 20 |
| Barium | 0.100 | 0.0972 | | mg/L | | 97 | 85 - 115 | 1 | 20 |
| Cadmium | 0.100 | 0.0965 | | mg/L | | 96 | 85 - 115 | 1 | 20 |
| Chromium | 0.100 | 0.0956 | | mg/L | | 96 | 85 - 115 | 2 | 20 |
| Cobalt | 0.100 | 0.0954 | | mg/L | | 95 | 85 - 115 | 2 | 20 |
| Lead | 0.100 | 0.0960 | | mg/L | | 96 | 85 - 115 | 1 | 20 |
| Molybdenum | 0.100 | 0.0968 | | mg/L | | 97 | 85 - 115 | 0 | 20 |
| Selenium | 0.100 | 0.0928 | | mg/L | | 93 | 85 - 115 | 4 | 20 |
| Thallium | 0.100 | 0.0971 | | mg/L | | 97 | 85 - 115 | 0 | 20 |

**Lab Sample ID: MB 550-119181/1-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119478** — **Prep Batch: 119181**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.0010 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:28 | 1 |
| Arsenic | ND | | 0.00050 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:28 | 1 |
| Barium | ND | | 0.00050 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:28 | 1 |
| Cadmium | ND | | 0.00010 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:28 | 1 |
| Chromium | ND | | 0.00050 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:28 | 1 |
| Cobalt | ND | | 0.00050 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:28 | 1 |
| Lead | ND | | 0.00050 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:28 | 1 |
| Molybdenum | ND | | 0.00050 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:28 | 1 |

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

**Lab Sample ID: MB 550-119181/1-A**
**Matrix: Water**
**Analysis Batch: 119478**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 119181**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Selenium | ND | | 0.00050 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:28 | 1 |
| Thallium | ND | | 0.00010 | | mg/L | | 06/06/17 08:30 | 06/08/17 10:28 | 1 |

**Lab Sample ID: LCS 550-119181/2-A**
**Matrix: Water**
**Analysis Batch: 119478**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 119181**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Antimony | 0.100 | 0.0917 | | mg/L | | 92 | 85 - 115 |
| Arsenic | 0.100 | 0.0909 | | mg/L | | 91 | 85 - 115 |
| Barium | 0.100 | 0.0934 | | mg/L | | 93 | 85 - 115 |
| Cadmium | 0.100 | 0.0920 | | mg/L | | 92 | 85 - 115 |
| Chromium | 0.100 | 0.0907 | | mg/L | | 91 | 85 - 115 |
| Cobalt | 0.100 | 0.0923 | | mg/L | | 92 | 85 - 115 |
| Lead | 0.100 | 0.0917 | | mg/L | | 92 | 85 - 115 |
| Molybdenum | 0.100 | 0.0915 | | mg/L | | 92 | 85 - 115 |
| Selenium | 0.100 | 0.0916 | | mg/L | | 92 | 85 - 115 |
| Thallium | 0.100 | 0.0909 | | mg/L | | 91 | 85 - 115 |

**Lab Sample ID: LCSD 550-119181/3-A**
**Matrix: Water**
**Analysis Batch: 119478**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 119181**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | 0.100 | 0.0920 | | mg/L | | 92 | 85 - 115 | 0 | 20 |
| Arsenic | 0.100 | 0.0917 | | mg/L | | 92 | 85 - 115 | 1 | 20 |
| Barium | 0.100 | 0.0937 | | mg/L | | 94 | 85 - 115 | 0 | 20 |
| Cadmium | 0.100 | 0.0922 | | mg/L | | 92 | 85 - 115 | 0 | 20 |
| Chromium | 0.100 | 0.0918 | | mg/L | | 92 | 85 - 115 | 1 | 20 |
| Cobalt | 0.100 | 0.0934 | | mg/L | | 93 | 85 - 115 | 1 | 20 |
| Lead | 0.100 | 0.0918 | | mg/L | | 92 | 85 - 115 | 0 | 20 |
| Molybdenum | 0.100 | 0.0919 | | mg/L | | 92 | 85 - 115 | 0 | 20 |
| Selenium | 0.100 | 0.0920 | | mg/L | | 92 | 85 - 115 | 0 | 20 |
| Thallium | 0.100 | 0.0901 | | mg/L | | 90 | 85 - 115 | 1 | 20 |

**Lab Sample ID: 550-83616-D-1-D MS**
**Matrix: Water**
**Analysis Batch: 119478**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 119181**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.100 | 0.0924 | | mg/L | | 92 | 70 - 130 |
| Arsenic | 0.0057 | | 0.100 | 0.0956 | | mg/L | | 90 | 70 - 130 |
| Barium | 0.062 | | 0.100 | 0.152 | | mg/L | | 90 | 70 - 130 |
| Cadmium | ND | | 0.100 | 0.0915 | | mg/L | | 92 | 70 - 130 |
| Chromium | 0.00078 | | 0.100 | 0.0902 | | mg/L | | 89 | 70 - 130 |
| Cobalt | ND | | 0.100 | 0.0902 | | mg/L | | 90 | 70 - 130 |
| Lead | ND | | 0.100 | 0.0898 | | mg/L | | 89 | 70 - 130 |
| Molybdenum | ND | | 0.100 | 0.0928 | | mg/L | | 93 | 70 - 130 |
| Selenium | ND | | 0.100 | 0.0897 | | mg/L | | 90 | 70 - 130 |

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

**Lab Sample ID: 550-83616-D-1-D MS** — **Client Sample ID: Matrix Spike**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119478** — **Prep Batch: 119181**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Thallium | ND | | 0.100 | 0.0898 | | mg/L | | 90 | 70 - 130 |

**Lab Sample ID: 550-83616-D-1-E MSD** — **Client Sample ID: Matrix Spike Duplicate**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119478** — **Prep Batch: 119181**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | | 0.100 | 0.0918 | | mg/L | | 92 | 70 - 130 | 1 | 20 |
| Arsenic | 0.0057 | | 0.100 | 0.0963 | | mg/L | | 91 | 70 - 130 | 1 | 20 |
| Barium | 0.062 | | 0.100 | 0.152 | | mg/L | | 90 | 70 - 130 | 0 | 20 |
| Cadmium | ND | | 0.100 | 0.0909 | | mg/L | | 91 | 70 - 130 | 1 | 20 |
| Chromium | 0.00078 | | 0.100 | 0.0904 | | mg/L | | 90 | 70 - 130 | 0 | 20 |
| Cobalt | ND | | 0.100 | 0.0907 | | mg/L | | 91 | 70 - 130 | 1 | 20 |
| Lead | ND | | 0.100 | 0.0893 | | mg/L | | 89 | 70 - 130 | 0 | 20 |
| Molybdenum | ND | | 0.100 | 0.0923 | | mg/L | | 92 | 70 - 130 | 1 | 20 |
| Selenium | ND | | 0.100 | 0.0897 | | mg/L | | 90 | 70 - 130 | 0 | 20 |
| Thallium | ND | | 0.100 | 0.0894 | | mg/L | | 89 | 70 - 130 | 0 | 20 |

## Method: 245.1 - Mercury (CVAA)

**Lab Sample ID: MB 550-119128/1-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119245** — **Prep Batch: 119128**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 14:00 | 06/06/17 12:38 | 1 |

**Lab Sample ID: LCS 550-119128/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119245** — **Prep Batch: 119128**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Hg | 0.0100 | 0.0109 | | mg/L | | 109 | 85 - 115 |

**Lab Sample ID: LCSD 550-119128/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119245** — **Prep Batch: 119128**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Hg | 0.0100 | 0.0106 | | mg/L | | 106 | 85 - 115 | 3 | 20 |

**Lab Sample ID: 550-83572-21 MS** — **Client Sample ID: FC-CCR-MW75-53017**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119245** — **Prep Batch: 119128**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.0100 | 0.00981 | | mg/L | | 98 | 70 - 130 |

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

**Lab Sample ID: 550-83572-21 MSD** — **Client Sample ID: FC-CCR-MW75-53017**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119245** — **Prep Batch: 119128**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.0100 | 0.0101 | | mg/L | | 101 | 70 - 130 | 3 | 20 |

**Lab Sample ID: MB 550-119142/1-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119288** — **Prep Batch: 119142**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/05/17 16:04 | 06/06/17 16:34 | 1 |

**Lab Sample ID: LCS 550-119142/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119288** — **Prep Batch: 119142**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Hg | 0.0100 | 0.0114 | | mg/L | | 114 | 85 - 115 |

**Lab Sample ID: LCSD 550-119142/3-A** — **Client Sample ID: Lab Control Sample Dup**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119288** — **Prep Batch: 119142**

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| Hg | 0.0100 | 0.0105 | | mg/L | | 105 | 85 - 115 | 9 | 20 |

**Lab Sample ID: 550-83572-6 MS** — **Client Sample ID: FC-CCR-MW62-52917**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119288** — **Prep Batch: 119142**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.0100 | 0.00937 | | mg/L | | 94 | 70 - 130 |

**Lab Sample ID: 550-83572-6 MSD** — **Client Sample ID: FC-CCR-MW62-52917**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119288** — **Prep Batch: 119142**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.0100 | 0.00930 | | mg/L | | 93 | 70 - 130 | 1 | 20 |

**Lab Sample ID: MB 550-119329/1-A** — **Client Sample ID: Method Blank**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119484** — **Prep Batch: 119329**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.00020 | | mg/L | | 06/07/17 10:15 | 06/08/17 12:40 | 1 |

**Lab Sample ID: LCS 550-119329/2-A** — **Client Sample ID: Lab Control Sample**
**Matrix: Water** — **Prep Type: Total/NA**
**Analysis Batch: 119484** — **Prep Batch: 119329**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Hg | 0.0100 | 0.00965 | | mg/L | | 96 | 85 - 115 |

# QC Sample Results

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

**Lab Sample ID: LCSD 550-119329/3-A**
**Matrix: Water**
**Analysis Batch: 119484**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 119329**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hg | | | 0.0100 | 0.00968 | | mg/L | | 97 | 85 - 115 | 0 | 20 |

**Lab Sample ID: 550-83572-1 MS**
**Matrix: Water**
**Analysis Batch: 119484**

**Client Sample ID: FC-CCR-MW7-53017**
**Prep Type: Total/NA**
**Prep Batch: 119329**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.0100 | 0.00911 | | mg/L | | 91 | 70 - 130 | | |

**Lab Sample ID: 550-83572-1 MSD**
**Matrix: Water**
**Analysis Batch: 119484**

**Client Sample ID: FC-CCR-MW7-53017**
**Prep Type: Total/NA**
**Prep Batch: 119329**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hg | ND | | 0.0100 | 0.00922 | | mg/L | | 92 | 70 - 130 | 1 | 20 |

# QC Association Summary

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## HPLC/IC

### Analysis Batch: 119812

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-1 | FC-CCR-MW7-53017 | Total/NA | Water | 300.0 | |
| 550-83572-2 | FC-CCR-MW8-53017 | Total/NA | Water | 300.0 | |
| 550-83572-3 | FC-CCR-MW49A-53017 | Total/NA | Water | 300.0 | |
| 550-83572-4 | FC-CCR-MW60-53017 | Total/NA | Water | 300.0 | |
| 550-83572-5 | FC-CCR-MW61-53017 | Total/NA | Water | 300.0 | |
| 550-83572-6 | FC-CCR-MW62-52917 | Total/NA | Water | 300.0 | |
| 550-83572-7 | FC-CCR-MW63-52817 | Total/NA | Water | 300.0 | |
| 550-83572-8 | FC-CCR-FD01-52817 | Total/NA | Water | 300.0 | |
| 550-83572-9 | FC-CCR-MW64-52817 | Total/NA | Water | 300.0 | |
| 550-83572-10 | FC-CCR-MW65-52917 | Total/NA | Water | 300.0 | |
| 550-83572-11 | FC-CCR-FD02-52917 | Total/NA | Water | 300.0 | |
| 550-83572-12 | FC-CCR-MW66-52917 | Total/NA | Water | 300.0 | |
| 550-83572-13 | FC-CCR-MW67-52917 | Total/NA | Water | 300.0 | |
| 550-83572-14 | FC-CCR-MW68-52917 | Total/NA | Water | 300.0 | |
| 550-83572-15 | FC-CCR-MW69-52917 | Total/NA | Water | 300.0 | |
| 550-83572-16 | FC-CCR-MW70-52917 | Total/NA | Water | 300.0 | |
| MB 550-119812/2 | Method Blank | Total/NA | Water | 300.0 | |
| LCS 550-119812/5 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCSD 550-119812/6 | Lab Control Sample Dup | Total/NA | Water | 300.0 | |
| 550-83572-1 MS | FC-CCR-MW7-53017 | Total/NA | Water | 300.0 | |
| 550-83572-1 MSD | FC-CCR-MW7-53017 | Total/NA | Water | 300.0 | |

### Analysis Batch: 119813

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-17 | FC-CCR-MW71-52917 | Total/NA | Water | 300.0 | |
| 550-83572-18 | FC-CCR-MW72-52917 | Total/NA | Water | 300.0 | |
| 550-83572-19 | FC-CCR-MW73-52917 | Total/NA | Water | 300.0 | |
| 550-83572-20 | FC-CCR-MW74-52917 | Total/NA | Water | 300.0 | |
| 550-83572-21 | FC-CCR-MW75-53017 | Total/NA | Water | 300.0 | |
| MB 550-119813/52 | Method Blank | Total/NA | Water | 300.0 | |
| LCS 550-119813/55 | Lab Control Sample | Total/NA | Water | 300.0 | |
| LCSD 550-119813/56 | Lab Control Sample Dup | Total/NA | Water | 300.0 | |
| 550-83572-17 MS | FC-CCR-MW71-52917 | Total/NA | Water | 300.0 | |
| 550-83572-17 MSD | FC-CCR-MW71-52917 | Total/NA | Water | 300.0 | |

## Metals

### Prep Batch: 119101

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-1 | FC-CCR-MW7-53017 | Total/NA | Water | 200.7 | |
| 550-83572-2 | FC-CCR-MW8-53017 | Total/NA | Water | 200.7 | |
| 550-83572-3 | FC-CCR-MW49A-53017 | Total/NA | Water | 200.7 | |
| 550-83572-4 | FC-CCR-MW60-53017 | Total/NA | Water | 200.7 | |
| 550-83572-5 | FC-CCR-MW61-53017 | Total/NA | Water | 200.7 | |
| 550-83572-6 | FC-CCR-MW62-52917 | Total/NA | Water | 200.7 | |
| 550-83572-7 | FC-CCR-MW63-52817 | Total/NA | Water | 200.7 | |
| 550-83572-8 | FC-CCR-FD01-52817 | Total/NA | Water | 200.7 | |
| 550-83572-9 | FC-CCR-MW64-52817 | Total/NA | Water | 200.7 | |
| 550-83572-10 | FC-CCR-MW65-52917 | Total/NA | Water | 200.7 | |
| 550-83572-11 | FC-CCR-FD02-52917 | Total/NA | Water | 200.7 | |

## Metals (Continued)

### Prep Batch: 119101 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-12 | FC-CCR-MW66-52917 | Total/NA | Water | 200.7 | |
| 550-83572-13 | FC-CCR-MW67-52917 | Total/NA | Water | 200.7 | |
| 550-83572-14 | FC-CCR-MW68-52917 | Total/NA | Water | 200.7 | |
| 550-83572-15 | FC-CCR-MW69-52917 | Total/NA | Water | 200.7 | |
| 550-83572-16 | FC-CCR-MW70-52917 | Total/NA | Water | 200.7 | |
| 550-83572-17 | FC-CCR-MW71-52917 | Total/NA | Water | 200.7 | |
| 550-83572-18 | FC-CCR-MW72-52917 | Total/NA | Water | 200.7 | |
| 550-83572-19 | FC-CCR-MW73-52917 | Total/NA | Water | 200.7 | |
| 550-83572-20 | FC-CCR-MW74-52917 | Total/NA | Water | 200.7 | |
| MB 550-119101/1-A | Method Blank | Total/NA | Water | 200.7 | |
| LCS 550-119101/2-A | Lab Control Sample | Total/NA | Water | 200.7 | |
| LCSD 550-119101/3-A | Lab Control Sample Dup | Total/NA | Water | 200.7 | |
| 550-83572-1 MS | FC-CCR-MW7-53017 | Total/NA | Water | 200.7 | |
| 550-83572-1 MSD | FC-CCR-MW7-53017 | Total/NA | Water | 200.7 | |

### Prep Batch: 119103

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-21 | FC-CCR-MW75-53017 | Total/NA | Water | 200.7 | |
| MB 550-119103/1-A | Method Blank | Total/NA | Water | 200.7 | |
| LCS 550-119103/2-A | Lab Control Sample | Total/NA | Water | 200.7 | |
| LCSD 550-119103/3-A | Lab Control Sample Dup | Total/NA | Water | 200.7 | |
| 550-83522-A-1-B MS | Matrix Spike | Total/NA | Water | 200.7 | |
| 550-83522-A-1-C MSD | Matrix Spike Duplicate | Total/NA | Water | 200.7 | |

### Prep Batch: 119128

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-2 | FC-CCR-MW8-53017 | Total/NA | Water | 245.1 | |
| 550-83572-3 | FC-CCR-MW49A-53017 | Total/NA | Water | 245.1 | |
| 550-83572-4 | FC-CCR-MW60-53017 | Total/NA | Water | 245.1 | |
| 550-83572-5 | FC-CCR-MW61-53017 | Total/NA | Water | 245.1 | |
| 550-83572-21 | FC-CCR-MW75-53017 | Total/NA | Water | 245.1 | |
| MB 550-119128/1-A | Method Blank | Total/NA | Water | 245.1 | |
| LCS 550-119128/2-A | Lab Control Sample | Total/NA | Water | 245.1 | |
| LCSD 550-119128/3-A | Lab Control Sample Dup | Total/NA | Water | 245.1 | |
| 550-83572-21 MS | FC-CCR-MW75-53017 | Total/NA | Water | 245.1 | |
| 550-83572-21 MSD | FC-CCR-MW75-53017 | Total/NA | Water | 245.1 | |

### Prep Batch: 119142

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-6 | FC-CCR-MW62-52917 | Total/NA | Water | 245.1 | |
| 550-83572-7 | FC-CCR-MW63-52817 | Total/NA | Water | 245.1 | |
| 550-83572-8 | FC-CCR-FD01-52817 | Total/NA | Water | 245.1 | |
| 550-83572-9 | FC-CCR-MW64-52817 | Total/NA | Water | 245.1 | |
| 550-83572-10 | FC-CCR-MW65-52917 | Total/NA | Water | 245.1 | |
| 550-83572-11 | FC-CCR-FD02-52917 | Total/NA | Water | 245.1 | |
| 550-83572-12 | FC-CCR-MW66-52917 | Total/NA | Water | 245.1 | |
| 550-83572-13 | FC-CCR-MW67-52917 | Total/NA | Water | 245.1 | |
| 550-83572-14 | FC-CCR-MW68-52917 | Total/NA | Water | 245.1 | |
| 550-83572-15 | FC-CCR-MW69-52917 | Total/NA | Water | 245.1 | |
| 550-83572-16 | FC-CCR-MW70-52917 | Total/NA | Water | 245.1 | |
| 550-83572-17 | FC-CCR-MW71-52917 | Total/NA | Water | 245.1 | |

## Metals (Continued)

### Prep Batch: 119142 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-18 | FC-CCR-MW72-52917 | Total/NA | Water | 245.1 | |
| 550-83572-19 | FC-CCR-MW73-52917 | Total/NA | Water | 245.1 | |
| 550-83572-20 | FC-CCR-MW74-52917 | Total/NA | Water | 245.1 | |
| MB 550-119142/1-A | Method Blank | Total/NA | Water | 245.1 | |
| LCS 550-119142/2-A | Lab Control Sample | Total/NA | Water | 245.1 | |
| LCSD 550-119142/3-A | Lab Control Sample Dup | Total/NA | Water | 245.1 | |
| 550-83572-6 MS | FC-CCR-MW62-52917 | Total/NA | Water | 245.1 | |
| 550-83572-6 MSD | FC-CCR-MW62-52917 | Total/NA | Water | 245.1 | |

### Prep Batch: 119174

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-1 | FC-CCR-MW7-53017 | Total/NA | Water | 200.8 | |
| 550-83572-2 | FC-CCR-MW8-53017 | Total/NA | Water | 200.8 | |
| 550-83572-3 | FC-CCR-MW49A-53017 | Total/NA | Water | 200.8 | |
| 550-83572-4 | FC-CCR-MW60-53017 | Total/NA | Water | 200.8 | |
| 550-83572-5 | FC-CCR-MW61-53017 | Total/NA | Water | 200.8 | |
| 550-83572-6 | FC-CCR-MW62-52917 | Total/NA | Water | 200.8 | |
| 550-83572-7 | FC-CCR-MW63-52817 | Total/NA | Water | 200.8 | |
| 550-83572-8 | FC-CCR-FD01-52817 | Total/NA | Water | 200.8 | |
| 550-83572-9 | FC-CCR-MW64-52817 | Total/NA | Water | 200.8 | |
| 550-83572-10 | FC-CCR-MW65-52917 | Total/NA | Water | 200.8 | |
| 550-83572-11 | FC-CCR-FD02-52917 | Total/NA | Water | 200.8 | |
| 550-83572-12 | FC-CCR-MW66-52917 | Total/NA | Water | 200.8 | |
| 550-83572-13 | FC-CCR-MW67-52917 | Total/NA | Water | 200.8 | |
| 550-83572-14 | FC-CCR-MW68-52917 | Total/NA | Water | 200.8 | |
| 550-83572-15 | FC-CCR-MW69-52917 | Total/NA | Water | 200.8 | |
| 550-83572-16 | FC-CCR-MW70-52917 | Total/NA | Water | 200.8 | |
| 550-83572-17 | FC-CCR-MW71-52917 | Total/NA | Water | 200.8 | |
| 550-83572-18 | FC-CCR-MW72-52917 | Total/NA | Water | 200.8 | |
| 550-83572-19 | FC-CCR-MW73-52917 | Total/NA | Water | 200.8 | |
| 550-83572-20 | FC-CCR-MW74-52917 | Total/NA | Water | 200.8 | |
| MB 550-119174/1-A | Method Blank | Total/NA | Water | 200.8 | |
| LCS 550-119174/2-A | Lab Control Sample | Total/NA | Water | 200.8 | |
| LCSD 550-119174/3-A | Lab Control Sample Dup | Total/NA | Water | 200.8 | |
| 550-83572-1 MS | FC-CCR-MW7-53017 | Total/NA | Water | 200.8 | |
| 550-83572-1 MSD | FC-CCR-MW7-53017 | Total/NA | Water | 200.8 | |

### Prep Batch: 119181

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-21 | FC-CCR-MW75-53017 | Total/NA | Water | 200.8 | |
| MB 550-119181/1-A | Method Blank | Total/NA | Water | 200.8 | |
| LCS 550-119181/2-A | Lab Control Sample | Total/NA | Water | 200.8 | |
| LCSD 550-119181/3-A | Lab Control Sample Dup | Total/NA | Water | 200.8 | |
| 550-83616-D-1-D MS | Matrix Spike | Total/NA | Water | 200.8 | |
| 550-83616-D-1-E MSD | Matrix Spike Duplicate | Total/NA | Water | 200.8 | |

### Analysis Batch: 119245

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-2 | FC-CCR-MW8-53017 | Total/NA | Water | 245.1 | 119128 |
| 550-83572-3 | FC-CCR-MW49A-53017 | Total/NA | Water | 245.1 | 119128 |
| 550-83572-4 | FC-CCR-MW60-53017 | Total/NA | Water | 245.1 | 119128 |

## Metals (Continued)

### Analysis Batch: 119245 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-5 | FC-CCR-MW61-53017 | Total/NA | Water | 245.1 | 119128 |
| 550-83572-21 | FC-CCR-MW75-53017 | Total/NA | Water | 245.1 | 119128 |
| MB 550-119128/1-A | Method Blank | Total/NA | Water | 245.1 | 119128 |
| LCS 550-119128/2-A | Lab Control Sample | Total/NA | Water | 245.1 | 119128 |
| LCSD 550-119128/3-A | Lab Control Sample Dup | Total/NA | Water | 245.1 | 119128 |
| 550-83572-21 MS | FC-CCR-MW75-53017 | Total/NA | Water | 245.1 | 119128 |
| 550-83572-21 MSD | FC-CCR-MW75-53017 | Total/NA | Water | 245.1 | 119128 |

### Analysis Batch: 119288

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-6 | FC-CCR-MW62-52917 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-7 | FC-CCR-MW63-52817 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-8 | FC-CCR-FD01-52817 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-9 | FC-CCR-MW64-52817 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-10 | FC-CCR-MW65-52917 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-11 | FC-CCR-FD02-52917 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-12 | FC-CCR-MW66-52917 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-13 | FC-CCR-MW67-52917 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-14 | FC-CCR-MW68-52917 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-15 | FC-CCR-MW69-52917 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-16 | FC-CCR-MW70-52917 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-17 | FC-CCR-MW71-52917 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-18 | FC-CCR-MW72-52917 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-19 | FC-CCR-MW73-52917 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-20 | FC-CCR-MW74-52917 | Total/NA | Water | 245.1 | 119142 |
| MB 550-119142/1-A | Method Blank | Total/NA | Water | 245.1 | 119142 |
| LCS 550-119142/2-A | Lab Control Sample | Total/NA | Water | 245.1 | 119142 |
| LCSD 550-119142/3-A | Lab Control Sample Dup | Total/NA | Water | 245.1 | 119142 |
| 550-83572-6 MS | FC-CCR-MW62-52917 | Total/NA | Water | 245.1 | 119142 |
| 550-83572-6 MSD | FC-CCR-MW62-52917 | Total/NA | Water | 245.1 | 119142 |

### Analysis Batch: 119316

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-21 | FC-CCR-MW75-53017 | Total/NA | Water | 200.7 Rev 4.4 | 119103 |
| MB 550-119103/1-A | Method Blank | Total/NA | Water | 200.7 Rev 4.4 | 119103 |
| LCS 550-119103/2-A | Lab Control Sample | Total/NA | Water | 200.7 Rev 4.4 | 119103 |
| LCSD 550-119103/3-A | Lab Control Sample Dup | Total/NA | Water | 200.7 Rev 4.4 | 119103 |
| 550-83522-A-1-B MS | Matrix Spike | Total/NA | Water | 200.7 Rev 4.4 | 119103 |
| 550-83522-A-1-C MSD | Matrix Spike Duplicate | Total/NA | Water | 200.7 Rev 4.4 | 119103 |

### Analysis Batch: 119317

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-1 | FC-CCR-MW7-53017 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-2 | FC-CCR-MW8-53017 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-3 | FC-CCR-MW49A-53017 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-4 | FC-CCR-MW60-53017 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-5 | FC-CCR-MW61-53017 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-6 | FC-CCR-MW62-52917 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-7 | FC-CCR-MW63-52817 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-8 | FC-CCR-FD01-52817 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-9 | FC-CCR-MW64-52817 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |

## Metals (Continued)

### Analysis Batch: 119317 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-10 | FC-CCR-MW65-52917 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-11 | FC-CCR-FD02-52917 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-12 | FC-CCR-MW66-52917 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-13 | FC-CCR-MW67-52917 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-14 | FC-CCR-MW68-52917 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-15 | FC-CCR-MW69-52917 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-16 | FC-CCR-MW70-52917 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-17 | FC-CCR-MW71-52917 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-18 | FC-CCR-MW72-52917 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-19 | FC-CCR-MW73-52917 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-20 | FC-CCR-MW74-52917 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| MB 550-119101/1-A | Method Blank | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| LCS 550-119101/2-A | Lab Control Sample | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| LCSD 550-119101/3-A | Lab Control Sample Dup | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-1 MS | FC-CCR-MW7-53017 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |
| 550-83572-1 MSD | FC-CCR-MW7-53017 | Total/NA | Water | 200.7 Rev 4.4 | 119101 |

### Prep Batch: 119329

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-1 | FC-CCR-MW7-53017 | Total/NA | Water | 245.1 | |
| MB 550-119329/1-A | Method Blank | Total/NA | Water | 245.1 | |
| LCS 550-119329/2-A | Lab Control Sample | Total/NA | Water | 245.1 | |
| LCSD 550-119329/3-A | Lab Control Sample Dup | Total/NA | Water | 245.1 | |
| 550-83572-1 MS | FC-CCR-MW7-53017 | Total/NA | Water | 245.1 | |
| 550-83572-1 MSD | FC-CCR-MW7-53017 | Total/NA | Water | 245.1 | |

### Analysis Batch: 119478

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-21 | FC-CCR-MW75-53017 | Total/NA | Water | 200.8 LL | 119181 |
| MB 550-119181/1-A | Method Blank | Total/NA | Water | 200.8 LL | 119181 |
| LCS 550-119181/2-A | Lab Control Sample | Total/NA | Water | 200.8 LL | 119181 |
| LCSD 550-119181/3-A | Lab Control Sample Dup | Total/NA | Water | 200.8 LL | 119181 |
| 550-83616-D-1-D MS | Matrix Spike | Total/NA | Water | 200.8 LL | 119181 |
| 550-83616-D-1-E MSD | Matrix Spike Duplicate | Total/NA | Water | 200.8 LL | 119181 |

### Analysis Batch: 119484

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-1 | FC-CCR-MW7-53017 | Total/NA | Water | 245.1 | 119329 |
| MB 550-119329/1-A | Method Blank | Total/NA | Water | 245.1 | 119329 |
| LCS 550-119329/2-A | Lab Control Sample | Total/NA | Water | 245.1 | 119329 |
| LCSD 550-119329/3-A | Lab Control Sample Dup | Total/NA | Water | 245.1 | 119329 |
| 550-83572-1 MS | FC-CCR-MW7-53017 | Total/NA | Water | 245.1 | 119329 |
| 550-83572-1 MSD | FC-CCR-MW7-53017 | Total/NA | Water | 245.1 | 119329 |

### Analysis Batch: 120827

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-1 | FC-CCR-MW7-53017 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-2 | FC-CCR-MW8-53017 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-3 | FC-CCR-MW49A-53017 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-4 | FC-CCR-MW60-53017 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-5 | FC-CCR-MW61-53017 | Total/NA | Water | 200.8 LL | 119174 |

## Metals (Continued)

### Analysis Batch: 120827 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-6 | FC-CCR-MW62-52917 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-7 | FC-CCR-MW63-52817 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-8 | FC-CCR-FD01-52817 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-9 | FC-CCR-MW64-52817 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-10 | FC-CCR-MW65-52917 | Total/NA | Water | 200.8 LL | 119174 |
| MB 550-119174/1-A | Method Blank | Total/NA | Water | 200.8 LL | 119174 |
| LCS 550-119174/2-A | Lab Control Sample | Total/NA | Water | 200.8 LL | 119174 |
| LCSD 550-119174/3-A | Lab Control Sample Dup | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-1 MS | FC-CCR-MW7-53017 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-1 MSD | FC-CCR-MW7-53017 | Total/NA | Water | 200.8 LL | 119174 |

### Analysis Batch: 122003

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 550-83572-11 | FC-CCR-FD02-52917 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-12 | FC-CCR-MW66-52917 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-13 | FC-CCR-MW67-52917 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-14 | FC-CCR-MW68-52917 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-15 | FC-CCR-MW69-52917 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-16 | FC-CCR-MW70-52917 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-17 | FC-CCR-MW71-52917 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-18 | FC-CCR-MW72-52917 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-19 | FC-CCR-MW73-52917 | Total/NA | Water | 200.8 LL | 119174 |
| 550-83572-20 | FC-CCR-MW74-52917 | Total/NA | Water | 200.8 LL | 119174 |

# Lab Chronicle

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-MW7-53017 — Lab Sample ID: 550-83572-1

**Date Collected: 05/30/17 11:09** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 2 | 119812 | 06/12/17 17:15 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 19:11 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 120827 | 06/25/17 17:24 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119329 | 06/07/17 10:15 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119484 | 06/08/17 12:47 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW8-53017 — Lab Sample ID: 550-83572-2

**Date Collected: 05/30/17 10:14** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 119812 | 06/12/17 19:06 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 19:17 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 120827 | 06/25/17 17:31 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119128 | 06/05/17 14:00 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119245 | 06/06/17 13:11 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW49A-53017 — Lab Sample ID: 550-83572-3

**Date Collected: 05/30/17 12:01** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 119812 | 06/12/17 20:19 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 19:23 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 120827 | 06/25/17 17:33 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119128 | 06/05/17 14:00 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119245 | 06/06/17 13:13 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW60-53017 — Lab Sample ID: 550-83572-4

**Date Collected: 05/30/17 09:35** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 2 | 119812 | 06/12/17 20:56 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 19:29 | CJM | TAL PHX |

## Client Sample ID: FC-CCR-MW60-53017 — Lab Sample ID: 550-83572-4

**Date Collected: 05/30/17 09:35** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 120827 | 06/25/17 17:40 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119128 | 06/05/17 14:00 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119245 | 06/06/17 13:14 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW61-53017 — Lab Sample ID: 550-83572-5

**Date Collected: 05/30/17 08:24** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 119812 | 06/12/17 21:33 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 19:35 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 120827 | 06/25/17 17:43 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119128 | 06/05/17 14:00 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119245 | 06/06/17 13:17 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW62-52917 — Lab Sample ID: 550-83572-6

**Date Collected: 05/29/17 09:08** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 119812 | 06/12/17 22:10 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 19:41 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 120827 | 06/25/17 17:45 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 16:42 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW63-52817 — Lab Sample ID: 550-83572-7

**Date Collected: 05/28/17 14:55** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 119812 | 06/12/17 22:47 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 19:47 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 120827 | 06/25/17 17:52 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 16:44 | JTG | TAL PHX |

# Lab Chronicle

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-FD01-52817 — Lab Sample ID: 550-83572-8

**Date Collected: 05/28/17 14:55** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 119812 | 06/13/17 00:00 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 19:53 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 120827 | 06/25/17 17:55 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 16:46 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW64-52817 — Lab Sample ID: 550-83572-9

**Date Collected: 05/28/17 14:09** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 119812 | 06/13/17 00:37 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 19:59 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 120827 | 06/25/17 18:02 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 16:47 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW65-52917 — Lab Sample ID: 550-83572-10

**Date Collected: 05/29/17 08:19** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 119812 | 06/13/17 01:14 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 20:02 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 120827 | 06/25/17 18:04 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 16:49 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-FD02-52917 — Lab Sample ID: 550-83572-11

**Date Collected: 05/29/17 08:19** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 1 | 119812 | 06/13/17 01:51 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 20:10 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |

# Lab Chronicle

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-FD02-52917
**Lab Sample ID: 550-83572-11**
**Date Collected: 05/29/17 08:19**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 200.8 LL | | 10 | 122003 | 07/09/17 17:08 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 16:50 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW66-52917
**Lab Sample ID: 550-83572-12**
**Date Collected: 05/29/17 09:38**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 119812 | 06/13/17 02:27 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 20:13 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 10 | 122003 | 07/09/17 17:10 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 16:52 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW67-52917
**Lab Sample ID: 550-83572-13**
**Date Collected: 05/29/17 12:19**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 119812 | 06/13/17 03:41 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 20:19 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 10 | 122003 | 07/09/17 17:13 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 16:53 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW68-52917
**Lab Sample ID: 550-83572-14**
**Date Collected: 05/29/17 12:53**
**Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 119812 | 06/13/17 04:18 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 20:25 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 10 | 122003 | 07/09/17 17:17 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 16:55 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW69-52917 — Lab Sample ID: 550-83572-15

**Date Collected: 05/29/17 13:23** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 119812 | 06/13/17 04:55 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 20:31 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 10 | 122003 | 07/09/17 17:20 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 16:56 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW70-52917 — Lab Sample ID: 550-83572-16

**Date Collected: 05/29/17 10:15** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 2 | 119812 | 06/13/17 05:31 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 20:37 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 10 | 122003 | 07/09/17 17:22 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 17:01 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW71-52917 — Lab Sample ID: 550-83572-17

**Date Collected: 05/29/17 11:24** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 119813 | 06/13/17 07:59 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 20:43 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 10 | 122003 | 07/09/17 17:27 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 17:02 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW72-52917 — Lab Sample ID: 550-83572-18

**Date Collected: 05/29/17 10:56** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 119813 | 06/13/17 09:49 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 20:49 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |

# Lab Chronicle

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Client Sample ID: FC-CCR-MW72-52917 — Lab Sample ID: 550-83572-18

**Date Collected: 05/29/17 10:56** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 200.8 LL | | 10 | 122003 | 07/09/17 17:29 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 17:04 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW73-52917 — Lab Sample ID: 550-83572-19

**Date Collected: 05/29/17 14:03** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 2 | 119813 | 06/13/17 10:26 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 20:55 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 10 | 122003 | 07/09/17 17:32 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 17:06 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW74-52917 — Lab Sample ID: 550-83572-20

**Date Collected: 05/29/17 14:38** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 2 | 119813 | 06/13/17 11:40 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119101 | 06/05/17 11:18 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119317 | 06/06/17 21:01 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119174 | 06/06/17 07:39 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 10 | 122003 | 07/09/17 17:34 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119142 | 06/05/17 16:04 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119288 | 06/06/17 17:07 | JTG | TAL PHX |

## Client Sample ID: FC-CCR-MW75-53017 — Lab Sample ID: 550-83572-21

**Date Collected: 05/30/17 08:52** — **Matrix: Water**
**Date Received: 05/31/17 13:10**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 300.0 | | 5 | 119813 | 06/13/17 12:16 | JAE | TAL PHX |
| Total/NA | Prep | 200.7 | | | 119103 | 06/05/17 11:26 | SGO | TAL PHX |
| Total/NA | Analysis | 200.7 Rev 4.4 | | 1 | 119316 | 06/06/17 17:35 | CJM | TAL PHX |
| Total/NA | Prep | 200.8 | | | 119181 | 06/06/17 08:30 | SGO | TAL PHX |
| Total/NA | Analysis | 200.8 LL | | 1 | 119478 | 06/08/17 10:53 | TEK | TAL PHX |
| Total/NA | Prep | 245.1 | | | 119128 | 06/05/17 14:00 | JTG | TAL PHX |
| Total/NA | Analysis | 245.1 | | 1 | 119245 | 06/06/17 12:46 | JTG | TAL PHX |

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

## Laboratory: TestAmerica Phoenix

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Arizona | State Program | 9 | AZ0728 | 06-09-18 |

# Method Summary

Client: Arizona Public Service Company
Project/Site: APS - Four Corners CCR

TestAmerica Job ID: 550-83572-2
SDG: Cholla

| 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

83573

Regulatory Program: CCR

TestAmerica Laboratories, Inc.

| | | | |
|---|---|---|---|
| Client Contact | Doug Lavarnway | Doug Lavarnway | 5/31/2017 |
| 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: Cholla | | | |
| 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: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FC-CCR-MW7-53017 | 5/30/2017 | 1109 | G | W | 2 | N | x | x | x | x | x | |
| 2 | FC-CCR-MW8-53017 | 5/30/2017 | 1014 | G | W | 2 | N | x | x | x | x | x | |
| 3 | FC-CCR-MW49A-53017 | 5/30/2017 | 1201 | G | W | 2 | N | x | x | x | x | x | |
| 4 | FC-CCR-MW60-53017 | 5/30/2017 | 935 | G | W | 2 | N | x | x | x | x | x | |
| 5 | FC-CCR-MW61-53017 | 5/30/2017 | 824 | G | W | 2 | N | x | x | x | x | x | |
| 6 | FC-CCR-MW62-52917 | 5/29/2017 | 908 | G | W | 2 | N | x | x | x | x | x | |
| 7 | FC-CCR-MW63-52817 | 5/28/2017 | 1455 | G | W | 2 | N | x | x | x | x | x | |
| 8 | FC-CCR-FD01-52817 | 5/28/2017 | 1455 | G | W | 2 | N | x | x | x | x | x | |
| 9 | FC-CCR-MW64-52817 | 5/28/2017 | 1409 | G | W | 2 | N | x | x | x | x | x | |
| 10 | FC-CCR-MW65-52917 | 5/29/2017 | 819 | G | W | 2 | N | x | x | x | x | x | |
| 11 | FC-CCR-FD02-52917 | 5/29/2017 | 819 | G | W | 2 | N | x | x | x | x | x | |

550-83573 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:

1.1°C, 1.1°C, 1.5°C, 0.2°C, 0.4°C PC

| Custody Seals Intact: | Custody Seal No.: | | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____ | | |
|---|---|---|---|---|---|
| Relinquished by: Doug Lavarnway | Company: APS | Date/Time: 5/31 | Received by: D Rogers | Company: Red J | Date/Time: 5/31/17 9:00a |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: | Date/Time: 5-31-17 1310 |

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

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

# Chain of Custody Record

83573

Regulatory Program: CCR

TestAmerica Laboratories, Inc.

| Client Contact | Doug Lavarnway | Doug Lavarnway | 5/31/2017 | COC No: |
|---|---|---|---|---|
| APS Four Corners | 928-587-0319 | Lab Contact: | Carrier: | 7 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: Cholla | | | | 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: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | FC-CCR-MW66-52917 | 5/29/2017 | 938 | G | W | 2 | N | x | x | x | x | x | |
| 13 | FC-CCR-MW67-52917 | 5/29/2017 | 1219 | G | W | 2 | N | x | x | x | x | x | |
| 14 | FC-CCR-MW68-52917 | 5/29/2017 | 1253 | G | W | 2 | N | x | x | x | x | x | |
| 15 | FC-CCR-MW69-52917 | 5/29/2017 | 1323 | G | W | 2 | N | x | x | x | x | x | |
| 16 | FC-CCR-MW70-52917 | 5/29/2017 | 1015 | G | W | 2 | N | x | x | x | x | x | |
| 17 | FC-CCR-MW71-52917 | 5/29/2017 | 1124 | G | W | 2 | N | x | x | x | x | x | |
| 18 | FC-CCR-MW72-52917 | 5/29/2017 | 1056 | G | W | 2 | N | x | x | x | x | x | |
| 19 | FC-CCR-MW73-52917 | 5/29/2017 | 1403 | G | W | 2 | N | x | x | x | x | x | |
| 20 | FC-CCR-MW74-52917 | 5/29/2017 | 1438 | G | W | 2 | N | x | x | x | x | x | |
| 21 | FC-CCR-MW75-53017 | 5/30/2017 | 852 | G | W | 2 | 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:**

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 | 5/31 | D Rogers | Rel IT | 5/31/17 9:00a |
| Relinquished by: | Company: | Date/Time: | Received by: | Company: | Date/Time: |
| Relinquished by: | Company: | Date/Time: | Received in Laboratory by: | Company: TA | Date/Time: 5-31-17 1310 |

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

# Login Sample Receipt Checklist

Client: Arizona Public Service Company

Job Number: 550-83572-2
SDG Number: Cholla

**Login Number: 83572**
**List Number: 1**
**Creator: Vilaboy, Monica**

**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? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | False | Check done at department level as required. |