TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
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TestAmerica Job ID: 240-58654-1
Client Project/Site: FCPP - CCR APS Four Corners

For:
AECOM Technical Services Inc.
7720 North 16th Street
Suite 100
Phoenix, Arizona 85020

Attn: Dan Sola

Authorized for release by:
12/18/2015 10:15:38 AM

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LINKS

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

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

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Definitions/Glossary

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 240-58654-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: AECOM Technical Services Inc.

Project: FCPP - CCR APS Four Corners

Report Number: 240-58654-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 12/4/2015 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.5º C.

TOTAL RECOVERABLE METALS (ICPMS)

Samples FC-CCR-MW8-120115 (240-58654-1), FC-CCR-MW12R-120115 (240-58654-2), FC-CCR-MW43-120115 (240-58654-3), FC-CCR-MW49A-120115 (240-58654-4) and FC-CCR-MW50-120115 (240-58654-5) were analyzed for total recoverable metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 12/07/2015 and analyzed on 12/09/2015, 12/10/2015 and 12/14/2015.

Barium and Sodium were detected in method blank MB 240-209704/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Samples FC-CCR-MW8-120115 (240-58654-1)[10X], FC-CCR-MW8-120115 (240-58654-1)[100X], FC-CCR-MW12R-120115 (240-58654-2)[10X], FC-CCR-MW12R-120115 (240-58654-2)[5X], FC-CCR-MW12R-120115 (240-58654-2)[50X], FC-CCR-MW43-120115 (240-58654-3)[10X], FC-CCR-MW49A-120115 (240-58654-4)[10X], FC-CCR-MW49A-120115 (240-58654-4)[50X], FC-CCR-MW50-120115 (240-58654-5)[10X] and FC-CCR-MW50-120115 (240-58654-5)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation

Job ID: 240-58654-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

limit: FC-CCR-MW8-120115 (240-58654-1), FC-CCR-MW12R-120115 (240-58654-2), FC-CCR-MW43-120115 (240-58654-3), FC-CCR-MW49A-120115 (240-58654-4) and FC-CCR-MW50-120115 (240-58654-5). The continuing calibration blanks and method blanks may not support the lower PQL.

The following samples were diluted due to the nature of the sample matrix: FC-CCR-MW8-120115 (240-58654-1), FC-CCR-MW12R-120115 (240-58654-2), FC-CCR-MW43-120115 (240-58654-3), FC-CCR-MW49A-120115 (240-58654-4) and FC-CCR-MW50-120115 (240-58654-5). Elevated reporting limits (RLs) are provided.

Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: FC-CCR-MW8-120115 (240-58654-1), FC-CCR-MW12R-120115 (240-58654-2), FC-CCR-MW43-120115 (240-58654-3), FC-CCR-MW49A-120115 (240-58654-4) and FC-CCR-MW50-120115 (240-58654-5). The continuing calibration blanks and method blanks may not support the lower PQL.

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

MERCURY

Samples FC-CCR-MW8-120115 (240-58654-1), FC-CCR-MW12R-120115 (240-58654-2), FC-CCR-MW43-120115 (240-58654-3), FC-CCR-MW49A-120115 (240-58654-4) and FC-CCR-MW50-120115 (240-58654-5) were analyzed for mercury in accordance with EPA Method 245.1. The samples were prepared on 12/07/2015 and analyzed on 12/08/2015.

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

ALKALINITY

Samples FC-CCR-MW8-120115 (240-58654-1), FC-CCR-MW12R-120115 (240-58654-2), FC-CCR-MW43-120115 (240-58654-3), FC-CCR-MW49A-120115 (240-58654-4) and FC-CCR-MW50-120115 (240-58654-5) were analyzed for alkalinity in accordance with SM 2320B. The samples were analyzed on 12/11/2015.

Alkalinity was detected in method blank MB 240-210655/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

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

TOTAL DISSOLVED SOLIDS

Samples FC-CCR-MW8-120115 (240-58654-1), FC-CCR-MW12R-120115 (240-58654-2), FC-CCR-MW43-120115 (240-58654-3), FC-CCR-MW49A-120115 (240-58654-4) and FC-CCR-MW50-120115 (240-58654-5) were analyzed for total dissolved solids in accordance with SM 2540C. The samples were analyzed on 12/07/2015 and 12/08/2015.

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

ANIONS

Samples FC-CCR-MW8-120115 (240-58654-1), FC-CCR-MW12R-120115 (240-58654-2), FC-CCR-MW43-120115 (240-58654-3), FC-CCR-MW49A-120115 (240-58654-4) and FC-CCR-MW50-120115 (240-58654-5) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 12/04/2015 and 12/08/2015.

Fluoride was detected in method blank MB 240-209929/3 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Samples FC-CCR-MW8-120115 (240-58654-1)[100X], FC-CCR-MW8-120115 (240-58654-1)[25X], FC-CCR-MW8-120115 (240-58654-1)[5X], FC-CCR-MW12R-120115 (240-58654-2)[1000X], FC-CCR-MW12R-120115 (240-58654-2)[25X], FC-CCR-MW43-120115 (240-58654-3)[25X], FC-CCR-MW43-120115 (240-58654-3)[5X], FC-CCR-MW43-120115 (240-58654-3)[50X], FC-CCR-MW49A-120115 (240-58654-4)[100X], FC-CCR-MW49A-120115 (240-58654-4)[25X], FC-CCR-MW49A-120115 (240-58654-4)[5X], FC-CCR-MW50-120115 (240-58654-5)[25X], FC-CCR-MW50-120115 (240-58654-5)[5X] and FC-CCR-MW50-120115 (240-58654-5)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Job ID: 240-58654-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

The following samples were diluted due to the nature of the sample matrix: FC-CCR-MW8-120115 (240-58654-1), FC-CCR-MW12R-120115 (240-58654-2), FC-CCR-MW43-120115 (240-58654-3), FC-CCR-MW49A-120115 (240-58654-4) and FC-CCR-MW50-120115 (240-58654-5). Elevated reporting limits (RLs) are provided.

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

NITRATE-NITRITE AS NITROGEN

Samples FC-CCR-MW8-120115 (240-58654-1), FC-CCR-MW12R-120115 (240-58654-2), FC-CCR-MW43-120115 (240-58654-3), FC-CCR-MW49A-120115 (240-58654-4) and FC-CCR-MW50-120115 (240-58654-5) were analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 12/09/2015 and 12/16/2015.

Nitrate Nitrite as N was detected in method blank MB 240-211117/4 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Samples FC-CCR-MW8-120115 (240-58654-1)[5X], FC-CCR-MW43-120115 (240-58654-3)[20X] and FC-CCR-MW49A-120115 (240-58654-4)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

Method Summary

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL CAN
245.1	Mercury (CVAA)	EPA	TAL CAN
2320B-1997	Alkalinity, Total	SM	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-58654-1	FC-CCR-MW8-120115	Water	12/01/15 09:50	12/04/15 09:45
240-58654-2	FC-CCR-MW12R-120115	Water	12/01/15 10:20	12/04/15 09:45
240-58654-3	FC-CCR-MW43-120115	Water	12/01/15 11:35	12/04/15 09:45
240-58654-4	FC-CCR-MW49A-120115	Water	12/01/15 10:45	12/04/15 09:45
240-58654-5	FC-CCR-MW50-120115	Water	12/01/15 11:15	12/04/15 09:45

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Client Sample ID: FC-CCR-MW8-120115 — Lab Sample ID: 240-58654-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0091		0.0050	0.00018	mg/L	1		200.8	Total Recoverable
Boron	17		2.0	1.1	mg/L	100		200.8	Total Recoverable
Barium	0.15	B	0.0050	0.0011	mg/L	1		200.8	Total Recoverable
Beryllium	0.0020		0.0010	0.000053	mg/L	1		200.8	Total Recoverable
Calcium	500		1.0	0.24	mg/L	1		200.8	Total Recoverable
Cadmium	0.00096	J	0.0010	0.000061	mg/L	1		200.8	Total Recoverable
Cobalt	0.019		0.0010	0.000021	mg/L	1		200.8	Total Recoverable
Chromium	0.020		0.0020	0.00020	mg/L	1		200.8	Total Recoverable
Nickel	0.092		0.0020	0.00023	mg/L	1		200.8	Total Recoverable
Molybdenum	0.033		0.010	0.00023	mg/L	1		200.8	Total Recoverable
Lead	0.033		0.010	0.0011	mg/L	10		200.8	Total Recoverable
Antimony	0.0014	J	0.0020	0.00016	mg/L	1		200.8	Total Recoverable
Selenium	0.013		0.0050	0.00025	mg/L	1		200.8	Total Recoverable
Potassium	34		1.0	0.030	mg/L	1		200.8	Total Recoverable
Sodium	2600	B	10	0.68	mg/L	10		200.8	Total Recoverable
Lithium	1.1		0.080	0.0029	mg/L	10		200.8	Total Recoverable
Mercury	0.00019	J	0.00020	0.000090	mg/L	1		245.1	Total/NA
Alkalinity	540	B	5.0	1.9	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	540		5.0	1.9	mg/L	1		2320B-1997	Total/NA
Chloride	880	F1	25	10	mg/L	25		300.0	Total/NA
Sulfate	9100		100	13	mg/L	100		300.0	Total/NA
Nitrate Nitrite as N	2.2		0.25	0.050	mg/L	5		353.2	Total/NA
Total Dissolved Solids	13000		100	74	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FC-CCR-MW12R-120115 — Lab Sample ID: 240-58654-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.074		0.025	0.00090	mg/L	5		200.8	Total Recoverable
Boron	0.45		0.20	0.11	mg/L	10		200.8	Total Recoverable
Barium	0.19	B	0.025	0.0055	mg/L	5		200.8	Total Recoverable
Beryllium	0.0064		0.0050	0.00027	mg/L	5		200.8	Total Recoverable
Calcium	500		1.0	0.24	mg/L	1		200.8	Total Recoverable
Cadmium	0.0020	J	0.0050	0.00031	mg/L	5		200.8	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Client Sample ID: FC-CCR-MW12R-120115 (Continued) — Lab Sample ID: 240-58654-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.041		0.0010	0.000021	mg/L	1		200.8	Total Recoverable
Chromium	0.091		0.0020	0.00020	mg/L	1		200.8	Total Recoverable
Nickel	0.12		0.0020	0.00023	mg/L	1		200.8	Total Recoverable
Molybdenum	0.027	J	0.050	0.0012	mg/L	5		200.8	Total Recoverable
Lead	0.096		0.0050	0.00055	mg/L	5		200.8	Total Recoverable
Selenium	0.75		0.050	0.0025	mg/L	10		200.8	Total Recoverable
Potassium	150		1.0	0.030	mg/L	1		200.8	Total Recoverable
Sodium	19000	B	50	3.4	mg/L	50		200.8	Total Recoverable
Lithium	3.3		0.080	0.0029	mg/L	10		200.8	Total Recoverable
Thallium	0.0065		0.0050	0.00037	mg/L	5		200.8	Total Recoverable
Mercury	0.00036		0.00020	0.000090	mg/L	1		245.1	Total/NA
Alkalinity	1100	B	5.0	1.9	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	1100		5.0	1.9	mg/L	1		2320B-1997	Total/NA
Chloride	2700		25	10	mg/L	25		300.0	Total/NA
Sulfate	56000		1000	130	mg/L	1000		300.0	Total/NA
Nitrate Nitrite as N	0.75		0.050	0.010	mg/L	1		353.2	Total/NA
Total Dissolved Solids	88000		1000	740	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FC-CCR-MW43-120115 — Lab Sample ID: 240-58654-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0027	J	0.0050	0.00018	mg/L	1		200.8	Total Recoverable
Boron	0.91		0.20	0.11	mg/L	10		200.8	Total Recoverable
Barium	0.15	B	0.0050	0.0011	mg/L	1		200.8	Total Recoverable
Beryllium	0.00095	J	0.0010	0.000053	mg/L	1		200.8	Total Recoverable
Calcium	470		1.0	0.24	mg/L	1		200.8	Total Recoverable
Cadmium	0.00029	J	0.0010	0.000061	mg/L	1		200.8	Total Recoverable
Cobalt	0.0022		0.0010	0.000021	mg/L	1		200.8	Total Recoverable
Chromium	0.0086		0.0020	0.00020	mg/L	1		200.8	Total Recoverable
Nickel	0.0081		0.0020	0.00023	mg/L	1		200.8	Total Recoverable
Molybdenum	0.0049	J	0.010	0.00023	mg/L	1		200.8	Total Recoverable
Lead	0.0059	J	0.010	0.0011	mg/L	10		200.8	Total Recoverable
Antimony	0.00075	J	0.0020	0.00016	mg/L	1		200.8	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Client Sample ID: FC-CCR-MW43-120115 (Continued) — Lab Sample ID: 240-58654-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	0.0045	J	0.0050	0.00025	mg/L	1		200.8	Total Recoverable
Potassium	31		1.0	0.030	mg/L	1		200.8	Total Recoverable
Sodium	1900	B	10	0.68	mg/L	10		200.8	Total Recoverable
Lithium	0.29		0.080	0.0029	mg/L	10		200.8	Total Recoverable
Alkalinity	680	B	5.0	1.9	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	680		5.0	1.9	mg/L	1		2320B-1997	Total/NA
Chloride	720		25	10	mg/L	25		300.0	Total/NA
Sulfate	6800		50	6.5	mg/L	50		300.0	Total/NA
Nitrate Nitrite as N	27		1.0	0.20	mg/L	20		353.2	Total/NA
Total Dissolved Solids	7900		50	37	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FC-CCR-MW49A-120115 — Lab Sample ID: 240-58654-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0016	J	0.0050	0.00018	mg/L	1		200.8	Total Recoverable
Boron	6.0		1.0	0.55	mg/L	50		200.8	Total Recoverable
Barium	0.042	B	0.0050	0.0011	mg/L	1		200.8	Total Recoverable
Beryllium	0.00075	J	0.0010	0.000053	mg/L	1		200.8	Total Recoverable
Calcium	440		1.0	0.24	mg/L	1		200.8	Total Recoverable
Cadmium	0.00018	J	0.0010	0.000061	mg/L	1		200.8	Total Recoverable
Cobalt	0.0022		0.0010	0.000021	mg/L	1		200.8	Total Recoverable
Chromium	0.0035		0.0020	0.00020	mg/L	1		200.8	Total Recoverable
Nickel	0.12		0.0020	0.00023	mg/L	1		200.8	Total Recoverable
Molybdenum	0.096	J	0.10	0.0023	mg/L	10		200.8	Total Recoverable
Antimony	0.00033	J	0.0020	0.00016	mg/L	1		200.8	Total Recoverable
Selenium	0.0021	J	0.0050	0.00025	mg/L	1		200.8	Total Recoverable
Potassium	54		1.0	0.030	mg/L	1		200.8	Total Recoverable
Sodium	4600	B	10	0.68	mg/L	10		200.8	Total Recoverable
Lithium	0.75		0.080	0.0029	mg/L	10		200.8	Total Recoverable
Thallium	0.0014	J	0.010	0.00074	mg/L	10		200.8	Total Recoverable
Mercury	0.00010	J	0.00020	0.000090	mg/L	1		245.1	Total/NA
Alkalinity	870	B	5.0	1.9	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	870		5.0	1.9	mg/L	1		2320B-1997	Total/NA
Chloride	340		25	10	mg/L	25		300.0	Total/NA
Sulfate	14000		100	13	mg/L	100		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Client Sample ID: FC-CCR-MW49A-120115 (Continued) — Lab Sample ID: 240-58654-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate Nitrite as N	6.5	B	0.25	0.050	mg/L	5		353.2	Total/NA
Total Dissolved Solids	17000		100	74	mg/L	1		SM 2540C	Total/NA

Client Sample ID: FC-CCR-MW50-120115 — Lab Sample ID: 240-58654-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0093		0.0050	0.00018	mg/L	1		200.8	Total Recoverable
Boron	2.4		0.40	0.22	mg/L	20		200.8	Total Recoverable
Barium	0.50	B	0.0050	0.0011	mg/L	1		200.8	Total Recoverable
Beryllium	0.0025		0.0010	0.000053	mg/L	1		200.8	Total Recoverable
Calcium	440		1.0	0.24	mg/L	1		200.8	Total Recoverable
Cadmium	0.00086	J	0.0010	0.000061	mg/L	1		200.8	Total Recoverable
Cobalt	0.016		0.0010	0.000021	mg/L	1		200.8	Total Recoverable
Chromium	0.11		0.0020	0.00020	mg/L	1		200.8	Total Recoverable
Nickel	0.82		0.0020	0.00023	mg/L	1		200.8	Total Recoverable
Molybdenum	0.0078	J	0.10	0.0023	mg/L	10		200.8	Total Recoverable
Lead	0.026		0.010	0.0011	mg/L	10		200.8	Total Recoverable
Antimony	0.0012	J	0.0020	0.00016	mg/L	1		200.8	Total Recoverable
Selenium	0.013		0.0050	0.00025	mg/L	1		200.8	Total Recoverable
Potassium	37		1.0	0.030	mg/L	1		200.8	Total Recoverable
Sodium	1300	B	10	0.68	mg/L	10		200.8	Total Recoverable
Lithium	0.40		0.080	0.0029	mg/L	10		200.8	Total Recoverable
Mercury	0.00017	J	0.00020	0.000090	mg/L	1		245.1	Total/NA
Alkalinity	350	B	5.0	1.9	mg/L	1		2320B-1997	Total/NA
Bicarbonate Alkalinity as CaCO3	350		5.0	1.9	mg/L	1		2320B-1997	Total/NA
Chloride	400		25	10	mg/L	25		300.0	Total/NA
Sulfate	4800		50	6.5	mg/L	50		300.0	Total/NA
Nitrate Nitrite as N	0.53		0.050	0.010	mg/L	1		353.2	Total/NA
Total Dissolved Solids	5600		50	37	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Client Sample ID: FC-CCR-MW8-120115

Lab Sample ID: 240-58654-1

Date Collected: 12/01/15 09:50
Matrix: Water
Date Received: 12/04/15 09:45

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0091		0.0050	0.00018	mg/L		12/07/15 09:33	12/09/15 21:25	1
Boron	17		2.0	1.1	mg/L		12/07/15 09:33	12/14/15 13:47	100
Barium	0.15	B	0.0050	0.0011	mg/L		12/07/15 09:33	12/09/15 21:25	1
Beryllium	0.0020		0.0010	0.000053	mg/L		12/07/15 09:33	12/09/15 21:25	1
Calcium	500		1.0	0.24	mg/L		12/07/15 09:33	12/09/15 21:25	1
Cadmium	0.00096	J	0.0010	0.000061	mg/L		12/07/15 09:33	12/09/15 21:25	1
Cobalt	0.019		0.0010	0.000021	mg/L		12/07/15 09:33	12/09/15 21:25	1
Chromium	0.020		0.0020	0.00020	mg/L		12/07/15 09:33	12/09/15 21:25	1
Nickel	0.092		0.0020	0.00023	mg/L		12/07/15 09:33	12/09/15 21:25	1
Molybdenum	0.033		0.010	0.00023	mg/L		12/07/15 09:33	12/09/15 21:25	1
Lead	0.033		0.010	0.0011	mg/L		12/07/15 09:33	12/14/15 10:28	10
Antimony	0.0014	J	0.0020	0.00016	mg/L		12/07/15 09:33	12/09/15 21:25	1
Selenium	0.013		0.0050	0.00025	mg/L		12/07/15 09:33	12/09/15 21:25	1
Potassium	34		1.0	0.030	mg/L		12/07/15 09:33	12/09/15 21:25	1
Sodium	2600	B	10	0.68	mg/L		12/07/15 09:33	12/14/15 10:28	10
Lithium	1.1		0.080	0.0029	mg/L		12/07/15 09:33	12/14/15 10:28	10
Thallium	0.010	U	0.010	0.00074	mg/L		12/07/15 09:33	12/14/15 10:28	10

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00019	J	0.00020	0.000090	mg/L		12/07/15 12:00	12/08/15 11:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	540	B	5.0	1.9	mg/L			12/11/15 18:57	1
Bicarbonate Alkalinity as CaCO3	540		5.0	1.9	mg/L			12/11/15 18:57	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	1.9	mg/L			12/11/15 18:57	1
Chloride	880	F1	25	10	mg/L			12/04/15 15:41	25
Fluoride	5.0	U	5.0	0.045	mg/L			12/08/15 17:14	5
Sulfate	9100		100	13	mg/L			12/08/15 17:32	100
Nitrate Nitrite as N	2.2		0.25	0.050	mg/L			12/09/15 11:14	5
Total Dissolved Solids	13000		100	74	mg/L			12/07/15 12:23	1

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Client Sample ID: FC-CCR-MW12R-120115

Lab Sample ID: 240-58654-2

Date Collected: 12/01/15 10:20
Matrix: Water
Date Received: 12/04/15 09:45

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.074		0.025	0.00090	mg/L		12/07/15 09:33	12/10/15 12:02	5
Boron	0.45		0.20	0.11	mg/L		12/07/15 09:33	12/14/15 13:51	10
Barium	0.19	B	0.025	0.0055	mg/L		12/07/15 09:33	12/10/15 12:02	5
Beryllium	0.0064		0.0050	0.00027	mg/L		12/07/15 09:33	12/10/15 12:02	5
Calcium	500		1.0	0.24	mg/L		12/07/15 09:33	12/09/15 21:29	1
Cadmium	0.0020	J	0.0050	0.00031	mg/L		12/07/15 09:33	12/10/15 12:02	5
Cobalt	0.041		0.0010	0.000021	mg/L		12/07/15 09:33	12/09/15 21:29	1
Chromium	0.091		0.0020	0.00020	mg/L		12/07/15 09:33	12/09/15 21:29	1
Nickel	0.12		0.0020	0.00023	mg/L		12/07/15 09:33	12/09/15 21:29	1
Molybdenum	0.027	J	0.050	0.0012	mg/L		12/07/15 09:33	12/10/15 12:02	5
Lead	0.096		0.0050	0.00055	mg/L		12/07/15 09:33	12/10/15 12:02	5
Antimony	0.010	U	0.010	0.00080	mg/L		12/07/15 09:33	12/10/15 12:02	5
Selenium	0.75		0.050	0.0025	mg/L		12/07/15 09:33	12/14/15 10:12	10
Potassium	150		1.0	0.030	mg/L		12/07/15 09:33	12/09/15 21:29	1
Sodium	19000	B	50	3.4	mg/L		12/07/15 09:33	12/14/15 10:32	50
Lithium	3.3		0.080	0.0029	mg/L		12/07/15 09:33	12/14/15 10:12	10
Thallium	0.0065		0.0050	0.00037	mg/L		12/07/15 09:33	12/10/15 12:02	5

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00036		0.00020	0.000090	mg/L		12/07/15 12:00	12/08/15 11:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	1100	B	5.0	1.9	mg/L			12/11/15 18:36	1
Bicarbonate Alkalinity as CaCO3	1100		5.0	1.9	mg/L			12/11/15 18:36	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	1.9	mg/L			12/11/15 18:36	1
Chloride	2700		25	10	mg/L			12/04/15 16:30	25
Fluoride	1000	U	1000	9.0	mg/L			12/08/15 18:09	1000
Sulfate	56000		1000	130	mg/L			12/08/15 18:09	1000
Nitrate Nitrite as N	0.75		0.050	0.010	mg/L			12/09/15 10:18	1
Total Dissolved Solids	88000		1000	740	mg/L			12/08/15 20:14	1

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Client Sample ID: FC-CCR-MW43-120115

Lab Sample ID: 240-58654-3

Date Collected: 12/01/15 11:35
Matrix: Water
Date Received: 12/04/15 09:45

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0027	J	0.0050	0.00018	mg/L		12/07/15 09:33	12/09/15 21:33	1
Boron	0.91		0.20	0.11	mg/L		12/07/15 09:33	12/14/15 13:55	10
Barium	0.15	B	0.0050	0.0011	mg/L		12/07/15 09:33	12/09/15 21:33	1
Beryllium	0.00095	J	0.0010	0.000053	mg/L		12/07/15 09:33	12/09/15 21:33	1
Calcium	470		1.0	0.24	mg/L		12/07/15 09:33	12/09/15 21:33	1
Cadmium	0.00029	J	0.0010	0.000061	mg/L		12/07/15 09:33	12/09/15 21:33	1
Cobalt	0.0022		0.0010	0.000021	mg/L		12/07/15 09:33	12/09/15 21:33	1
Chromium	0.0086		0.0020	0.00020	mg/L		12/07/15 09:33	12/09/15 21:33	1
Nickel	0.0081		0.0020	0.00023	mg/L		12/07/15 09:33	12/09/15 21:33	1
Molybdenum	0.0049	J	0.010	0.00023	mg/L		12/07/15 09:33	12/09/15 21:33	1
Lead	0.0059	J	0.010	0.0011	mg/L		12/07/15 09:33	12/14/15 10:16	10
Antimony	0.00075	J	0.0020	0.00016	mg/L		12/07/15 09:33	12/09/15 21:33	1
Selenium	0.0045	J	0.0050	0.00025	mg/L		12/07/15 09:33	12/09/15 21:33	1
Potassium	31		1.0	0.030	mg/L		12/07/15 09:33	12/09/15 21:33	1
Sodium	1900	B	10	0.68	mg/L		12/07/15 09:33	12/14/15 10:16	10
Lithium	0.29		0.080	0.0029	mg/L		12/07/15 09:33	12/14/15 10:16	10
Thallium	0.010	U	0.010	0.00074	mg/L		12/07/15 09:33	12/14/15 10:16	10

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000090	mg/L		12/07/15 12:00	12/08/15 11:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	680	B	5.0	1.9	mg/L			12/11/15 19:55	1
Bicarbonate Alkalinity as CaCO3	680		5.0	1.9	mg/L			12/11/15 19:55	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	1.9	mg/L			12/11/15 19:55	1
Chloride	720		25	10	mg/L			12/04/15 16:47	25
Fluoride	5.0	U	5.0	0.045	mg/L			12/08/15 19:04	5
Sulfate	6800		50	6.5	mg/L			12/08/15 19:23	50
Nitrate Nitrite as N	27		1.0	0.20	mg/L			12/09/15 11:15	20
Total Dissolved Solids	7900		50	37	mg/L			12/07/15 12:23	1

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Client Sample ID: FC-CCR-MW49A-120115

Lab Sample ID: 240-58654-4

Date Collected: 12/01/15 10:45
Matrix: Water
Date Received: 12/04/15 09:45

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0016	J	0.0050	0.00018	mg/L		12/07/15 09:33	12/09/15 21:37	1
Boron	6.0		1.0	0.55	mg/L		12/07/15 09:33	12/14/15 13:59	50
Barium	0.042	B	0.0050	0.0011	mg/L		12/07/15 09:33	12/09/15 21:37	1
Beryllium	0.00075	J	0.0010	0.000053	mg/L		12/07/15 09:33	12/09/15 21:37	1
Calcium	440		1.0	0.24	mg/L		12/07/15 09:33	12/09/15 21:37	1
Cadmium	0.00018	J	0.0010	0.000061	mg/L		12/07/15 09:33	12/09/15 21:37	1
Cobalt	0.0022		0.0010	0.000021	mg/L		12/07/15 09:33	12/09/15 21:37	1
Chromium	0.0035		0.0020	0.00020	mg/L		12/07/15 09:33	12/09/15 21:37	1
Nickel	0.12		0.0020	0.00023	mg/L		12/07/15 09:33	12/09/15 21:37	1
Molybdenum	0.096	J	0.10	0.0023	mg/L		12/07/15 09:33	12/14/15 10:36	10
Lead	0.010	U	0.010	0.0011	mg/L		12/07/15 09:33	12/14/15 10:36	10
Antimony	0.00033	J	0.0020	0.00016	mg/L		12/07/15 09:33	12/09/15 21:37	1
Selenium	0.0021	J	0.0050	0.00025	mg/L		12/07/15 09:33	12/09/15 21:37	1
Potassium	54		1.0	0.030	mg/L		12/07/15 09:33	12/09/15 21:37	1
Sodium	4600	B	10	0.68	mg/L		12/07/15 09:33	12/14/15 10:36	10
Lithium	0.75		0.080	0.0029	mg/L		12/07/15 09:33	12/14/15 10:36	10
Thallium	0.0014	J	0.010	0.00074	mg/L		12/07/15 09:33	12/14/15 10:36	10

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00010	J	0.00020	0.000090	mg/L		12/07/15 12:00	12/08/15 11:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	870	B	5.0	1.9	mg/L			12/11/15 19:36	1
Bicarbonate Alkalinity as CaCO3	870		5.0	1.9	mg/L			12/11/15 19:36	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	1.9	mg/L			12/11/15 19:36	1
Chloride	340		25	10	mg/L			12/04/15 17:03	25
Fluoride	5.0	U	5.0	0.045	mg/L			12/08/15 19:41	5
Sulfate	14000		100	13	mg/L			12/08/15 20:00	100
Nitrate Nitrite as N	6.5	B	0.25	0.050	mg/L			12/16/15 12:50	5
Total Dissolved Solids	17000		100	74	mg/L			12/07/15 12:23	1

Client Sample Results

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Client Sample ID: FC-CCR-MW50-120115

Lab Sample ID: 240-58654-5

Date Collected: 12/01/15 11:15
Matrix: Water
Date Received: 12/04/15 09:45

Method: 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0093		0.0050	0.00018	mg/L		12/07/15 09:33	12/09/15 21:49	1
Boron	2.4		0.40	0.22	mg/L		12/07/15 09:33	12/14/15 14:03	20
Barium	0.50	B	0.0050	0.0011	mg/L		12/07/15 09:33	12/09/15 21:49	1
Beryllium	0.0025		0.0010	0.000053	mg/L		12/07/15 09:33	12/09/15 21:49	1
Calcium	440		1.0	0.24	mg/L		12/07/15 09:33	12/09/15 21:49	1
Cadmium	0.00086	J	0.0010	0.000061	mg/L		12/07/15 09:33	12/09/15 21:49	1
Cobalt	0.016		0.0010	0.000021	mg/L		12/07/15 09:33	12/09/15 21:49	1
Chromium	0.11		0.0020	0.00020	mg/L		12/07/15 09:33	12/09/15 21:49	1
Nickel	0.82		0.0020	0.00023	mg/L		12/07/15 09:33	12/09/15 21:49	1
Molybdenum	0.0078	J	0.10	0.0023	mg/L		12/07/15 09:33	12/14/15 10:48	10
Lead	0.026		0.010	0.0011	mg/L		12/07/15 09:33	12/14/15 10:48	10
Antimony	0.0012	J	0.0020	0.00016	mg/L		12/07/15 09:33	12/09/15 21:49	1
Selenium	0.013		0.0050	0.00025	mg/L		12/07/15 09:33	12/09/15 21:49	1
Potassium	37		1.0	0.030	mg/L		12/07/15 09:33	12/09/15 21:49	1
Sodium	1300	B	10	0.68	mg/L		12/07/15 09:33	12/14/15 10:48	10
Lithium	0.40		0.080	0.0029	mg/L		12/07/15 09:33	12/14/15 10:48	10
Thallium	0.010	U	0.010	0.00074	mg/L		12/07/15 09:33	12/14/15 10:48	10

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00017	J	0.00020	0.000090	mg/L		12/07/15 12:00	12/08/15 11:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	350	B	5.0	1.9	mg/L			12/11/15 18:08	1
Bicarbonate Alkalinity as CaCO3	350		5.0	1.9	mg/L			12/11/15 18:08	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	1.9	mg/L			12/11/15 18:08	1
Chloride	400		25	10	mg/L			12/04/15 17:19	25
Fluoride	5.0	U	5.0	0.045	mg/L			12/08/15 20:18	5
Sulfate	4800		50	6.5	mg/L			12/08/15 20:36	50
Nitrate Nitrite as N	0.53		0.050	0.010	mg/L			12/09/15 11:18	1
Total Dissolved Solids	5600		50	37	mg/L			12/07/15 12:23	1

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 240-209704/1-A
Matrix: Water
Analysis Batch: 210855

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 209704

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0050	U	0.0050	0.00018	mg/L		12/07/15 09:33	12/14/15 13:39	1
Boron	0.020	U	0.020	0.011	mg/L		12/07/15 09:33	12/14/15 13:39	1
Barium	0.00110	J	0.0050	0.0011	mg/L		12/07/15 09:33	12/14/15 13:39	1
Beryllium	0.0010	U	0.0010	0.000053	mg/L		12/07/15 09:33	12/14/15 13:39	1
Calcium	1.0	U	1.0	0.24	mg/L		12/07/15 09:33	12/14/15 13:39	1
Cadmium	0.0010	U	0.0010	0.000061	mg/L		12/07/15 09:33	12/14/15 13:39	1
Cobalt	0.0010	U	0.0010	0.000021	mg/L		12/07/15 09:33	12/14/15 13:39	1
Chromium	0.0020	U	0.0020	0.00020	mg/L		12/07/15 09:33	12/14/15 13:39	1
Nickel	0.0020	U	0.0020	0.00023	mg/L		12/07/15 09:33	12/14/15 13:39	1
Molybdenum	0.010	U	0.010	0.00023	mg/L		12/07/15 09:33	12/14/15 13:39	1
Lead	0.0010	U	0.0010	0.00011	mg/L		12/07/15 09:33	12/14/15 13:39	1
Antimony	0.0020	U	0.0020	0.00016	mg/L		12/07/15 09:33	12/14/15 13:39	1
Selenium	0.0050	U	0.0050	0.00025	mg/L		12/07/15 09:33	12/14/15 13:39	1
Potassium	1.0	U	1.0	0.030	mg/L		12/07/15 09:33	12/14/15 13:39	1
Sodium	0.0687	J	1.0	0.068	mg/L		12/07/15 09:33	12/14/15 13:39	1
Lithium	0.0080	U	0.0080	0.00029	mg/L		12/07/15 09:33	12/14/15 13:39	1
Thallium	0.0010	U	0.0010	0.000074	mg/L		12/07/15 09:33	12/14/15 13:39	1

Lab Sample ID: LCS 240-209704/2-A
Matrix: Water
Analysis Batch: 210855

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 209704

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	0.957		mg/L		96	85 - 115
Boron	0.100	0.0879		mg/L		88	85 - 115
Barium	1.00	0.917		mg/L		92	85 - 115
Beryllium	1.00	0.898		mg/L		90	85 - 115
Calcium	10.0	9.08		mg/L		91	85 - 115
Cadmium	1.00	0.960		mg/L		96	85 - 115
Cobalt	1.00	0.978		mg/L		98	85 - 115
Chromium	1.00	0.944		mg/L		94	85 - 115
Nickel	1.00	0.992		mg/L		99	85 - 115
Molybdenum	0.100	0.0933		mg/L		93	85 - 115
Lead	1.00	0.936		mg/L		94	85 - 115
Antimony	0.100	0.0930		mg/L		93	85 - 115
Selenium	1.00	0.952		mg/L		95	85 - 115
Potassium	10.0	9.41		mg/L		94	85 - 115
Sodium	10.0	9.22		mg/L		92	85 - 115
Lithium	0.100	0.0889		mg/L		89	85 - 115
Thallium	0.250	0.234		mg/L		94	85 - 115

QC Sample Results

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 240-209706/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 209995 — **Prep Batch: 209706**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00020	U	0.00020	0.000090	mg/L		12/07/15 12:00	12/08/15 11:06	1

Lab Sample ID: LCS 240-209706/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 209995 — **Prep Batch: 209706**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00500	0.00490		mg/L		98	85 - 115

Method: 2320B-1997 - Alkalinity, Total

Lab Sample ID: MB 240-210655/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 210655

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	2.70	J	5.0	1.9	mg/L			12/11/15 16:11	1
Bicarbonate Alkalinity as CaCO3	5.0	U	5.0	1.9	mg/L			12/11/15 16:11	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	1.9	mg/L			12/11/15 16:11	1

Lab Sample ID: LCS 240-210655/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 210655

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	368	401		mg/L		109	90 - 127

Lab Sample ID: 240-58654-1 DU — **Client Sample ID: FC-CCR-MW8-120115**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 210655

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	540	B	543		mg/L		0.4	20
Bicarbonate Alkalinity as CaCO3	540		543		mg/L		0.4	20
Carbonate Alkalinity as CaCO3	5.0	U	5.0	U	mg/L		NC	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-209587/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 209587

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.41	mg/L			12/04/15 15:08	1
Sulfate	1.0	U	1.0	0.13	mg/L			12/04/15 15:08	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-209587/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 209587

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.2		mg/L		100	90 - 110
Sulfate	50.0	48.4		mg/L		97	90 - 110

Lab Sample ID: 240-58654-1 MS — **Client Sample ID: FC-CCR-MW8-120115**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 209587

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	880	F1	50.0	884	4	mg/L		11	80 - 120

Lab Sample ID: 240-58654-1 MSD — **Client Sample ID: FC-CCR-MW8-120115**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 209587

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	880	F1	50.0	875	4	mg/L		-7	80 - 120	1	20

Lab Sample ID: MB 240-209929/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 209929

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.41	mg/L			12/08/15 15:23	1
Fluoride	0.0131	J	1.0	0.0090	mg/L			12/08/15 15:23	1
Sulfate	1.0	U	1.0	0.13	mg/L			12/08/15 15:23	1

Lab Sample ID: LCS 240-209929/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 209929

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	53.5		mg/L		107	90 - 110
Fluoride	2.50	2.53		mg/L		101	90 - 110
Sulfate	50.0	50.3		mg/L		101	90 - 110

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 240-210049/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 210049

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	0.050	U	0.050	0.010	mg/L			12/09/15 10:02	1

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 240-210049/5
Matrix: Water
Analysis Batch: 210049

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	1.93	1.92		mg/L		99	90 - 110

Lab Sample ID: MB 240-210073/4
Matrix: Water
Analysis Batch: 210073

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	0.050	U	0.050	0.010	mg/L			12/09/15 11:12	1

Lab Sample ID: LCS 240-210073/5
Matrix: Water
Analysis Batch: 210073

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	1.93	1.89		mg/L		98	90 - 110

Lab Sample ID: MB 240-211117/4
Matrix: Water
Analysis Batch: 211117

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	0.0338	J	0.050	0.010	mg/L			12/16/15 12:48	1

Lab Sample ID: LCS 240-211117/5
Matrix: Water
Analysis Batch: 211117

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	1.93	2.02		mg/L		104	90 - 110

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

Lab Sample ID: MB 240-209750/1
Matrix: Water
Analysis Batch: 209750

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	7.4	mg/L			12/07/15 12:23	1

Lab Sample ID: LCS 240-209750/2
Matrix: Water
Analysis Batch: 209750

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	342	333		mg/L		97	88 - 110

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

Lab Sample ID: MB 240-209955/1
Matrix: Water
Analysis Batch: 209955

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	7.4	mg/L			12/08/15 20:14	1

Lab Sample ID: LCS 240-209955/2
Matrix: Water
Analysis Batch: 209955

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	342	353		mg/L		103	88 - 110

QC Association Summary

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Metals

Prep Batch: 209704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-1	FC-CCR-MW8-120115	Total Recoverable	Water	200.8	
240-58654-2	FC-CCR-MW12R-120115	Total Recoverable	Water	200.8	
240-58654-3	FC-CCR-MW43-120115	Total Recoverable	Water	200.8	
240-58654-4	FC-CCR-MW49A-120115	Total Recoverable	Water	200.8	
240-58654-5	FC-CCR-MW50-120115	Total Recoverable	Water	200.8	
LCS 240-209704/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
MB 240-209704/1-A	Method Blank	Total Recoverable	Water	200.8	

Prep Batch: 209706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-1	FC-CCR-MW8-120115	Total/NA	Water	245.1	
240-58654-2	FC-CCR-MW12R-120115	Total/NA	Water	245.1	
240-58654-3	FC-CCR-MW43-120115	Total/NA	Water	245.1	
240-58654-4	FC-CCR-MW49A-120115	Total/NA	Water	245.1	
240-58654-5	FC-CCR-MW50-120115	Total/NA	Water	245.1	
LCS 240-209706/2-A	Lab Control Sample	Total/NA	Water	245.1	
MB 240-209706/1-A	Method Blank	Total/NA	Water	245.1	

Analysis Batch: 209995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-1	FC-CCR-MW8-120115	Total/NA	Water	245.1	209706
240-58654-2	FC-CCR-MW12R-120115	Total/NA	Water	245.1	209706
240-58654-3	FC-CCR-MW43-120115	Total/NA	Water	245.1	209706
240-58654-4	FC-CCR-MW49A-120115	Total/NA	Water	245.1	209706
240-58654-5	FC-CCR-MW50-120115	Total/NA	Water	245.1	209706
LCS 240-209706/2-A	Lab Control Sample	Total/NA	Water	245.1	209706
MB 240-209706/1-A	Method Blank	Total/NA	Water	245.1	209706

Analysis Batch: 210214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-1	FC-CCR-MW8-120115	Total Recoverable	Water	200.8	209704
240-58654-2	FC-CCR-MW12R-120115	Total Recoverable	Water	200.8	209704
240-58654-3	FC-CCR-MW43-120115	Total Recoverable	Water	200.8	209704
240-58654-4	FC-CCR-MW49A-120115	Total Recoverable	Water	200.8	209704
240-58654-5	FC-CCR-MW50-120115	Total Recoverable	Water	200.8	209704

Analysis Batch: 210402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-2	FC-CCR-MW12R-120115	Total Recoverable	Water	200.8	209704

Analysis Batch: 210855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-1	FC-CCR-MW8-120115	Total Recoverable	Water	200.8	209704
240-58654-1	FC-CCR-MW8-120115	Total Recoverable	Water	200.8	209704
240-58654-2	FC-CCR-MW12R-120115	Total Recoverable	Water	200.8	209704
240-58654-2	FC-CCR-MW12R-120115	Total Recoverable	Water	200.8	209704
240-58654-2	FC-CCR-MW12R-120115	Total Recoverable	Water	200.8	209704
240-58654-3	FC-CCR-MW43-120115	Total Recoverable	Water	200.8	209704
240-58654-3	FC-CCR-MW43-120115	Total Recoverable	Water	200.8	209704
240-58654-4	FC-CCR-MW49A-120115	Total Recoverable	Water	200.8	209704
240-58654-4	FC-CCR-MW49A-120115	Total Recoverable	Water	200.8	209704

Metals (Continued)

Analysis Batch: 210855 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-5	FC-CCR-MW50-120115	Total Recoverable	Water	200.8	209704
240-58654-5	FC-CCR-MW50-120115	Total Recoverable	Water	200.8	209704
LCS 240-209704/2-A	Lab Control Sample	Total Recoverable	Water	200.8	209704
MB 240-209704/1-A	Method Blank	Total Recoverable	Water	200.8	209704

General Chemistry

Analysis Batch: 209587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-1	FC-CCR-MW8-120115	Total/NA	Water	300.0	
240-58654-1 MS	FC-CCR-MW8-120115	Total/NA	Water	300.0	
240-58654-1 MSD	FC-CCR-MW8-120115	Total/NA	Water	300.0	
240-58654-2	FC-CCR-MW12R-120115	Total/NA	Water	300.0	
240-58654-3	FC-CCR-MW43-120115	Total/NA	Water	300.0	
240-58654-4	FC-CCR-MW49A-120115	Total/NA	Water	300.0	
240-58654-5	FC-CCR-MW50-120115	Total/NA	Water	300.0	
LCS 240-209587/4	Lab Control Sample	Total/NA	Water	300.0	
MB 240-209587/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 209750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-1	FC-CCR-MW8-120115	Total/NA	Water	SM 2540C	
240-58654-3	FC-CCR-MW43-120115	Total/NA	Water	SM 2540C	
240-58654-4	FC-CCR-MW49A-120115	Total/NA	Water	SM 2540C	
240-58654-5	FC-CCR-MW50-120115	Total/NA	Water	SM 2540C	
LCS 240-209750/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 240-209750/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 209929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-1	FC-CCR-MW8-120115	Total/NA	Water	300.0	
240-58654-1	FC-CCR-MW8-120115	Total/NA	Water	300.0	
240-58654-2	FC-CCR-MW12R-120115	Total/NA	Water	300.0	
240-58654-3	FC-CCR-MW43-120115	Total/NA	Water	300.0	
240-58654-3	FC-CCR-MW43-120115	Total/NA	Water	300.0	
240-58654-4	FC-CCR-MW49A-120115	Total/NA	Water	300.0	
240-58654-4	FC-CCR-MW49A-120115	Total/NA	Water	300.0	
240-58654-5	FC-CCR-MW50-120115	Total/NA	Water	300.0	
240-58654-5	FC-CCR-MW50-120115	Total/NA	Water	300.0	
LCS 240-209929/4	Lab Control Sample	Total/NA	Water	300.0	
MB 240-209929/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 209955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-2	FC-CCR-MW12R-120115	Total/NA	Water	SM 2540C	
LCS 240-209955/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 240-209955/1	Method Blank	Total/NA	Water	SM 2540C	

QC Association Summary

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

General Chemistry (Continued)

Analysis Batch: 210049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-2	FC-CCR-MW12R-120115	Total/NA	Water	353.2	
LCS 240-210049/5	Lab Control Sample	Total/NA	Water	353.2	
MB 240-210049/4	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 210073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-1	FC-CCR-MW8-120115	Total/NA	Water	353.2	
240-58654-3	FC-CCR-MW43-120115	Total/NA	Water	353.2	
240-58654-5	FC-CCR-MW50-120115	Total/NA	Water	353.2	
LCS 240-210073/5	Lab Control Sample	Total/NA	Water	353.2	
MB 240-210073/4	Method Blank	Total/NA	Water	353.2	

Analysis Batch: 210655

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-1	FC-CCR-MW8-120115	Total/NA	Water	2320B-1997	
240-58654-1 DU	FC-CCR-MW8-120115	Total/NA	Water	2320B-1997	
240-58654-2	FC-CCR-MW12R-120115	Total/NA	Water	2320B-1997	
240-58654-3	FC-CCR-MW43-120115	Total/NA	Water	2320B-1997	
240-58654-4	FC-CCR-MW49A-120115	Total/NA	Water	2320B-1997	
240-58654-5	FC-CCR-MW50-120115	Total/NA	Water	2320B-1997	
LCS 240-210655/4	Lab Control Sample	Total/NA	Water	2320B-1997	
MB 240-210655/5	Method Blank	Total/NA	Water	2320B-1997	

Analysis Batch: 211117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-58654-4	FC-CCR-MW49A-120115	Total/NA	Water	353.2	
LCS 240-211117/5	Lab Control Sample	Total/NA	Water	353.2	
MB 240-211117/4	Method Blank	Total/NA	Water	353.2	

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Client Sample ID: FC-CCR-MW8-120115

Lab Sample ID: 240-58654-1
Date Collected: 12/01/15 09:50
Matrix: Water
Date Received: 12/04/15 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		1	210214	12/09/15 21:25	RKT	TAL CAN
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		10	210855	12/14/15 10:28	RKT	TAL CAN
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		100	210855	12/14/15 13:47	RKT	TAL CAN
Total/NA	Prep	245.1			209706	12/07/15 12:00	WKD	TAL CAN
Total/NA	Analysis	245.1		1	209995	12/08/15 11:22	WAL	TAL CAN
Total/NA	Analysis	2320B-1997		1	210655	12/11/15 18:57	LKG	TAL CAN
Total/NA	Analysis	300.0		5	209929	12/08/15 17:14	LKG	TAL CAN
Total/NA	Analysis	300.0		100	209929	12/08/15 17:32	LKG	TAL CAN
Total/NA	Analysis	300.0		25	209587	12/04/15 15:41	LKG	TAL CAN
Total/NA	Analysis	353.2		5	210073	12/09/15 11:14	LKG	TAL CAN
Total/NA	Analysis	SM 2540C		1	209750	12/07/15 12:23	GNR	TAL CAN

Client Sample ID: FC-CCR-MW12R-120115

Lab Sample ID: 240-58654-2
Date Collected: 12/01/15 10:20
Matrix: Water
Date Received: 12/04/15 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		1	210214	12/09/15 21:29	RKT	TAL CAN
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		5	210402	12/10/15 12:02	RKT	TAL CAN
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		10	210855	12/14/15 10:12	RKT	TAL CAN
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		50	210855	12/14/15 10:32	RKT	TAL CAN
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		10	210855	12/14/15 13:51	RKT	TAL CAN
Total/NA	Prep	245.1			209706	12/07/15 12:00	WKD	TAL CAN
Total/NA	Analysis	245.1		1	209995	12/08/15 11:25	WAL	TAL CAN
Total/NA	Analysis	2320B-1997		1	210655	12/11/15 18:36	LKG	TAL CAN
Total/NA	Analysis	300.0		1000	209929	12/08/15 18:09	LKG	TAL CAN
Total/NA	Analysis	300.0		25	209587	12/04/15 16:30	LKG	TAL CAN
Total/NA	Analysis	353.2		1	210049	12/09/15 10:18	LKG	TAL CAN
Total/NA	Analysis	SM 2540C		1	209955	12/08/15 20:14	JWW	TAL CAN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Client Sample ID: FC-CCR-MW43-120115 — Lab Sample ID: 240-58654-3

Date Collected: 12/01/15 11:35 — **Matrix: Water**
Date Received: 12/04/15 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		1	210214	12/09/15 21:33	RKT	TAL CAN
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		10	210855	12/14/15 10:16	RKT	TAL CAN
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		10	210855	12/14/15 13:55	RKT	TAL CAN
Total/NA	Prep	245.1			209706	12/07/15 12:00	WKD	TAL CAN
Total/NA	Analysis	245.1		1	209995	12/08/15 11:18	WAL	TAL CAN
Total/NA	Analysis	2320B-1997		1	210655	12/11/15 19:55	LKG	TAL CAN
Total/NA	Analysis	300.0		5	209929	12/08/15 19:04	LKG	TAL CAN
Total/NA	Analysis	300.0		50	209929	12/08/15 19:23	LKG	TAL CAN
Total/NA	Analysis	300.0		25	209587	12/04/15 16:47	LKG	TAL CAN
Total/NA	Analysis	353.2		20	210073	12/09/15 11:15	LKG	TAL CAN
Total/NA	Analysis	SM 2540C		1	209750	12/07/15 12:23	GNR	TAL CAN

Client Sample ID: FC-CCR-MW49A-120115 — Lab Sample ID: 240-58654-4

Date Collected: 12/01/15 10:45 — **Matrix: Water**
Date Received: 12/04/15 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		1	210214	12/09/15 21:37	RKT	TAL CAN
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		10	210855	12/14/15 10:36	RKT	TAL CAN
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		50	210855	12/14/15 13:59	RKT	TAL CAN
Total/NA	Prep	245.1			209706	12/07/15 12:00	WKD	TAL CAN
Total/NA	Analysis	245.1		1	209995	12/08/15 11:19	WAL	TAL CAN
Total/NA	Analysis	2320B-1997		1	210655	12/11/15 19:36	LKG	TAL CAN
Total/NA	Analysis	300.0		5	209929	12/08/15 19:41	LKG	TAL CAN
Total/NA	Analysis	300.0		100	209929	12/08/15 20:00	LKG	TAL CAN
Total/NA	Analysis	300.0		25	209587	12/04/15 17:03	LKG	TAL CAN
Total/NA	Analysis	353.2		5	211117	12/16/15 12:50	LKG	TAL CAN
Total/NA	Analysis	SM 2540C		1	209750	12/07/15 12:23	GNR	TAL CAN

Client Sample ID: FC-CCR-MW50-120115 — Lab Sample ID: 240-58654-5

Date Collected: 12/01/15 11:15 — **Matrix: Water**
Date Received: 12/04/15 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		1	210214	12/09/15 21:49	RKT	TAL CAN

Lab Chronicle

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Client Sample ID: FC-CCR-MW50-120115

Lab Sample ID: 240-58654-5

Date Collected: 12/01/15 11:15

Matrix: Water

Date Received: 12/04/15 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		10	210855	12/14/15 10:48	RKT	TAL CAN
Total Recoverable	Prep	200.8			209704	12/07/15 09:33	WKD	TAL CAN
Total Recoverable	Analysis	200.8		20	210855	12/14/15 14:03	RKT	TAL CAN
Total/NA	Prep	245.1			209706	12/07/15 12:00	WKD	TAL CAN
Total/NA	Analysis	245.1		1	209995	12/08/15 11:27	WAL	TAL CAN
Total/NA	Analysis	2320B-1997		1	210655	12/11/15 18:08	LKG	TAL CAN
Total/NA	Analysis	300.0		5	209929	12/08/15 20:18	LKG	TAL CAN
Total/NA	Analysis	300.0		50	209929	12/08/15 20:36	LKG	TAL CAN
Total/NA	Analysis	300.0		25	209587	12/04/15 17:19	LKG	TAL CAN
Total/NA	Analysis	353.2		1	210073	12/09/15 11:18	LKG	TAL CAN
Total/NA	Analysis	SM 2540C		1	209750	12/07/15 12:23	GNR	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: AECOM Technical Services Inc.
Project/Site: FCPP - CCR APS Four Corners

TestAmerica Job ID: 240-58654-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-15
Illinois	NELAP	5	200004	07-31-16
Kansas	NELAP	7	E-10336	01-31-16 *
Kentucky (UST)	State Program	4	58	02-26-16
Kentucky (WW)	State Program	4	98016	12-31-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-15
Nevada	State Program	9	OH-000482008A	07-31-16
New Jersey	NELAP	2	OH001	06-30-16
New York	NELAP	2	10975	03-31-16
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-16
Pennsylvania	NELAP	3	68-00340	08-31-16
Texas	NELAP	6	T104704517-15-5	08-31-16
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-16
West Virginia DEP	State Program	3	210	12-31-15
Wisconsin	State Program	5	999518190	08-31-16

* Certification renewal pending - certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

1 2 3 4 5 6 7 8 9 10 11 12 13

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS

240-58654 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 tel 330.497.9396 fax 330.497.0772 www.testamericainc.com

America Phoenix
E. Cotton Center Blvd.
189
nix, AZ 85040
one: 602.437.3340 Fax:

1.4/C1.5

Chain of Custody Record

097472

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact		Project Manager: Dan Sola	Site Contact:	Date: 12/1/15	COC No: 097472
Company Name: AECOM		Tel/Fax:	Lab Contact: Becki Strart	Carrier: Fed Ex	1 of 1 COCs
Address: 7720 N. 16th St. #100		Analysis Turnaround Time			Sampler:
City/State/Zip: Phoenix, AZ, 85331		☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 612-244-8599		TAT if different from Below _____			Walk-in Client:
Fax:		☒ 2 weeks			Lab Sampling:
Project Name: FCPP- CCR		☐ 1 week			
Site: APS Four Corners		☐ 2 days			Job / SDG No.:
P O #		☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	200.8	245.1	353.2	2320B, 2450C, 300	903.1	904	Sample Specific Notes:
FC-CCR-MW8-120115	12/1/15	950	G	W	4	N		X	X	X	X			
FC-CCR-MW12R-120115	12/1/15	1020	G	W	4	N		X	X	X	X			
FC-CCR-MW43-120115	12/1/15	1135	G	W	4	N		X	X	X	X			
FC-CCR-MW49A-120115	12/1/15	1045	G	W	4	N		X	X	X	X			
FC-CCR-MW50-120115	12/1/15	1115	G	W	4	N		X	X	X	X			
~~FC-CCR~~ QS														

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:
~~ONE CO~~ 3.8°C

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:
	AECOM	12/2/15 2:00pm	LOUIE BATEMAN	T AMERICA	12/3/15 11:20
Relinquished by: LOUIE BATEMAN	Company: T-AMERICA	Date/Time: 12/3/15 12:35	Received by:	Company: TA-PHX LAB	Date/Time: 12-03-15 15:15
Relinquished by: FEDEX	Company: TA PHX LAB	Date/Time: 12-03-15	Received in Laboratory by:	Company: TA	Date/Time: 12/4/15 945

TestAmerica Canton Sample Receipt Form/Narrative **Login # : 58604**
Canton Facility

Client AECOM Site Name _____ Cooler unpacked by: Alex

Cooler Received on 12/4/15 Opened on 12/4/15

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
   - IR GUN# 53 (CF +0.1 °C) Observed Cooler Temp. 1.4 °C Corrected Cooler Temp. 1.5 °C
   - IR GUN# 48 (CF -0.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
   - ~~IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C~~
   - IR GUN# 8 (CF -0.5 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

☐ See Multiple Cooler Form

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
   - -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# **HC559158**
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
15. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

~~Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)~~

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____.

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
FC-CCR-MW8-120115	240-58654-A-1	Plastic 250ml - with Sulfuric Acid	<2		
FC-CCR-MW8-120115	240-58654-C-1	Plastic 500ml - with Nitric Acid	<2		
FC-CCR-MW8-120115	240-58654-D-1	Plastic 1 liter - Nitric Acid	<2		
FC-CCR-MW12R-120115	240-58654-A-2	Plastic 250ml - with Sulfuric Acid	<2		
FC-CCR-MW12R-120115	240-58654-C-2	Plastic 500ml - with Nitric Acid	<2		
FC-CCR-MW12R-120115	240-58654-D-2	Plastic 1 liter - Nitric Acid	<2		
FC-CCR-MW43-120115	240-58654-A-3	Plastic 250ml - with Sulfuric Acid	<2		
FC-CCR-MW43-120115	240-58654-C-3	Plastic 500ml - with Nitric Acid	<2		
FC-CCR-MW43-120115	240-58654-D-3	Plastic 1 liter - Nitric Acid	<2		
FC-CCR-MW49A-120115	240-58654-A-4	Plastic 250ml - with Sulfuric Acid	<2		
FC-CCR-MW49A-120115	240-58654-C-4	Plastic 500ml - with Nitric Acid	<2		
FC-CCR-MW49A-120115	240-58654-D-4	Plastic 1 liter - Nitric Acid	<2		
FC-CCR-MW50-120115	240-58654-A-5	Plastic 250ml - with Sulfuric Acid	<2		
FC-CCR-MW50-120115	240-58654-C-5	Plastic 500ml - with Nitric Acid	<2		
FC-CCR-MW50-120115	240-58654-D-5	Plastic 1 liter - Nitric Acid	<2		