TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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TestAmerica Job ID: 550-89579-2
Client Project/Site: APS - Four Corners CCR

For:
Arizona Public Service Company
4801 Cholla Lake Rd
Joseph City, Arizona 86032

Attn: Doug Lavarnway

Authorized for release by:
9/30/2017 1:48:30 PM

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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: 550-89579-2

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.
B1	Target analyte detected in method blank at or above the method reporting limit.

Glossary

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

Job ID: 550-89579-2

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-89579-2

Comments
No additional comments.

Receipt
The samples were received on 9/12/2017 2:44 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.2º C, 1.8º C, 1.8º C and 2.0º C.

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

Metals
Method(s) 245.1: An incorrect volume of spiking solution was inadvertently added to the laboratory control sample (LCS), laboratory control sample duplicate (LCSD), matrix spike (MS), AND matrix spike duplicate (MSD) associated with preparation batch 550-127960 and analytical batch 550-128122. Percent recoveries are based on the amount spiked and are within the calibration range.

Method(s) 245.1: The method blank for preparation batch 550-128152 and analytical batch 550-128420 contained mercury above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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: 550-89579-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-89579-1	FC-CCR-MW7-91017	Water	09/10/17 16:06	09/12/17 14:44
550-89579-2	FC-CCR-MW49A-91017	Water	09/10/17 17:05	09/12/17 14:44
550-89579-3	FC-CCR-MW60-91017	Water	09/10/17 14:58	09/12/17 14:44
550-89579-4	FC-CCR-MW61-91017	Water	09/10/17 13:46	09/12/17 14:44
550-89579-5	FC-CCR-MW62-9917	Water	09/09/17 15:36	09/12/17 14:44
550-89579-6	FC-CCR-MW63-9917	Water	09/09/17 16:14	09/12/17 14:44
550-89579-7	FC-CCR-MW64-9917	Water	09/09/17 16:39	09/12/17 14:44
550-89579-8	FC-CCR-MW65-9917	Water	09/09/17 14:45	09/12/17 14:44
550-89579-9	FC-CCR-FD01-9917	Water	09/09/17 14:45	09/12/17 14:44
550-89579-10	FC-CCR-MW66-9917	Water	09/09/17 17:13	09/12/17 14:44
550-89579-11	FC-CCR-MW67-91017	Water	09/10/17 09:53	09/12/17 14:44
550-89579-12	FC-CCR-MW68-91017	Water	09/10/17 10:27	09/12/17 14:44
550-89579-13	FC-CCR-MW69-91017	Water	09/10/17 09:05	09/12/17 14:44
550-89579-14	FC-CCR-FD02-91017	Water	09/10/17 09:05	09/12/17 14:44
550-89579-15	FC-CCR-MW70-9917	Water	09/09/17 17:46	09/12/17 14:44
550-89579-16	FC-CCR-MW71-91117	Water	09/11/17 08:56	09/12/17 14:44
550-89579-17	FC-CCR-MW72-91017	Water	09/10/17 17:54	09/12/17 14:44
550-89579-18	FC-CCR-MW73-91017	Water	09/10/17 11:37	09/12/17 14:44
550-89579-19	FC-CCR-MW74-91017	Water	09/10/17 12:10	09/12/17 14:44
550-89579-20	FC-CCR-MW75-91017	Water	09/10/17 14:24	09/12/17 14:44

Detection Summary

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-MW7-91017 — Lab Sample ID: 550-89579-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.83		0.20	mg/L	1		200.7 Rev 4.4	Total/NA
Arsenic	0.0021	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Barium	0.014	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.0035	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Selenium	0.013	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW49A-91017 — Lab Sample ID: 550-89579-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.90		0.20	mg/L	1		200.7 Rev 4.4	Total/NA
Barium	0.020	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Cobalt	0.0026	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.034	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Thallium	0.0013	D1	0.00040	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW60-91017 — Lab Sample ID: 550-89579-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	7.4	D1	0.80	mg/L	2		300.0	Total/NA
Lithium	0.76		0.20	mg/L	1		200.7 Rev 4.4	Total/NA
Barium	0.017	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Cadmium	0.00097	D1	0.00040	mg/L	4		200.8 LL	Total/NA
Cobalt	0.29	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.16	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW61-91017 — Lab Sample ID: 550-89579-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	1.2		0.40	mg/L	1		300.0	Total/NA
Lithium	0.37		0.20	mg/L	1		200.7 Rev 4.4	Total/NA
Barium	0.013	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Cadmium	0.00087	D1	0.00040	mg/L	4		200.8 LL	Total/NA
Cobalt	0.014	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.073	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW62-9917 — Lab Sample ID: 550-89579-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	1.5		0.40	mg/L	1		300.0	Total/NA
Arsenic	0.0031	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Barium	0.026	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Cobalt	0.0064	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.0028	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW63-9917 — Lab Sample ID: 550-89579-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	2.0		0.40	mg/L	1		300.0	Total/NA
Barium	0.020	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Cobalt	0.0060	D1	0.0020	mg/L	4		200.8 LL	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: 550-89579-2

Client Sample ID: FC-CCR-MW63-9917 (Continued) — Lab Sample ID: 550-89579-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	0.0025	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW64-9917 — Lab Sample ID: 550-89579-7

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	1.5		0.40	mg/L	1		300.0	Total/NA
Barium	0.024	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.0045	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW65-9917 — Lab Sample ID: 550-89579-8

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	2.0		0.40	mg/L	1		300.0	Total/NA
Barium	0.012	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.0080	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-FD01-9917 — Lab Sample ID: 550-89579-9

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	2.0		0.40	mg/L	1		300.0	Total/NA
Barium	0.011	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.0081	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW66-9917 — Lab Sample ID: 550-89579-10

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	26	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
Barium	0.019	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Cobalt	0.0069	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.021	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW67-91017 — Lab Sample ID: 550-89579-11

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	24	D1	2.0	mg/L	5		300.0	Total/NA
Lithium	0.43		0.20	mg/L	1		200.7 Rev 4.4	Total/NA
Barium	0.020	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Cobalt	0.0047	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.038	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Selenium	0.023	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Thallium	0.00056	D1	0.00040	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW68-91017 — Lab Sample ID: 550-89579-12

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	11	D1	2.0	mg/L	5		300.0	Total/NA
Lithium	0.34		0.20	mg/L	1		200.7 Rev 4.4	Total/NA
Arsenic	0.0086	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Barium	0.0075	D1	0.0020	mg/L	4		200.8 LL	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: 550-89579-2

Client Sample ID: FC-CCR-MW68-91017 (Continued) — Lab Sample ID: 550-89579-12

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.0023	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.0063	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Selenium	0.29	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Thallium	0.00083	D1	0.00040	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW69-91017 — Lab Sample ID: 550-89579-13

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	20	D1	2.0	mg/L	5		300.0	Total/NA
Lithium	0.46		0.20	mg/L	1		200.7 Rev 4.4	Total/NA
Arsenic	0.0073	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Barium	0.018	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Cobalt	0.0043	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Lead	0.0060	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.016	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Selenium	0.014	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-FD02-91017 — Lab Sample ID: 550-89579-14

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	20	D1	2.0	mg/L	5		300.0	Total/NA
Lithium	0.46		0.20	mg/L	1		200.7 Rev 4.4	Total/NA
Arsenic	0.0075	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Barium	0.018	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Cobalt	0.0044	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.017	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Selenium	0.013	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW70-9917 — Lab Sample ID: 550-89579-15

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	2.5	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	0.0056	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Barium	0.010	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Cobalt	0.0057	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.0063	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Selenium	0.17	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW71-91117 — Lab Sample ID: 550-89579-16

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.32		0.20	mg/L	1		200.7 Rev 4.4	Total/NA
Arsenic	0.0048	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Barium	0.0089	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Selenium	0.20	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW72-91017 — Lab Sample ID: 550-89579-17

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: 550-89579-2

Client Sample ID: FC-CCR-MW72-91017 (Continued) — Lab Sample ID: 550-89579-17

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.37		0.20	mg/L	1		200.7 Rev 4.4	Total/NA
Arsenic	0.0029	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Barium	0.0086	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Cobalt	0.0023	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Selenium	0.10	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Thallium	0.00095	D1	0.00040	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW73-91017 — Lab Sample ID: 550-89579-18

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.22		0.20	mg/L	1		200.7 Rev 4.4	Total/NA
Arsenic	0.0020	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Barium	0.023	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Cobalt	0.0048	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.0024	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Selenium	0.033	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW74-91017 — Lab Sample ID: 550-89579-19

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	2.0	D1	0.80	mg/L	2		300.0	Total/NA
Lithium	0.48		0.20	mg/L	1		200.7 Rev 4.4	Total/NA
Arsenic	0.0043	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Barium	0.023	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.024	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Selenium	0.092	D1	0.0020	mg/L	4		200.8 LL	Total/NA

Client Sample ID: FC-CCR-MW75-91017 — Lab Sample ID: 550-89579-20

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Lithium	0.42		0.20	mg/L	1		200.7 Rev 4.4	Total/NA
Barium	0.018	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Cadmium	0.0020	D1	0.00040	mg/L	4		200.8 LL	Total/NA
Cobalt	0.044	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Lead	0.0032	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Molybdenum	0.16	D1	0.0020	mg/L	4		200.8 LL	Total/NA
Selenium	0.0023	D1	0.0020	mg/L	4		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: 550-89579-2

Client Sample ID: FC-CCR-MW7-91017

Lab Sample ID: 550-89579-1
Date Collected: 09/10/17 16:06
Matrix: Water
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND	D1 D5	0.80	mg/L			09/23/17 15:24	2

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 04:30	1
Lithium	**0.83**		0.20	mg/L		09/13/17 06:44	09/26/17 04:30	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:13	4
Arsenic	**0.0021**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:13	4
Barium	**0.014**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:13	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:13	4
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:13	4
Cobalt	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:13	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:13	4
Molybdenum	**0.0035**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:13	4
Selenium	**0.013**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:13	4
Thallium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:13	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020	mg/L		09/21/17 11:42	09/22/17 15:06	1

Client Sample ID: FC-CCR-MW49A-91017

Lab Sample ID: 550-89579-2
Date Collected: 09/10/17 17:05
Matrix: Water
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND	D1 D5	4.0	mg/L			09/23/17 17:14	10

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 04:39	1
Lithium	**0.90**		0.20	mg/L		09/13/17 06:44	09/26/17 04:39	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:21	4
Arsenic	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:21	4
Barium	**0.020**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:21	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:21	4
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:21	4
Cobalt	**0.0026**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:21	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:21	4
Molybdenum	**0.034**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:21	4
Selenium	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:21	4
Thallium	**0.0013**	**D1**	0.00040	mg/L		09/14/17 10:28	09/29/17 20:21	4

Client Sample Results

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-MW49A-91017

Lab Sample ID: 550-89579-2
Date Collected: 09/10/17 17:05
Matrix: Water
Date Received: 09/12/17 14:44

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND	B1	0.00020	mg/L		09/23/17 11:02	09/26/17 16:12	1

Client Sample ID: FC-CCR-MW60-91017

Lab Sample ID: 550-89579-3
Date Collected: 09/10/17 14:58
Matrix: Water
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**7.4**	**D1**	0.80	mg/L			09/23/17 17:51	2

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 04:44	1
Lithium	**0.76**		0.20	mg/L		09/13/17 06:44	09/26/17 04:44	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:23	4
Arsenic	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:23	4
Barium	**0.017**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:23	4
Cadmium	**0.00097**	**D1**	0.00040	mg/L		09/14/17 10:28	09/29/17 20:23	4
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:23	4
Cobalt	**0.29**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:23	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:23	4
Molybdenum	**0.16**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:23	4
Selenium	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:23	4
Thallium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:23	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND	B1	0.00020	mg/L		09/23/17 11:02	09/26/17 16:10	1

Client Sample ID: FC-CCR-MW61-91017

Lab Sample ID: 550-89579-4
Date Collected: 09/10/17 13:46
Matrix: Water
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**1.2**		0.40	mg/L			09/23/17 19:05	1

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 04:50	1
Lithium	**0.37**		0.20	mg/L		09/13/17 06:44	09/26/17 04:50	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:25	4
Arsenic	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:25	4
Barium	**0.013**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:25	4
Cadmium	**0.00087**	**D1**	0.00040	mg/L		09/14/17 10:28	09/29/17 20:25	4

Client Sample ID: FC-CCR-MW61-91017

Lab Sample ID: 550-89579-4
Date Collected: 09/10/17 13:46
Matrix: Water
Date Received: 09/12/17 14:44

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:25	4
Cobalt	**0.014**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:25	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:25	4
Molybdenum	**0.073**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:25	4
Selenium	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:25	4
Thallium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:25	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND	B1	0.00020	mg/L		09/23/17 11:02	09/26/17 16:13	1

Client Sample ID: FC-CCR-MW62-9917

Lab Sample ID: 550-89579-5
Date Collected: 09/09/17 15:36
Matrix: Water
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**1.5**		0.40	mg/L			09/23/17 19:42	1

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 04:56	1
Lithium	ND		0.20	mg/L		09/13/17 06:44	09/26/17 04:56	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:28	4
Arsenic	**0.0031**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:28	4
Barium	**0.026**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:28	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:28	4
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:28	4
Cobalt	**0.0064**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:28	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:28	4
Molybdenum	**0.0028**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:28	4
Selenium	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:28	4
Thallium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:28	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020	mg/L		09/21/17 11:42	09/22/17 15:30	1

Client Sample ID: FC-CCR-MW63-9917

Lab Sample ID: 550-89579-6
Date Collected: 09/09/17 16:14
Matrix: Water
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**2.0**		0.40	mg/L			09/23/17 20:18	1

Client Sample Results

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-MW63-9917

Lab Sample ID: 550-89579-6
Matrix: Water

Date Collected: 09/09/17 16:14
Date Received: 09/12/17 14:44

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 05:02	1
Lithium	ND		0.20	mg/L		09/13/17 06:44	09/26/17 05:02	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:30	4
Arsenic	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:30	4
Barium	**0.020**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:30	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:30	4
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:30	4
Cobalt	**0.0060**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:30	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:30	4
Molybdenum	**0.0025**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:30	4
Selenium	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:30	4
Thallium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:30	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020	mg/L		09/21/17 11:42	09/22/17 15:31	1

Client Sample ID: FC-CCR-MW64-9917

Lab Sample ID: 550-89579-7
Matrix: Water

Date Collected: 09/09/17 16:39
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**1.5**		0.40	mg/L			09/23/17 20:55	1

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 05:08	1
Lithium	ND		0.20	mg/L		09/13/17 06:44	09/26/17 05:08	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:33	4
Arsenic	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:33	4
Barium	**0.024**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:33	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:33	4
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:33	4
Cobalt	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:33	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:33	4
Molybdenum	**0.0045**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:33	4
Selenium	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:33	4
Thallium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:33	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020	mg/L		09/21/17 11:42	09/22/17 15:33	1

Client Sample Results

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-MW65-9917

Lab Sample ID: 550-89579-8
Matrix: Water
Date Collected: 09/09/17 14:45
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**2.0**		0.40	mg/L			09/23/17 21:32	1

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 05:19	1
Lithium	ND		0.20	mg/L		09/13/17 06:44	09/26/17 05:19	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:35	4
Arsenic	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:35	4
Barium	**0.012**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:35	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:35	4
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:35	4
Cobalt	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:35	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:35	4
Molybdenum	**0.0080**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:35	4
Selenium	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:35	4
Thallium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:35	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020	mg/L		09/21/17 11:42	09/22/17 15:35	1

Client Sample ID: FC-CCR-FD01-9917

Lab Sample ID: 550-89579-9
Matrix: Water
Date Collected: 09/09/17 14:45
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**2.0**		0.40	mg/L			09/23/17 22:46	1

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 05:22	1
Lithium	ND		0.20	mg/L		09/13/17 06:44	09/26/17 05:22	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:37	4
Arsenic	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:37	4
Barium	**0.011**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:37	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:37	4
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:37	4
Cobalt	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:37	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:37	4
Molybdenum	**0.0081**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:37	4
Selenium	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:37	4
Thallium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:37	4

Client Sample Results

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-FD01-9917

Lab Sample ID: 550-89579-9
Date Collected: 09/09/17 14:45
Matrix: Water
Date Received: 09/12/17 14:44

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020	mg/L		09/21/17 11:42	09/22/17 15:36	1

Client Sample ID: FC-CCR-MW66-9917

Lab Sample ID: 550-89579-10
Date Collected: 09/09/17 17:13
Matrix: Water
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**26**	**D1**	2.0	mg/L			09/23/17 23:22	5

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 05:25	1
Lithium	**0.32**		0.20	mg/L		09/13/17 06:44	09/26/17 05:25	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:40	4
Arsenic	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:40	4
Barium	**0.019**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:40	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:40	4
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:40	4
Cobalt	**0.0069**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:40	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:40	4
Molybdenum	**0.021**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:40	4
Selenium	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:40	4
Thallium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:40	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020	mg/L		09/21/17 11:42	09/22/17 15:38	1

Client Sample ID: FC-CCR-MW67-91017

Lab Sample ID: 550-89579-11
Date Collected: 09/10/17 09:53
Matrix: Water
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**24**	**D1**	2.0	mg/L			09/23/17 23:59	5

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 05:31	1
Lithium	**0.43**		0.20	mg/L		09/13/17 06:44	09/26/17 05:31	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:47	4
Arsenic	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:47	4
Barium	**0.020**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:47	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:47	4

Client Sample ID: FC-CCR-MW67-91017

Lab Sample ID: 550-89579-11
Date Collected: 09/10/17 09:53
Matrix: Water
Date Received: 09/12/17 14:44

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:47	4
Cobalt	**0.0047**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:47	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:47	4
Molybdenum	**0.038**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:47	4
Selenium	**0.023**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:47	4
Thallium	**0.00056**	**D1**	0.00040	mg/L		09/14/17 10:28	09/29/17 20:47	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND	B1	0.00020	mg/L		09/23/17 11:02	09/26/17 16:15	1

Client Sample ID: FC-CCR-MW68-91017

Lab Sample ID: 550-89579-12
Date Collected: 09/10/17 10:27
Matrix: Water
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**11**	**D1**	2.0	mg/L			09/24/17 00:36	5

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 05:37	1
Lithium	**0.34**		0.20	mg/L		09/13/17 06:44	09/26/17 05:37	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:49	4
Arsenic	**0.0086**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:49	4
Barium	**0.0075**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:49	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:49	4
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:49	4
Cobalt	**0.0023**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:49	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:49	4
Molybdenum	**0.0063**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:49	4
Selenium	**0.29**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:49	4
Thallium	**0.00083**	**D1**	0.00040	mg/L		09/14/17 10:28	09/29/17 20:49	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND	B1	0.00020	mg/L		09/23/17 11:02	09/26/17 16:17	1

Client Sample ID: FC-CCR-MW69-91017

Lab Sample ID: 550-89579-13
Date Collected: 09/10/17 09:05
Matrix: Water
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**20**	**D1**	2.0	mg/L			09/24/17 01:13	5

Client Sample Results

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-MW69-91017

Lab Sample ID: 550-89579-13
Date Collected: 09/10/17 09:05
Matrix: Water
Date Received: 09/12/17 14:44

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 05:43	1
Lithium	**0.46**		0.20	mg/L		09/13/17 06:44	09/26/17 05:43	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:51	4
Arsenic	**0.0073**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:51	4
Barium	**0.018**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:51	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:51	4
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:51	4
Cobalt	**0.0043**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:51	4
Lead	**0.0060**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:51	4
Molybdenum	**0.016**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:51	4
Selenium	**0.014**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:51	4
Thallium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:51	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND	B1	0.00020	mg/L		09/23/17 11:02	09/26/17 16:18	1

Client Sample ID: FC-CCR-FD02-91017

Lab Sample ID: 550-89579-14
Date Collected: 09/10/17 09:05
Matrix: Water
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**20**	**D1**	2.0	mg/L			09/24/17 02:27	5

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 05:49	1
Lithium	**0.46**		0.20	mg/L		09/13/17 06:44	09/26/17 05:49	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:54	4
Arsenic	**0.0075**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:54	4
Barium	**0.018**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:54	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:54	4
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 20:54	4
Cobalt	**0.0044**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:54	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 20:54	4
Molybdenum	**0.017**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:54	4
Selenium	**0.013**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 20:54	4
Thallium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 20:54	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND	B1	0.00020	mg/L		09/23/17 11:02	09/26/17 16:20	1

Client Sample Results

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-MW70-9917

Lab Sample ID: 550-89579-15
Matrix: Water
Date Collected: 09/09/17 17:46
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**2.5**	**D1**	0.80		mg/L			09/24/17 03:03	2

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010		mg/L		09/13/17 06:44	09/26/17 05:55	1
Lithium	**0.31**		0.20		mg/L		09/13/17 06:44	09/26/17 05:55	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040		mg/L		09/14/17 10:28	09/29/17 20:56	4
Arsenic	**0.0056**	**D1**	0.0020		mg/L		09/14/17 10:28	09/29/17 20:56	4
Barium	**0.010**	**D1**	0.0020		mg/L		09/14/17 10:28	09/29/17 20:56	4
Cadmium	ND	D1	0.00040		mg/L		09/14/17 10:28	09/29/17 20:56	4
Chromium	ND	D1	0.0040		mg/L		09/14/17 10:28	09/29/17 20:56	4
Cobalt	**0.0057**	**D1**	0.0020		mg/L		09/14/17 10:28	09/29/17 20:56	4
Lead	ND	D1	0.0020		mg/L		09/14/17 10:28	09/29/17 20:56	4
Molybdenum	**0.0063**	**D1**	0.0020		mg/L		09/14/17 10:28	09/29/17 20:56	4
Selenium	**0.17**	**D1**	0.0020		mg/L		09/14/17 10:28	09/29/17 20:56	4
Thallium	ND	D1	0.00040		mg/L		09/14/17 10:28	09/29/17 20:56	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020		mg/L		09/21/17 11:42	09/22/17 15:39	1

Client Sample ID: FC-CCR-MW71-91117

Lab Sample ID: 550-89579-16
Matrix: Water
Date Collected: 09/11/17 08:56
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND	D1 D5	2.0		mg/L			09/24/17 03:40	5

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010		mg/L		09/13/17 06:44	09/26/17 06:01	1
Lithium	**0.32**		0.20		mg/L		09/13/17 06:44	09/26/17 06:01	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040		mg/L		09/14/17 10:28	09/29/17 20:59	4
Arsenic	**0.0048**	**D1**	0.0020		mg/L		09/14/17 10:28	09/29/17 20:59	4
Barium	**0.0089**	**D1**	0.0020		mg/L		09/14/17 10:28	09/29/17 20:59	4
Cadmium	ND	D1	0.00040		mg/L		09/14/17 10:28	09/29/17 20:59	4
Chromium	ND	D1	0.0040		mg/L		09/14/17 10:28	09/29/17 20:59	4
Cobalt	ND	D1	0.0020		mg/L		09/14/17 10:28	09/29/17 20:59	4
Lead	ND	D1	0.0020		mg/L		09/14/17 10:28	09/29/17 20:59	4
Molybdenum	ND	D1	0.0020		mg/L		09/14/17 10:28	09/29/17 20:59	4
Selenium	**0.20**	**D1**	0.0020		mg/L		09/14/17 10:28	09/29/17 20:59	4
Thallium	ND	D1	0.00040		mg/L		09/14/17 10:28	09/29/17 20:59	4

Client Sample Results

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-MW71-91117

Lab Sample ID: 550-89579-16
Date Collected: 09/11/17 08:56
Matrix: Water
Date Received: 09/12/17 14:44

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND	B1	0.00020	mg/L		09/23/17 11:02	09/26/17 16:21	1

Client Sample ID: FC-CCR-MW72-91017

Lab Sample ID: 550-89579-17
Date Collected: 09/10/17 17:54
Matrix: Water
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND	D1 D5	2.0	mg/L			09/24/17 04:17	5

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 06:06	1
Lithium	**0.37**		0.20	mg/L		09/13/17 06:44	09/26/17 06:06	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 21:01	4
Arsenic	**0.0029**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 21:01	4
Barium	**0.0086**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 21:01	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 21:01	4
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 21:01	4
Cobalt	**0.0023**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 21:01	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 21:01	4
Molybdenum	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 21:01	4
Selenium	**0.10**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 21:01	4
Thallium	**0.00095**	**D1**	0.00040	mg/L		09/14/17 10:28	09/29/17 21:01	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND	B1	0.00020	mg/L		09/23/17 11:02	09/26/17 16:23	1

Client Sample ID: FC-CCR-MW73-91017

Lab Sample ID: 550-89579-18
Date Collected: 09/10/17 11:37
Matrix: Water
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND	D1 D5	0.80	mg/L			09/24/17 04:54	2

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 06:21	1
Lithium	**0.22**		0.20	mg/L		09/13/17 06:44	09/26/17 06:21	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 21:03	4
Arsenic	**0.0020**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 21:03	4
Barium	**0.023**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 21:03	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 21:03	4

Client Sample ID: FC-CCR-MW73-91017 — Lab Sample ID: 550-89579-18

Date Collected: 09/10/17 11:37 — **Matrix: Water**
Date Received: 09/12/17 14:44

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 21:03	4
Cobalt	**0.0048**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 21:03	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 21:03	4
Molybdenum	**0.0024**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 21:03	4
Selenium	**0.033**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 21:03	4
Thallium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 21:03	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND	B1	0.00020	mg/L		09/23/17 11:02	09/26/17 16:24	1

Client Sample ID: FC-CCR-MW74-91017 — Lab Sample ID: 550-89579-19

Date Collected: 09/10/17 12:10 — **Matrix: Water**
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	**2.0**	**D1**	0.80	mg/L			09/24/17 06:07	2

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010	mg/L		09/13/17 06:44	09/26/17 06:27	1
Lithium	**0.48**		0.20	mg/L		09/13/17 06:44	09/26/17 06:27	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 21:06	4
Arsenic	**0.0043**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 21:06	4
Barium	**0.023**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 21:06	4
Cadmium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 21:06	4
Chromium	ND	D1	0.0040	mg/L		09/14/17 10:28	09/29/17 21:06	4
Cobalt	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 21:06	4
Lead	ND	D1	0.0020	mg/L		09/14/17 10:28	09/29/17 21:06	4
Molybdenum	**0.024**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 21:06	4
Selenium	**0.092**	**D1**	0.0020	mg/L		09/14/17 10:28	09/29/17 21:06	4
Thallium	ND	D1	0.00040	mg/L		09/14/17 10:28	09/29/17 21:06	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND	B1	0.00020	mg/L		09/23/17 11:02	09/26/17 16:29	1

Client Sample ID: FC-CCR-MW75-91017 — Lab Sample ID: 550-89579-20

Date Collected: 09/10/17 14:24 — **Matrix: Water**
Date Received: 09/12/17 14:44

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND	D1 D5	2.0	mg/L			09/24/17 07:03	5

Client Sample Results

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-MW75-91017

Lab Sample ID: 550-89579-20

Date Collected: 09/10/17 14:24
Matrix: Water
Date Received: 09/12/17 14:44

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010		mg/L		09/13/17 06:44	09/26/17 06:33	1
Lithium	**0.42**		0.20		mg/L		09/13/17 06:44	09/26/17 06:33	1

Method: 200.8 LL - Metals (ICP/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	D1	0.0040		mg/L		09/14/17 10:28	09/29/17 21:08	4
Arsenic	ND	D1	0.0020		mg/L		09/14/17 10:28	09/29/17 21:08	4
Barium	**0.018**	**D1**	0.0020		mg/L		09/14/17 10:28	09/29/17 21:08	4
Cadmium	**0.0020**	**D1**	0.00040		mg/L		09/14/17 10:28	09/29/17 21:08	4
Chromium	ND	D1	0.0040		mg/L		09/14/17 10:28	09/29/17 21:08	4
Cobalt	**0.044**	**D1**	0.0020		mg/L		09/14/17 10:28	09/29/17 21:08	4
Lead	**0.0032**	**D1**	0.0020		mg/L		09/14/17 10:28	09/29/17 21:08	4
Molybdenum	**0.16**	**D1**	0.0020		mg/L		09/14/17 10:28	09/29/17 21:08	4
Selenium	**0.0023**	**D1**	0.0020		mg/L		09/14/17 10:28	09/29/17 21:08	4
Thallium	ND	D1	0.00040		mg/L		09/14/17 10:28	09/29/17 21:08	4

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND	B1	0.00020		mg/L		09/23/17 11:02	09/26/17 16:31	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 550-128179/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128179

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.40		mg/L			09/23/17 13:52	1

Lab Sample ID: LCS 550-128179/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128179

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride			4.00	4.27		mg/L		107	90 - 110		

Lab Sample ID: LCSD 550-128179/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128179

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride			4.00	4.26		mg/L		107	90 - 110	0	20

Lab Sample ID: 550-89579-1 MS — **Client Sample ID: FC-CCR-MW7-91017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128179

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride	ND	D1 D5	8.00	8.32	D1	mg/L		100	80 - 120		

Lab Sample ID: 550-89579-1 MSD — **Client Sample ID: FC-CCR-MW7-91017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128179

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	8.24	D1	mg/L		99	80 - 120	1	20

Lab Sample ID: MB 550-128590/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128590

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.40		mg/L			09/27/17 15:41	1

Lab Sample ID: LCS 550-128590/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128590

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride			4.00	4.22		mg/L		106	90 - 110		

Lab Sample ID: LCSD 550-128590/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128590

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

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 550-127178/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128372 — **Prep Batch: 127178**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	ND		0.0010		mg/L		09/13/17 06:44	09/26/17 04:10	1
Lithium	ND		0.20		mg/L		09/13/17 06:44	09/26/17 04:10	1

Lab Sample ID: LCS 550-127178/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128372 — **Prep Batch: 127178**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	1.00	1.05		mg/L		105	85 - 115
Lithium	1.00	0.966		mg/L		97	85 - 115

Lab Sample ID: LCSD 550-127178/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128372 — **Prep Batch: 127178**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Beryllium	1.00	1.04		mg/L		104	85 - 115	1	20
Lithium	1.00	0.987		mg/L		99	85 - 115	2	20

Lab Sample ID: 550-89579-1 MS — **Client Sample ID: FC-CCR-MW7-91017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128372 — **Prep Batch: 127178**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Beryllium	ND		1.00	0.988		mg/L		99	70 - 130
Lithium	0.83		1.00	1.85		mg/L		102	70 - 130

Lab Sample ID: 550-89579-1 MSD — **Client Sample ID: FC-CCR-MW7-91017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128372 — **Prep Batch: 127178**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Beryllium	ND		1.00	0.996		mg/L		100	70 - 130	1	20
Lithium	0.83		1.00	1.84		mg/L		101	70 - 130	1	20

Method: 200.8 LL - Metals (ICP/MS)

Lab Sample ID: MB 550-127339/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128789 — **Prep Batch: 127339**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0010		mg/L		09/14/17 10:28	09/29/17 20:06	1
Arsenic	ND		0.00050		mg/L		09/14/17 10:28	09/29/17 20:06	1
Barium	ND		0.00050		mg/L		09/14/17 10:28	09/29/17 20:06	1
Cadmium	ND		0.00010		mg/L		09/14/17 10:28	09/29/17 20:06	1
Chromium	ND		0.0010		mg/L		09/14/17 10:28	09/29/17 20:06	1
Cobalt	ND		0.00050		mg/L		09/14/17 10:28	09/29/17 20:06	1
Lead	ND		0.00050		mg/L		09/14/17 10:28	09/29/17 20:06	1

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

Lab Sample ID: MB 550-127339/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128789 — **Prep Batch: 127339**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	ND		0.00050	mg/L		09/14/17 10:28	09/29/17 20:06	1
Selenium	ND		0.00050	mg/L		09/14/17 10:28	09/29/17 20:06	1
Thallium	ND		0.00010	mg/L		09/14/17 10:28	09/29/17 20:06	1

Lab Sample ID: LCS 550-127339/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128789 — **Prep Batch: 127339**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.100	0.0959		mg/L		96	85 - 115
Arsenic	0.100	0.0985		mg/L		99	85 - 115
Barium	0.100	0.0983		mg/L		98	85 - 115
Cadmium	0.100	0.0961		mg/L		96	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	0.0958		mg/L		96	85 - 115
Molybdenum	0.100	0.0953		mg/L		95	85 - 115
Selenium	0.100	0.0978		mg/L		98	85 - 115
Thallium	0.100	0.0970		mg/L		97	85 - 115

Lab Sample ID: LCSD 550-127339/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128789 — **Prep Batch: 127339**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.100	0.0966		mg/L		97	85 - 115	1	20
Arsenic	0.100	0.0971		mg/L		97	85 - 115	1	20
Barium	0.100	0.0993		mg/L		99	85 - 115	1	20
Cadmium	0.100	0.0969		mg/L		97	85 - 115	1	20
Chromium	0.100	0.0973		mg/L		97	85 - 115	0	20
Cobalt	0.100	0.0974		mg/L		97	85 - 115	0	20
Lead	0.100	0.0967		mg/L		97	85 - 115	1	20
Molybdenum	0.100	0.0964		mg/L		96	85 - 115	1	20
Selenium	0.100	0.0968		mg/L		97	85 - 115	1	20
Thallium	0.100	0.0975		mg/L		98	85 - 115	1	20

Lab Sample ID: 550-89579-1 MS — **Client Sample ID: FC-CCR-MW7-91017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128789 — **Prep Batch: 127339**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND	D1	0.100	0.0993	D1	mg/L		99	70 - 130
Arsenic	0.0021	D1	0.100	0.101	D1	mg/L		99	70 - 130
Barium	0.014	D1	0.100	0.112	D1	mg/L		97	70 - 130
Cadmium	ND	D1	0.100	0.0942	D1	mg/L		94	70 - 130
Chromium	ND	D1	0.100	0.0967	D1	mg/L		95	70 - 130
Cobalt	ND	D1	0.100	0.0943	D1	mg/L		94	70 - 130
Lead	ND	D1	0.100	0.0887	D1	mg/L		89	70 - 130
Molybdenum	0.0035	D1	0.100	0.104	D1	mg/L		100	70 - 130

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

Lab Sample ID: 550-89579-1 MS — **Client Sample ID: FC-CCR-MW7-91017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128789 — **Prep Batch: 127339**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Selenium	0.013	D1	0.100	0.117	D1	mg/L		104	70 - 130		
Thallium	ND	D1	0.100	0.0886	D1	mg/L		88	70 - 130		

Lab Sample ID: 550-89579-1 MSD — **Client Sample ID: FC-CCR-MW7-91017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128789 — **Prep Batch: 127339**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND	D1	0.100	0.0985	D1	mg/L		98	70 - 130	1	20
Arsenic	0.0021	D1	0.100	0.101	D1	mg/L		99	70 - 130	0	20
Barium	0.014	D1	0.100	0.113	D1	mg/L		98	70 - 130	1	20
Cadmium	ND	D1	0.100	0.0926	D1	mg/L		92	70 - 130	2	20
Chromium	ND	D1	0.100	0.0953	D1	mg/L		94	70 - 130	1	20
Cobalt	ND	D1	0.100	0.0928	D1	mg/L		92	70 - 130	2	20
Lead	ND	D1	0.100	0.0881	D1	mg/L		88	70 - 130	1	20
Molybdenum	0.0035	D1	0.100	0.102	D1	mg/L		99	70 - 130	1	20
Selenium	0.013	D1	0.100	0.115	D1	mg/L		101	70 - 130	2	20
Thallium	ND	D1	0.100	0.0880	D1	mg/L		88	70 - 130	1	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 550-127960/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128122 — **Prep Batch: 127960**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hg	ND		0.00020		mg/L		09/21/17 11:42	09/22/17 14:58	1

Lab Sample ID: LCS 550-127960/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128122 — **Prep Batch: 127960**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg			0.0200	0.0197		mg/L		99	85 - 115		

Lab Sample ID: LCSD 550-127960/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128122 — **Prep Batch: 127960**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg			0.0200	0.0196		mg/L		98	85 - 115	1	20

Lab Sample ID: 550-89579-1 MS — **Client Sample ID: FC-CCR-MW7-91017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128122 — **Prep Batch: 127960**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg	ND		0.0200	0.0166		mg/L		83	70 - 130		

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 550-89579-1 MSD — **Client Sample ID: FC-CCR-MW7-91017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128122 — **Prep Batch: 127960**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	ND		0.0200	0.0183		mg/L		91	70 - 130	10	20

Lab Sample ID: MB 550-128152/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128420 — **Prep Batch: 128152**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hg	0.000632	B1	0.00020		mg/L		09/23/17 11:02	09/26/17 16:03	1

Lab Sample ID: LCS 550-128152/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128420 — **Prep Batch: 128152**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg			0.0100	0.0105		mg/L		105	85 - 115		

Lab Sample ID: LCSD 550-128152/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128420 — **Prep Batch: 128152**

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	2	20

Lab Sample ID: 550-89579-3 MS — **Client Sample ID: FC-CCR-MW60-91017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128420 — **Prep Batch: 128152**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg	ND	B1	0.0100	0.0101		mg/L		101	70 - 130		

Lab Sample ID: 550-89579-3 MSD — **Client Sample ID: FC-CCR-MW60-91017**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 128420 — **Prep Batch: 128152**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hg	ND	B1	0.0100	0.00939		mg/L		94	70 - 130	7	20

QC Association Summary

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

TestAmerica Job ID: 550-89579-2

HPLC/IC

Analysis Batch: 128179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-89579-1	FC-CCR-MW7-91017	Total/NA	Water	300.0	
550-89579-2	FC-CCR-MW49A-91017	Total/NA	Water	300.0	
550-89579-3	FC-CCR-MW60-91017	Total/NA	Water	300.0	
550-89579-4	FC-CCR-MW61-91017	Total/NA	Water	300.0	
550-89579-5	FC-CCR-MW62-9917	Total/NA	Water	300.0	
550-89579-6	FC-CCR-MW63-9917	Total/NA	Water	300.0	
550-89579-7	FC-CCR-MW64-9917	Total/NA	Water	300.0	
550-89579-8	FC-CCR-MW65-9917	Total/NA	Water	300.0	
550-89579-9	FC-CCR-FD01-9917	Total/NA	Water	300.0	
550-89579-10	FC-CCR-MW66-9917	Total/NA	Water	300.0	
550-89579-11	FC-CCR-MW67-91017	Total/NA	Water	300.0	
550-89579-12	FC-CCR-MW68-91017	Total/NA	Water	300.0	
550-89579-13	FC-CCR-MW69-91017	Total/NA	Water	300.0	
550-89579-14	FC-CCR-FD02-91017	Total/NA	Water	300.0	
550-89579-15	FC-CCR-MW70-9917	Total/NA	Water	300.0	
550-89579-16	FC-CCR-MW71-91117	Total/NA	Water	300.0	
550-89579-17	FC-CCR-MW72-91017	Total/NA	Water	300.0	
550-89579-18	FC-CCR-MW73-91017	Total/NA	Water	300.0	
550-89579-19	FC-CCR-MW74-91017	Total/NA	Water	300.0	
550-89579-20	FC-CCR-MW75-91017	Total/NA	Water	300.0	
MB 550-128179/2	Method Blank	Total/NA	Water	300.0	
LCS 550-128179/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-128179/6	Lab Control Sample Dup	Total/NA	Water	300.0	
550-89579-1 MS	FC-CCR-MW7-91017	Total/NA	Water	300.0	
550-89579-1 MSD	FC-CCR-MW7-91017	Total/NA	Water	300.0	

Analysis Batch: 128590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 550-128590/2	Method Blank	Total/NA	Water	300.0	
LCS 550-128590/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-128590/6	Lab Control Sample Dup	Total/NA	Water	300.0	

Metals

Prep Batch: 127178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-89579-1	FC-CCR-MW7-91017	Total/NA	Water	200.7	
550-89579-2	FC-CCR-MW49A-91017	Total/NA	Water	200.7	
550-89579-3	FC-CCR-MW60-91017	Total/NA	Water	200.7	
550-89579-4	FC-CCR-MW61-91017	Total/NA	Water	200.7	
550-89579-5	FC-CCR-MW62-9917	Total/NA	Water	200.7	
550-89579-6	FC-CCR-MW63-9917	Total/NA	Water	200.7	
550-89579-7	FC-CCR-MW64-9917	Total/NA	Water	200.7	
550-89579-8	FC-CCR-MW65-9917	Total/NA	Water	200.7	
550-89579-9	FC-CCR-FD01-9917	Total/NA	Water	200.7	
550-89579-10	FC-CCR-MW66-9917	Total/NA	Water	200.7	
550-89579-11	FC-CCR-MW67-91017	Total/NA	Water	200.7	
550-89579-12	FC-CCR-MW68-91017	Total/NA	Water	200.7	
550-89579-13	FC-CCR-MW69-91017	Total/NA	Water	200.7	
550-89579-14	FC-CCR-FD02-91017	Total/NA	Water	200.7	

Metals (Continued)

Prep Batch: 127178 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-89579-15	FC-CCR-MW70-9917	Total/NA	Water	200.7	
550-89579-16	FC-CCR-MW71-91117	Total/NA	Water	200.7	
550-89579-17	FC-CCR-MW72-91017	Total/NA	Water	200.7	
550-89579-18	FC-CCR-MW73-91017	Total/NA	Water	200.7	
550-89579-19	FC-CCR-MW74-91017	Total/NA	Water	200.7	
550-89579-20	FC-CCR-MW75-91017	Total/NA	Water	200.7	
MB 550-127178/1-A	Method Blank	Total/NA	Water	200.7	
LCS 550-127178/2-A	Lab Control Sample	Total/NA	Water	200.7	
LCSD 550-127178/3-A	Lab Control Sample Dup	Total/NA	Water	200.7	
550-89579-1 MS	FC-CCR-MW7-91017	Total/NA	Water	200.7	
550-89579-1 MSD	FC-CCR-MW7-91017	Total/NA	Water	200.7	

Prep Batch: 127339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-89579-1	FC-CCR-MW7-91017	Total/NA	Water	200.8	
550-89579-2	FC-CCR-MW49A-91017	Total/NA	Water	200.8	
550-89579-3	FC-CCR-MW60-91017	Total/NA	Water	200.8	
550-89579-4	FC-CCR-MW61-91017	Total/NA	Water	200.8	
550-89579-5	FC-CCR-MW62-9917	Total/NA	Water	200.8	
550-89579-6	FC-CCR-MW63-9917	Total/NA	Water	200.8	
550-89579-7	FC-CCR-MW64-9917	Total/NA	Water	200.8	
550-89579-8	FC-CCR-MW65-9917	Total/NA	Water	200.8	
550-89579-9	FC-CCR-FD01-9917	Total/NA	Water	200.8	
550-89579-10	FC-CCR-MW66-9917	Total/NA	Water	200.8	
550-89579-11	FC-CCR-MW67-91017	Total/NA	Water	200.8	
550-89579-12	FC-CCR-MW68-91017	Total/NA	Water	200.8	
550-89579-13	FC-CCR-MW69-91017	Total/NA	Water	200.8	
550-89579-14	FC-CCR-FD02-91017	Total/NA	Water	200.8	
550-89579-15	FC-CCR-MW70-9917	Total/NA	Water	200.8	
550-89579-16	FC-CCR-MW71-91117	Total/NA	Water	200.8	
550-89579-17	FC-CCR-MW72-91017	Total/NA	Water	200.8	
550-89579-18	FC-CCR-MW73-91017	Total/NA	Water	200.8	
550-89579-19	FC-CCR-MW74-91017	Total/NA	Water	200.8	
550-89579-20	FC-CCR-MW75-91017	Total/NA	Water	200.8	
MB 550-127339/1-A	Method Blank	Total/NA	Water	200.8	
LCS 550-127339/2-A	Lab Control Sample	Total/NA	Water	200.8	
LCSD 550-127339/3-A	Lab Control Sample Dup	Total/NA	Water	200.8	
550-89579-1 MS	FC-CCR-MW7-91017	Total/NA	Water	200.8	
550-89579-1 MSD	FC-CCR-MW7-91017	Total/NA	Water	200.8	

Prep Batch: 127960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-89579-1	FC-CCR-MW7-91017	Total/NA	Water	245.1	
550-89579-5	FC-CCR-MW62-9917	Total/NA	Water	245.1	
550-89579-6	FC-CCR-MW63-9917	Total/NA	Water	245.1	
550-89579-7	FC-CCR-MW64-9917	Total/NA	Water	245.1	
550-89579-8	FC-CCR-MW65-9917	Total/NA	Water	245.1	
550-89579-9	FC-CCR-FD01-9917	Total/NA	Water	245.1	
550-89579-10	FC-CCR-MW66-9917	Total/NA	Water	245.1	
550-89579-15	FC-CCR-MW70-9917	Total/NA	Water	245.1	
MB 550-127960/1-A	Method Blank	Total/NA	Water	245.1	

Metals (Continued)

Prep Batch: 127960 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 550-127960/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 550-127960/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
550-89579-1 MS	FC-CCR-MW7-91017	Total/NA	Water	245.1	
550-89579-1 MSD	FC-CCR-MW7-91017	Total/NA	Water	245.1	

Analysis Batch: 128122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-89579-1	FC-CCR-MW7-91017	Total/NA	Water	245.1	127960
550-89579-5	FC-CCR-MW62-9917	Total/NA	Water	245.1	127960
550-89579-6	FC-CCR-MW63-9917	Total/NA	Water	245.1	127960
550-89579-7	FC-CCR-MW64-9917	Total/NA	Water	245.1	127960
550-89579-8	FC-CCR-MW65-9917	Total/NA	Water	245.1	127960
550-89579-9	FC-CCR-FD01-9917	Total/NA	Water	245.1	127960
550-89579-10	FC-CCR-MW66-9917	Total/NA	Water	245.1	127960
550-89579-15	FC-CCR-MW70-9917	Total/NA	Water	245.1	127960
MB 550-127960/1-A	Method Blank	Total/NA	Water	245.1	127960
LCS 550-127960/2-A	Lab Control Sample	Total/NA	Water	245.1	127960
LCSD 550-127960/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	127960
550-89579-1 MS	FC-CCR-MW7-91017	Total/NA	Water	245.1	127960
550-89579-1 MSD	FC-CCR-MW7-91017	Total/NA	Water	245.1	127960

Prep Batch: 128152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-89579-2	FC-CCR-MW49A-91017	Total/NA	Water	245.1	
550-89579-3	FC-CCR-MW60-91017	Total/NA	Water	245.1	
550-89579-4	FC-CCR-MW61-91017	Total/NA	Water	245.1	
550-89579-11	FC-CCR-MW67-91017	Total/NA	Water	245.1	
550-89579-12	FC-CCR-MW68-91017	Total/NA	Water	245.1	
550-89579-13	FC-CCR-MW69-91017	Total/NA	Water	245.1	
550-89579-14	FC-CCR-FD02-91017	Total/NA	Water	245.1	
550-89579-16	FC-CCR-MW71-91117	Total/NA	Water	245.1	
550-89579-17	FC-CCR-MW72-91017	Total/NA	Water	245.1	
550-89579-18	FC-CCR-MW73-91017	Total/NA	Water	245.1	
550-89579-19	FC-CCR-MW74-91017	Total/NA	Water	245.1	
550-89579-20	FC-CCR-MW75-91017	Total/NA	Water	245.1	
MB 550-128152/1-A	Method Blank	Total/NA	Water	245.1	
LCS 550-128152/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 550-128152/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
550-89579-3 MS	FC-CCR-MW60-91017	Total/NA	Water	245.1	
550-89579-3 MSD	FC-CCR-MW60-91017	Total/NA	Water	245.1	

Analysis Batch: 128372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-89579-1	FC-CCR-MW7-91017	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-2	FC-CCR-MW49A-91017	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-3	FC-CCR-MW60-91017	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-4	FC-CCR-MW61-91017	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-5	FC-CCR-MW62-9917	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-6	FC-CCR-MW63-9917	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-7	FC-CCR-MW64-9917	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-8	FC-CCR-MW65-9917	Total/NA	Water	200.7 Rev 4.4	127178

Metals (Continued)

Analysis Batch: 128372 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-89579-9	FC-CCR-FD01-9917	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-10	FC-CCR-MW66-9917	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-11	FC-CCR-MW67-91017	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-12	FC-CCR-MW68-91017	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-13	FC-CCR-MW69-91017	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-14	FC-CCR-FD02-91017	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-15	FC-CCR-MW70-9917	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-16	FC-CCR-MW71-91117	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-17	FC-CCR-MW72-91017	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-18	FC-CCR-MW73-91017	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-19	FC-CCR-MW74-91017	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-20	FC-CCR-MW75-91017	Total/NA	Water	200.7 Rev 4.4	127178
MB 550-127178/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	127178
LCS 550-127178/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	127178
LCSD 550-127178/3-A	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-1 MS	FC-CCR-MW7-91017	Total/NA	Water	200.7 Rev 4.4	127178
550-89579-1 MSD	FC-CCR-MW7-91017	Total/NA	Water	200.7 Rev 4.4	127178

Analysis Batch: 128420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-89579-2	FC-CCR-MW49A-91017	Total/NA	Water	245.1	128152
550-89579-3	FC-CCR-MW60-91017	Total/NA	Water	245.1	128152
550-89579-4	FC-CCR-MW61-91017	Total/NA	Water	245.1	128152
550-89579-11	FC-CCR-MW67-91017	Total/NA	Water	245.1	128152
550-89579-12	FC-CCR-MW68-91017	Total/NA	Water	245.1	128152
550-89579-13	FC-CCR-MW69-91017	Total/NA	Water	245.1	128152
550-89579-14	FC-CCR-FD02-91017	Total/NA	Water	245.1	128152
550-89579-16	FC-CCR-MW71-91117	Total/NA	Water	245.1	128152
550-89579-17	FC-CCR-MW72-91017	Total/NA	Water	245.1	128152
550-89579-18	FC-CCR-MW73-91017	Total/NA	Water	245.1	128152
550-89579-19	FC-CCR-MW74-91017	Total/NA	Water	245.1	128152
550-89579-20	FC-CCR-MW75-91017	Total/NA	Water	245.1	128152
MB 550-128152/1-A	Method Blank	Total/NA	Water	245.1	128152
LCS 550-128152/2-A	Lab Control Sample	Total/NA	Water	245.1	128152
LCSD 550-128152/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	128152
550-89579-3 MS	FC-CCR-MW60-91017	Total/NA	Water	245.1	128152
550-89579-3 MSD	FC-CCR-MW60-91017	Total/NA	Water	245.1	128152

Analysis Batch: 128789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-89579-1	FC-CCR-MW7-91017	Total/NA	Water	200.8 LL	127339
550-89579-2	FC-CCR-MW49A-91017	Total/NA	Water	200.8 LL	127339
550-89579-3	FC-CCR-MW60-91017	Total/NA	Water	200.8 LL	127339
550-89579-4	FC-CCR-MW61-91017	Total/NA	Water	200.8 LL	127339
550-89579-5	FC-CCR-MW62-9917	Total/NA	Water	200.8 LL	127339
550-89579-6	FC-CCR-MW63-9917	Total/NA	Water	200.8 LL	127339
550-89579-7	FC-CCR-MW64-9917	Total/NA	Water	200.8 LL	127339
550-89579-8	FC-CCR-MW65-9917	Total/NA	Water	200.8 LL	127339
550-89579-9	FC-CCR-FD01-9917	Total/NA	Water	200.8 LL	127339
550-89579-10	FC-CCR-MW66-9917	Total/NA	Water	200.8 LL	127339
550-89579-11	FC-CCR-MW67-91017	Total/NA	Water	200.8 LL	127339

Metals (Continued)

Analysis Batch: 128789 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-89579-12	FC-CCR-MW68-91017	Total/NA	Water	200.8 LL	127339
550-89579-13	FC-CCR-MW69-91017	Total/NA	Water	200.8 LL	127339
550-89579-14	FC-CCR-FD02-91017	Total/NA	Water	200.8 LL	127339
550-89579-15	FC-CCR-MW70-9917	Total/NA	Water	200.8 LL	127339
550-89579-16	FC-CCR-MW71-91117	Total/NA	Water	200.8 LL	127339
550-89579-17	FC-CCR-MW72-91017	Total/NA	Water	200.8 LL	127339
550-89579-18	FC-CCR-MW73-91017	Total/NA	Water	200.8 LL	127339
550-89579-19	FC-CCR-MW74-91017	Total/NA	Water	200.8 LL	127339
550-89579-20	FC-CCR-MW75-91017	Total/NA	Water	200.8 LL	127339
MB 550-127339/1-A	Method Blank	Total/NA	Water	200.8 LL	127339
LCS 550-127339/2-A	Lab Control Sample	Total/NA	Water	200.8 LL	127339
LCSD 550-127339/3-A	Lab Control Sample Dup	Total/NA	Water	200.8 LL	127339
550-89579-1 MS	FC-CCR-MW7-91017	Total/NA	Water	200.8 LL	127339
550-89579-1 MSD	FC-CCR-MW7-91017	Total/NA	Water	200.8 LL	127339

Lab Chronicle

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-MW7-91017 — Lab Sample ID: 550-89579-1

Date Collected: 09/10/17 16:06 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2	128179	09/23/17 15:24	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 04:30	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:13	TEK	TAL PHX
Total/NA	Prep	245.1			127960	09/21/17 11:42	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128122	09/22/17 15:06	JTG	TAL PHX

Client Sample ID: FC-CCR-MW49A-91017 — Lab Sample ID: 550-89579-2

Date Collected: 09/10/17 17:05 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	128179	09/23/17 17:14	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 04:39	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:21	TEK	TAL PHX
Total/NA	Prep	245.1			128152	09/23/17 11:02	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128420	09/26/17 16:12	JTG	TAL PHX

Client Sample ID: FC-CCR-MW60-91017 — Lab Sample ID: 550-89579-3

Date Collected: 09/10/17 14:58 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2	128179	09/23/17 17:51	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 04:44	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:23	TEK	TAL PHX
Total/NA	Prep	245.1			128152	09/23/17 11:02	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128420	09/26/17 16:10	JTG	TAL PHX

Client Sample ID: FC-CCR-MW61-91017 — Lab Sample ID: 550-89579-4

Date Collected: 09/10/17 13:46 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	128179	09/23/17 19:05	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 04:50	TC1	TAL PHX

Lab Chronicle

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-MW61-91017 — Lab Sample ID: 550-89579-4

Date Collected: 09/10/17 13:46 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:25	TEK	TAL PHX
Total/NA	Prep	245.1			128152	09/23/17 11:02	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128420	09/26/17 16:13	JTG	TAL PHX

Client Sample ID: FC-CCR-MW62-9917 — Lab Sample ID: 550-89579-5

Date Collected: 09/09/17 15:36 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	128179	09/23/17 19:42	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 04:56	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:28	TEK	TAL PHX
Total/NA	Prep	245.1			127960	09/21/17 11:42	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128122	09/22/17 15:30	JTG	TAL PHX

Client Sample ID: FC-CCR-MW63-9917 — Lab Sample ID: 550-89579-6

Date Collected: 09/09/17 16:14 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	128179	09/23/17 20:18	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 05:02	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:30	TEK	TAL PHX
Total/NA	Prep	245.1			127960	09/21/17 11:42	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128122	09/22/17 15:31	JTG	TAL PHX

Client Sample ID: FC-CCR-MW64-9917 — Lab Sample ID: 550-89579-7

Date Collected: 09/09/17 16:39 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	128179	09/23/17 20:55	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 05:08	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:33	TEK	TAL PHX
Total/NA	Prep	245.1			127960	09/21/17 11:42	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128122	09/22/17 15:33	JTG	TAL PHX

Lab Chronicle

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-MW65-9917 — Lab Sample ID: 550-89579-8

Date Collected: 09/09/17 14:45 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	128179	09/23/17 21:32	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 05:19	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:35	TEK	TAL PHX
Total/NA	Prep	245.1			127960	09/21/17 11:42	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128122	09/22/17 15:35	JTG	TAL PHX

Client Sample ID: FC-CCR-FD01-9917 — Lab Sample ID: 550-89579-9

Date Collected: 09/09/17 14:45 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	128179	09/23/17 22:46	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 05:22	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:37	TEK	TAL PHX
Total/NA	Prep	245.1			127960	09/21/17 11:42	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128122	09/22/17 15:36	JTG	TAL PHX

Client Sample ID: FC-CCR-MW66-9917 — Lab Sample ID: 550-89579-10

Date Collected: 09/09/17 17:13 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	128179	09/23/17 23:22	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 05:25	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:40	TEK	TAL PHX
Total/NA	Prep	245.1			127960	09/21/17 11:42	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128122	09/22/17 15:38	JTG	TAL PHX

Client Sample ID: FC-CCR-MW67-91017 — Lab Sample ID: 550-89579-11

Date Collected: 09/10/17 09:53 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	128179	09/23/17 23:59	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 05:31	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX

Lab Chronicle

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-MW67-91017 — Lab Sample ID: 550-89579-11

Date Collected: 09/10/17 09:53
Date Received: 09/12/17 14:44
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:47	TEK	TAL PHX
Total/NA	Prep	245.1			128152	09/23/17 11:02	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128420	09/26/17 16:15	JTG	TAL PHX

Client Sample ID: FC-CCR-MW68-91017 — Lab Sample ID: 550-89579-12

Date Collected: 09/10/17 10:27
Date Received: 09/12/17 14:44
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	128179	09/24/17 00:36	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 05:37	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:49	TEK	TAL PHX
Total/NA	Prep	245.1			128152	09/23/17 11:02	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128420	09/26/17 16:17	JTG	TAL PHX

Client Sample ID: FC-CCR-MW69-91017 — Lab Sample ID: 550-89579-13

Date Collected: 09/10/17 09:05
Date Received: 09/12/17 14:44
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	128179	09/24/17 01:13	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 05:43	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:51	TEK	TAL PHX
Total/NA	Prep	245.1			128152	09/23/17 11:02	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128420	09/26/17 16:18	JTG	TAL PHX

Client Sample ID: FC-CCR-FD02-91017 — Lab Sample ID: 550-89579-14

Date Collected: 09/10/17 09:05
Date Received: 09/12/17 14:44
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	128179	09/24/17 02:27	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 05:49	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:54	TEK	TAL PHX
Total/NA	Prep	245.1			128152	09/23/17 11:02	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128420	09/26/17 16:20	JTG	TAL PHX

Lab Chronicle

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-MW70-9917 — Lab Sample ID: 550-89579-15

Date Collected: 09/09/17 17:46 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2	128179	09/24/17 03:03	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 05:55	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:56	TEK	TAL PHX
Total/NA	Prep	245.1			127960	09/21/17 11:42	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128122	09/22/17 15:39	JTG	TAL PHX

Client Sample ID: FC-CCR-MW71-91117 — Lab Sample ID: 550-89579-16

Date Collected: 09/11/17 08:56 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	128179	09/24/17 03:40	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 06:01	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 20:59	TEK	TAL PHX
Total/NA	Prep	245.1			128152	09/23/17 11:02	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128420	09/26/17 16:21	JTG	TAL PHX

Client Sample ID: FC-CCR-MW72-91017 — Lab Sample ID: 550-89579-17

Date Collected: 09/10/17 17:54 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	128179	09/24/17 04:17	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 06:06	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 21:01	TEK	TAL PHX
Total/NA	Prep	245.1			128152	09/23/17 11:02	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128420	09/26/17 16:23	JTG	TAL PHX

Client Sample ID: FC-CCR-MW73-91017 — Lab Sample ID: 550-89579-18

Date Collected: 09/10/17 11:37 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2	128179	09/24/17 04:54	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 06:21	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX

Lab Chronicle

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

TestAmerica Job ID: 550-89579-2

Client Sample ID: FC-CCR-MW73-91017 — Lab Sample ID: 550-89579-18

Date Collected: 09/10/17 11:37 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 21:03	TEK	TAL PHX
Total/NA	Prep	245.1			128152	09/23/17 11:02	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128420	09/26/17 16:24	JTG	TAL PHX

Client Sample ID: FC-CCR-MW74-91017 — Lab Sample ID: 550-89579-19

Date Collected: 09/10/17 12:10 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2	128179	09/24/17 06:07	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 06:27	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 21:06	TEK	TAL PHX
Total/NA	Prep	245.1			128152	09/23/17 11:02	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128420	09/26/17 16:29	JTG	TAL PHX

Client Sample ID: FC-CCR-MW75-91017 — Lab Sample ID: 550-89579-20

Date Collected: 09/10/17 14:24 — **Matrix: Water**
Date Received: 09/12/17 14:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	128179	09/24/17 07:03	JSS	TAL PHX
Total/NA	Prep	200.7			127178	09/13/17 06:44	SGO	TAL PHX
Total/NA	Analysis	200.7 Rev 4.4		1	128372	09/26/17 06:33	TC1	TAL PHX
Total/NA	Prep	200.8			127339	09/14/17 10:28	SGO	TAL PHX
Total/NA	Analysis	200.8 LL		4	128789	09/29/17 21:08	TEK	TAL PHX
Total/NA	Prep	245.1			128152	09/23/17 11:02	JTG	TAL PHX
Total/NA	Analysis	245.1		1	128420	09/26/17 16:31	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: 550-89579-2

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: 550-89579-2

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

9/30/2017

Regulatory Program: 89579 CCR

Client Contact	Doug Lavarnway	Doug Lavarnway	9/12/2017	COC No:
APS Four Corners	928-587-0319	Lab Contact:	Carrier:	___3___ 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:
FC-CCR-MW7-91017 -01	9/10/2017	1606	G	W	2	N	x	x	x	x	x	
FC-CCR-MW49A-91017 -02	9/10/2017	1705	G	W	2	N	x	x	x	x	x	
FC-CCR-MW60-91017 -03	9/10/2017	1458	G	W	2	N	x	x	x	x	x	
FC-CCR-MW61-91017 -04	9/10/2017	1346	G	W	2	N	x	x	x	x	x	
FC-CCR-MW62-9917 -05	9/9/2017	1536	G	W	2	N	x	x	x	x	x	
FC-CCR-MW63-9917 -06	9/9/2017	1614	G	W	2	N	x	x	x	x	x	
FC-CCR-MW64-9917 -07	9/9/2017	1639	G	W	2	N	x	x	x	x	x	
FC-CCR-MW65-9917 -08	9/9/2017	1445	G	W	2	N	x	x	x	x	x	
FC-CCR-FD01-9917 -09	9/9/2017	1445	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.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

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

☐ Return to Client ☑ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Doug Lavarnway	APS	9/12 1444			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time: 9-12-17 1444

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

89579

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

9/30/2017

Regulatory Program: CCR

Client Contact	Doug Lavarnway	Doug Lavarnway	9/12/2017	COC No:
APS Four Corners	928-587-0319	Lab Contact:	Carrier:	4 of 6 COCs
End of County Road 6675	Analysis Turnaround Time			Sampler:
Fruitland, New Mexico 87416				For Lab Use Only:
(928) 587-0319 Phone	TAT if different from Below _____			Walk-in Client:
(xxx) xxx-xxxx FAX				Lab Sampling:
Project Name: CCR				
Site: 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:
FC-CCR-MW66-9917 -10	9/9/2017	1713	G	W	2	N	x	x	x	x	x	
FC-CCR-MW67-91017 -11	9/10/2017	953	G	W	2	N	x	x	x	x	x	
FC-CCR-MW68-91017 -12	9/10/2017	1027	G	W	2	N	x	x	x	x	x	
FC-CCR-MW69-91017 -13	9/10/2017	905	G	W	2	N	x	x	x	x	x	
FC-CCR-FD02-91017 -14	9/10/2017	905	G	W	2	N	x	x	x	x	x	
FC-CCR-MW70-9917 -15	9/9/2017	1746	G	W	2	N	x	x	x	x	x	
FC-CCR-MW71-91117 -16	9/11/2017	856	G	W	2	N	x	x	x	x	x	
FC-CCR-MW72-91017 -17	9/10/2017	1754	G	W	2	N	x	x	x	x	x	
FC-CCR-MW73-91017 -18	9/10/2017	1137	G	W	2	N	x	x	x	x	x	
FC-CCR-MW74-91017 -19	9/10/2017	1210	G	W	2	N	x	x	x	x	x	
FC-CCR-MW75-91017 -20	9/10/2017	1424	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.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

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

☐ Return to Client ☑ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Doug Lavarnway	APS	9/12/1444			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
				TA	9/12/1444

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

Login Sample Receipt Checklist

Client: Arizona Public Service Company

Job Number: 550-89579-2

Login Number: 89579
List Number: 1
Creator: Gravlin, Andrea

List Source: TestAmerica Phoenix

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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.