

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-86852-1

Client Project/Site: Adams County Shooting Range

For:

Quantum Water Consulting

1746 Cole Blvd

Suite 340

Lakewood, Colorado 80401

Attn: Mr. John Dellaport



Authorized for release by:

8/25/2016 11:38:54 AM

Stephanie Rothmeyer, Project Manager I

(303)736-0182

stephanie.rothmeyer@testamericainc.com

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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.

Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	6
Method Summary	8
Sample Summary	9
Client Sample Results	10
Surrogate Summary	17
QC Sample Results	18
QC Association	25
Chronicle	27
Certification Summary	28
Chain of Custody	29
Receipt Checklists	30



Definitions/Glossary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
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.
α	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)

Case Narrative

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Job ID: 280-86852-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Quantum Water Consulting

Project: Adams County Shooting Range

Report Number: 280-86852-1

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

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

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

RECEIPT

The samples were received on 8/12/2016 at 2:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 21.9° C.

These samples were collected, placed on ice, and delivered on the same day. Three of three VOA vials for sample AC-P4 show a sample time of 1015 on the container labels, but the COC lists 10:30; the sample was logged per the COC. All containers for sample AC-MW-4 show a sample date of 08/11/16, but the COC lists 08/12/16; the sample was logged per the COC.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples AC-P4 (280-86852-1), AC-MW-1 (280-86852-2), AC-MW-4 (280-86852-3) and TRIP BLANK (280-86852-4) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 08/22/2016.

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

TOTAL METALS

Samples AC-MW-1 (280-86852-2) and AC-MW-4 (280-86852-3) were analyzed for total metals in accordance with EPA SW-846 Method 6010B. The samples were prepared on 08/19/2016 and analyzed on 08/20/2016.

Sodium failed the recovery criteria low for the MS of sample AC-MW-1 (280-86852-2) in batch 280-338863. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

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

TOTAL METALS (ICPMS)

Samples AC-MW-1 (280-86852-2) and AC-MW-4 (280-86852-3) were analyzed for total metals (ICPMS) in accordance with SW846 6020A. The samples were prepared on 08/19/2016 and analyzed on 08/22/2016 and 08/23/2016.

Sample AC-MW-1 (280-86852-2)[5X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

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

ALKALINITY

Case Narrative

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Job ID: 280-86852-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

Samples AC-MW-1 (280-86852-2) and AC-MW-4 (280-86852-3) were analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 08/17/2016.

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

ANIONS (28 DAYS)

Samples AC-MW-1 (280-86852-2) and AC-MW-4 (280-86852-3) were analyzed for anions (28 days) in accordance with EPA Method 300.0. The samples were analyzed on 08/12/2016.

Samples AC-MW-1 (280-86852-2)[50X] and AC-MW-4 (280-86852-3)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

ANIONS (48 HOURS)

Samples AC-MW-1 (280-86852-2) and AC-MW-4 (280-86852-3) were analyzed for anions (48 hours) in accordance with EPA Method 300.0. The samples were analyzed on 08/12/2016.

Sample AC-MW-1 (280-86852-2)[5X] required dilution prior to analysis due to the Matrix Conductivity Threshold (MCT) of the instrument. The reporting limits have been adjusted accordingly.

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

Detection Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Client Sample ID: AC-P4

Lab Sample ID: 280-86852-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acetone	2.3	J	10	1.9	ug/L	1			8260B	Total/NA
Carbon disulfide	0.56	J	2.0	0.45	ug/L	1			8260B	Total/NA
Trichloroethene	0.98	J	1.0	0.16	ug/L	1			8260B	Total/NA

Client Sample ID: AC-MW-1

Lab Sample ID: 280-86852-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acetone	11		10	1.9	ug/L	1			8260B	Total/NA
Chloroform	0.19	J	1.0	0.16	ug/L	1			8260B	Total/NA
cis-1,2-Dichloroethene	0.56	J	1.0	0.15	ug/L	1			8260B	Total/NA
1,1-Dichloroethane	0.90	J	1.0	0.22	ug/L	1			8260B	Total/NA
1,2-Dichloropropane	0.25	J	1.0	0.18	ug/L	1			8260B	Total/NA
Trichloroethene	0.19	J	1.0	0.16	ug/L	1			8260B	Total/NA
Trichlorofluoromethane	0.74	J	2.0	0.29	ug/L	1			8260B	Total/NA
Calcium	860000		200	35	ug/L	1			6010B	Total/NA
Magnesium	170000		200	11	ug/L	1			6010B	Total/NA
Potassium	19000		3000	240	ug/L	1			6010B	Total/NA
Sodium	1800000		1000	92	ug/L	1			6010B	Total/NA
Antimony	1.0	J	2.0	0.40	ug/L	1			6020A	Total/NA
Arsenic	1.2	J	5.0	0.33	ug/L	1			6020A	Total/NA
Barium	61		1.0	0.29	ug/L	1			6020A	Total/NA
Chromium	3.8		2.0	0.50	ug/L	1			6020A	Total/NA
Cobalt	2.9		1.0	0.054	ug/L	1			6020A	Total/NA
Copper	9.2		2.0	0.56	ug/L	1			6020A	Total/NA
Lead	0.94	J	1.0	0.18	ug/L	1			6020A	Total/NA
Nickel	15		2.0	0.30	ug/L	1			6020A	Total/NA
Selenium	92		5.0	0.70	ug/L	1			6020A	Total/NA
Silver	0.057	J	5.0	0.033	ug/L	1			6020A	Total/NA
Thallium	0.16	J	1.0	0.050	ug/L	1			6020A	Total/NA
Vanadium	2.5	J	5.0	0.50	ug/L	1			6020A	Total/NA
Zinc	9.5	J	10	2.0	ug/L	1			6020A	Total/NA
Chloride	3300		150	13	mg/L	50			300.0	Total/NA
Nitrate as N	1.7	J	2.5	0.21	mg/L	5			300.0	Total/NA
Sulfate	1700		250	12	mg/L	50			300.0	Total/NA
Alkalinity	220		5.0	1.1	mg/L	1			SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	220		5.0	1.1	mg/L	1			SM 2320B	Total/NA

Client Sample ID: AC-MW-4

Lab Sample ID: 280-86852-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acetone	13		10	1.9	ug/L	1			8260B	Total/NA
cis-1,2-Dichloroethene	8.8		1.0	0.15	ug/L	1			8260B	Total/NA
1,2-Dichloropropane	0.30	J	1.0	0.18	ug/L	1			8260B	Total/NA
trans-1,2-Dichloroethene	0.20	J	1.0	0.15	ug/L	1			8260B	Total/NA
Trichloroethene	0.30	J	1.0	0.16	ug/L	1			8260B	Total/NA
Vinyl chloride	0.53	J	1.0	0.10	ug/L	1			8260B	Total/NA
Calcium	620000		200	35	ug/L	1			6010B	Total/NA
Magnesium	140000		200	11	ug/L	1			6010B	Total/NA
Potassium	8600		3000	240	ug/L	1			6010B	Total/NA
Sodium	960000		1000	92	ug/L	1			6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Client Sample ID: AC-MW-4 (Continued)

Lab Sample ID: 280-86852-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	1.3	J	5.0	0.33	ug/L	1			6020A	Total/NA
Barium	42		1.0	0.29	ug/L	1			6020A	Total/NA
Chromium	1.1	J	2.0	0.50	ug/L	1			6020A	Total/NA
Cobalt	0.89	J	1.0	0.054	ug/L	1			6020A	Total/NA
Copper	3.8		2.0	0.56	ug/L	1			6020A	Total/NA
Nickel	13		2.0	0.30	ug/L	1			6020A	Total/NA
Selenium	1.4	J	5.0	0.70	ug/L	1			6020A	Total/NA
Silver	0.054	J	5.0	0.033	ug/L	1			6020A	Total/NA
Thallium	0.065	J	1.0	0.050	ug/L	1			6020A	Total/NA
Vanadium	5.0		5.0	0.50	ug/L	1			6020A	Total/NA
Zinc	4.5	J	10	2.0	ug/L	1			6020A	Total/NA
Chloride	640		60	5.1	mg/L	20			300.0	Total/NA
Nitrate as N	0.82		0.50	0.042	mg/L	1			300.0	Total/NA
Sulfate	2300		100	4.6	mg/L	20			300.0	Total/NA
Alkalinity	820		5.0	1.1	mg/L	1			SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	820		5.0	1.1	mg/L	1			SM 2320B	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 280-86852-4

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Method Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
6010B	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
300.0	Anions, Ion Chromatography	MCAWW	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN

Protocol References:

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",

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

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-86852-1	AC-P4	Water	08/12/16 10:30	08/12/16 14:55
280-86852-2	AC-MW-1	Water	08/12/16 11:20	08/12/16 14:55
280-86852-3	AC-MW-4	Water	08/12/16 12:45	08/12/16 14:55
280-86852-4	TRIP BLANK	Water	08/12/16 00:00	08/12/16 14:55

Client Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: AC-P4
Date Collected: 08/12/16 10:30
Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	2.3	J	10	1.9	ug/L			08/22/16 18:12	1
Benzene	ND		1.0	0.16	ug/L			08/22/16 18:12	1
Bromoform	ND		1.0	0.19	ug/L			08/22/16 18:12	1
Bromomethane	ND		2.0	0.21	ug/L			08/22/16 18:12	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			08/22/16 18:12	1
Acrylonitrile	ND		20	1.4	ug/L			08/22/16 18:12	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			08/22/16 18:12	1
Chlorobenzene	ND		1.0	0.17	ug/L			08/22/16 18:12	1
Chlorobromomethane	ND		1.0	0.10	ug/L			08/22/16 18:12	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			08/22/16 18:12	1
Chloroethane	ND		2.0	0.41	ug/L			08/22/16 18:12	1
Chloroform	ND		1.0	0.16	ug/L			08/22/16 18:12	1
Chloromethane	ND		2.0	0.30	ug/L			08/22/16 18:12	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/22/16 18:12	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			08/22/16 18:12	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			08/22/16 18:12	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			08/22/16 18:12	1
Dibromomethane	ND		1.0	0.17	ug/L			08/22/16 18:12	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			08/22/16 18:12	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			08/22/16 18:12	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			08/22/16 18:12	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			08/22/16 18:12	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/22/16 18:12	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			08/22/16 18:12	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			08/22/16 18:12	1
Carbon disulfide	0.56	J	2.0	0.45	ug/L			08/22/16 18:12	1
Ethylbenzene	ND		1.0	0.16	ug/L			08/22/16 18:12	1
2-Hexanone	ND		5.0	1.7	ug/L			08/22/16 18:12	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			08/22/16 18:12	1
m-Xylene & p-Xylene	ND		2.0	0.34	ug/L			08/22/16 18:12	1
o-Xylene	ND		1.0	0.19	ug/L			08/22/16 18:12	1
Styrene	ND		1.0	0.17	ug/L			08/22/16 18:12	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/22/16 18:12	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/22/16 18:12	1
Tetrachloroethene	ND		1.0	0.20	ug/L			08/22/16 18:12	1
Toluene	ND		1.0	0.17	ug/L			08/22/16 18:12	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/22/16 18:12	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			08/22/16 18:12	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			08/22/16 18:12	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			08/22/16 18:12	1
Trichloroethene	0.98	J	1.0	0.16	ug/L			08/22/16 18:12	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			08/22/16 18:12	1
1,2,3-Trichloropropane	ND		2.5	0.33	ug/L			08/22/16 18:12	1
Vinyl chloride	ND		1.0	0.10	ug/L			08/22/16 18:12	1
Xylenes, Total	ND		2.0	0.19	ug/L			08/22/16 18:12	1
trans-1,4-Dichloro-2-butene	ND		3.0	0.80	ug/L			08/22/16 18:12	1
Iodomethane	ND		1.0	0.23	ug/L			08/22/16 18:12	1
Vinyl acetate	ND		3.0	0.94	ug/L			08/22/16 18:12	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		78 - 120		08/22/16 18:12	1
Dibromofluoromethane (Surr)	99		77 - 120		08/22/16 18:12	1
1,2-Dichloroethane-d4 (Surr)	119		70 - 127		08/22/16 18:12	1
Toluene-d8 (Surr)	98		80 - 125		08/22/16 18:12	1

Client Sample ID: AC-MW-1
Date Collected: 08/12/16 11:20
Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	11		10	1.9	ug/L			08/22/16 18:32	1
Benzene	ND		1.0	0.16	ug/L			08/22/16 18:32	1
Bromoform	ND		1.0	0.19	ug/L			08/22/16 18:32	1
Bromomethane	ND		2.0	0.21	ug/L			08/22/16 18:32	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			08/22/16 18:32	1
Acrylonitrile	ND		20	1.4	ug/L			08/22/16 18:32	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			08/22/16 18:32	1
Chlorobenzene	ND		1.0	0.17	ug/L			08/22/16 18:32	1
Chlorobromomethane	ND		1.0	0.10	ug/L			08/22/16 18:32	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			08/22/16 18:32	1
Chloroethane	ND		2.0	0.41	ug/L			08/22/16 18:32	1
Chloroform	0.19	J	1.0	0.16	ug/L			08/22/16 18:32	1
Chloromethane	ND		2.0	0.30	ug/L			08/22/16 18:32	1
cis-1,2-Dichloroethene	0.56	J	1.0	0.15	ug/L			08/22/16 18:32	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			08/22/16 18:32	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			08/22/16 18:32	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			08/22/16 18:32	1
Dibromomethane	ND		1.0	0.17	ug/L			08/22/16 18:32	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			08/22/16 18:32	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			08/22/16 18:32	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			08/22/16 18:32	1
1,1-Dichloroethane	0.90	J	1.0	0.22	ug/L			08/22/16 18:32	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/22/16 18:32	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			08/22/16 18:32	1
1,2-Dichloropropane	0.25	J	1.0	0.18	ug/L			08/22/16 18:32	1
Carbon disulfide	ND		2.0	0.45	ug/L			08/22/16 18:32	1
Ethylbenzene	ND		1.0	0.16	ug/L			08/22/16 18:32	1
2-Hexanone	ND		5.0	1.7	ug/L			08/22/16 18:32	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			08/22/16 18:32	1
m-Xylene & p-Xylene	ND		2.0	0.34	ug/L			08/22/16 18:32	1
o-Xylene	ND		1.0	0.19	ug/L			08/22/16 18:32	1
Styrene	ND		1.0	0.17	ug/L			08/22/16 18:32	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/22/16 18:32	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/22/16 18:32	1
Tetrachloroethene	ND		1.0	0.20	ug/L			08/22/16 18:32	1
Toluene	ND		1.0	0.17	ug/L			08/22/16 18:32	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/22/16 18:32	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			08/22/16 18:32	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			08/22/16 18:32	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			08/22/16 18:32	1
Trichloroethene	0.19	J	1.0	0.16	ug/L			08/22/16 18:32	1
Trichlorofluoromethane	0.74	J	2.0	0.29	ug/L			08/22/16 18:32	1
1,2,3-Trichloropropane	ND		2.5	0.33	ug/L			08/22/16 18:32	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: AC-MW-1
Date Collected: 08/12/16 11:20
Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		1.0	0.10	ug/L			08/22/16 18:32	1
Xylenes, Total	ND		2.0	0.19	ug/L			08/22/16 18:32	1
trans-1,4-Dichloro-2-butene	ND		3.0	0.80	ug/L			08/22/16 18:32	1
Iodomethane	ND		1.0	0.23	ug/L			08/22/16 18:32	1
Vinyl acetate	ND		3.0	0.94	ug/L			08/22/16 18:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		78 - 120		08/22/16 18:32	1
Dibromofluoromethane (Surr)	105		77 - 120		08/22/16 18:32	1
1,2-Dichloroethane-d4 (Surr)	121		70 - 127		08/22/16 18:32	1
Toluene-d8 (Surr)	94		80 - 125		08/22/16 18:32	1

Client Sample ID: AC-MW-4
Date Collected: 08/12/16 12:45
Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	13		10	1.9	ug/L			08/22/16 18:53	1
Benzene	ND		1.0	0.16	ug/L			08/22/16 18:53	1
Bromoform	ND		1.0	0.19	ug/L			08/22/16 18:53	1
Bromomethane	ND		2.0	0.21	ug/L			08/22/16 18:53	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			08/22/16 18:53	1
Acrylonitrile	ND		20	1.4	ug/L			08/22/16 18:53	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			08/22/16 18:53	1
Chlorobenzene	ND		1.0	0.17	ug/L			08/22/16 18:53	1
Chlorobromomethane	ND		1.0	0.10	ug/L			08/22/16 18:53	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			08/22/16 18:53	1
Chloroethane	ND		2.0	0.41	ug/L			08/22/16 18:53	1
Chloroform	ND		1.0	0.16	ug/L			08/22/16 18:53	1
Chloromethane	ND		2.0	0.30	ug/L			08/22/16 18:53	1
cis-1,2-Dichloroethene	8.8		1.0	0.15	ug/L			08/22/16 18:53	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			08/22/16 18:53	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			08/22/16 18:53	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			08/22/16 18:53	1
Dibromomethane	ND		1.0	0.17	ug/L			08/22/16 18:53	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			08/22/16 18:53	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			08/22/16 18:53	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			08/22/16 18:53	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			08/22/16 18:53	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/22/16 18:53	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			08/22/16 18:53	1
1,2-Dichloropropane	0.30	J	1.0	0.18	ug/L			08/22/16 18:53	1
Carbon disulfide	ND		2.0	0.45	ug/L			08/22/16 18:53	1
Ethylbenzene	ND		1.0	0.16	ug/L			08/22/16 18:53	1
2-Hexanone	ND		5.0	1.7	ug/L			08/22/16 18:53	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			08/22/16 18:53	1
m-Xylene & p-Xylene	ND		2.0	0.34	ug/L			08/22/16 18:53	1
o-Xylene	ND		1.0	0.19	ug/L			08/22/16 18:53	1
Styrene	ND		1.0	0.17	ug/L			08/22/16 18:53	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/22/16 18:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/22/16 18:53	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: AC-MW-4
Date Collected: 08/12/16 12:45
Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		1.0	0.20	ug/L			08/22/16 18:53	1
Toluene	ND		1.0	0.17	ug/L			08/22/16 18:53	1
trans-1,2-Dichloroethene	0.20	J	1.0	0.15	ug/L			08/22/16 18:53	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			08/22/16 18:53	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			08/22/16 18:53	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			08/22/16 18:53	1
Trichloroethene	0.30	J	1.0	0.16	ug/L			08/22/16 18:53	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			08/22/16 18:53	1
1,2,3-Trichloropropane	ND		2.5	0.33	ug/L			08/22/16 18:53	1
Vinyl chloride	0.53	J	1.0	0.10	ug/L			08/22/16 18:53	1
Xylenes, Total	ND		2.0	0.19	ug/L			08/22/16 18:53	1
trans-1,4-Dichloro-2-butene	ND		3.0	0.80	ug/L			08/22/16 18:53	1
Iodomethane	ND		1.0	0.23	ug/L			08/22/16 18:53	1
Vinyl acetate	ND		3.0	0.94	ug/L			08/22/16 18:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		78 - 120		08/22/16 18:53	1
Dibromofluoromethane (Surr)	107		77 - 120		08/22/16 18:53	1
1,2-Dichloroethane-d4 (Surr)	123		70 - 127		08/22/16 18:53	1
Toluene-d8 (Surr)	97		80 - 125		08/22/16 18:53	1

Client Sample ID: TRIP BLANK
Date Collected: 08/12/16 00:00
Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10	1.9	ug/L			08/22/16 19:14	1
Benzene	ND		1.0	0.16	ug/L			08/22/16 19:14	1
Bromoform	ND		1.0	0.19	ug/L			08/22/16 19:14	1
Bromomethane	ND		2.0	0.21	ug/L			08/22/16 19:14	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			08/22/16 19:14	1
Acrylonitrile	ND		20	1.4	ug/L			08/22/16 19:14	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			08/22/16 19:14	1
Chlorobenzene	ND		1.0	0.17	ug/L			08/22/16 19:14	1
Chlorobromomethane	ND		1.0	0.10	ug/L			08/22/16 19:14	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			08/22/16 19:14	1
Chloroethane	ND		2.0	0.41	ug/L			08/22/16 19:14	1
Chloroform	ND		1.0	0.16	ug/L			08/22/16 19:14	1
Chloromethane	ND		2.0	0.30	ug/L			08/22/16 19:14	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/22/16 19:14	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			08/22/16 19:14	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			08/22/16 19:14	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			08/22/16 19:14	1
Dibromomethane	ND		1.0	0.17	ug/L			08/22/16 19:14	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			08/22/16 19:14	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			08/22/16 19:14	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			08/22/16 19:14	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			08/22/16 19:14	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/22/16 19:14	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			08/22/16 19:14	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			08/22/16 19:14	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: TRIP BLANK

Date Collected: 08/12/16 00:00

Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		2.0	0.45	ug/L			08/22/16 19:14	1
Ethylbenzene	ND		1.0	0.16	ug/L			08/22/16 19:14	1
2-Hexanone	ND		5.0	1.7	ug/L			08/22/16 19:14	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			08/22/16 19:14	1
m-Xylene & p-Xylene	ND		2.0	0.34	ug/L			08/22/16 19:14	1
o-Xylene	ND		1.0	0.19	ug/L			08/22/16 19:14	1
Styrene	ND		1.0	0.17	ug/L			08/22/16 19:14	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/22/16 19:14	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/22/16 19:14	1
Tetrachloroethene	ND		1.0	0.20	ug/L			08/22/16 19:14	1
Toluene	ND		1.0	0.17	ug/L			08/22/16 19:14	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/22/16 19:14	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			08/22/16 19:14	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			08/22/16 19:14	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			08/22/16 19:14	1
Trichloroethene	ND		1.0	0.16	ug/L			08/22/16 19:14	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			08/22/16 19:14	1
1,2,3-Trichloropropane	ND		2.5	0.33	ug/L			08/22/16 19:14	1
Vinyl chloride	ND		1.0	0.10	ug/L			08/22/16 19:14	1
Xylenes, Total	ND		2.0	0.19	ug/L			08/22/16 19:14	1
trans-1,4-Dichloro-2-butene	ND		3.0	0.80	ug/L			08/22/16 19:14	1
Iodomethane	ND		1.0	0.23	ug/L			08/22/16 19:14	1
Vinyl acetate	ND		3.0	0.94	ug/L			08/22/16 19:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		78 - 120		08/22/16 19:14	1
Dibromofluoromethane (Surr)	107		77 - 120		08/22/16 19:14	1
1,2-Dichloroethane-d4 (Surr)	122		70 - 127		08/22/16 19:14	1
Toluene-d8 (Surr)	96		80 - 125		08/22/16 19:14	1

Method: 6010B - Metals (ICP)

Client Sample ID: AC-MW-1

Date Collected: 08/12/16 11:20

Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	860000		200	35	ug/L		08/19/16 14:45	08/20/16 01:44	1
Magnesium	170000		200	11	ug/L		08/19/16 14:45	08/20/16 01:44	1
Potassium	19000		3000	240	ug/L		08/19/16 14:45	08/20/16 01:44	1
Sodium	1800000		1000	92	ug/L		08/19/16 14:45	08/20/16 01:44	1

Client Sample ID: AC-MW-4

Date Collected: 08/12/16 12:45

Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	620000		200	35	ug/L		08/19/16 14:45	08/20/16 01:56	1
Magnesium	140000		200	11	ug/L		08/19/16 14:45	08/20/16 01:56	1
Potassium	8600		3000	240	ug/L		08/19/16 14:45	08/20/16 01:56	1
Sodium	960000		1000	92	ug/L		08/19/16 14:45	08/20/16 01:56	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: AC-MW-1
Date Collected: 08/12/16 11:20
Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.0	J	2.0	0.40	ug/L		08/19/16 14:45	08/22/16 15:36	1
Arsenic	1.2	J	5.0	0.33	ug/L		08/19/16 14:45	08/22/16 15:36	1
Barium	61		1.0	0.29	ug/L		08/19/16 14:45	08/22/16 15:36	1
Beryllium	ND		5.0	0.40	ug/L		08/19/16 14:45	08/23/16 09:20	5
Cadmium	ND		1.0	0.27	ug/L		08/19/16 14:45	08/22/16 15:36	1
Chromium	3.8		2.0	0.50	ug/L		08/19/16 14:45	08/22/16 15:36	1
Cobalt	2.9		1.0	0.054	ug/L		08/19/16 14:45	08/22/16 15:36	1
Copper	9.2		2.0	0.56	ug/L		08/19/16 14:45	08/22/16 15:36	1
Lead	0.94	J	1.0	0.18	ug/L		08/19/16 14:45	08/22/16 15:36	1
Nickel	15		2.0	0.30	ug/L		08/19/16 14:45	08/22/16 15:36	1
Selenium	92		5.0	0.70	ug/L		08/19/16 14:45	08/22/16 15:36	1
Silver	0.057	J	5.0	0.033	ug/L		08/19/16 14:45	08/22/16 15:36	1
Thallium	0.16	J	1.0	0.050	ug/L		08/19/16 14:45	08/22/16 15:36	1
Vanadium	2.5	J	5.0	0.50	ug/L		08/19/16 14:45	08/22/16 15:36	1
Zinc	9.5	J	10	2.0	ug/L		08/19/16 14:45	08/22/16 15:36	1

Client Sample ID: AC-MW-4
Date Collected: 08/12/16 12:45
Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.40	ug/L		08/19/16 14:45	08/22/16 15:40	1
Arsenic	1.3	J	5.0	0.33	ug/L		08/19/16 14:45	08/22/16 15:40	1
Barium	42		1.0	0.29	ug/L		08/19/16 14:45	08/22/16 15:40	1
Beryllium	ND		1.0	0.080	ug/L		08/19/16 14:45	08/22/16 15:40	1
Cadmium	ND		1.0	0.27	ug/L		08/19/16 14:45	08/22/16 15:40	1
Chromium	1.1	J	2.0	0.50	ug/L		08/19/16 14:45	08/22/16 15:40	1
Cobalt	0.89	J	1.0	0.054	ug/L		08/19/16 14:45	08/22/16 15:40	1
Copper	3.8		2.0	0.56	ug/L		08/19/16 14:45	08/22/16 15:40	1
Lead	ND		1.0	0.18	ug/L		08/19/16 14:45	08/22/16 15:40	1
Nickel	13		2.0	0.30	ug/L		08/19/16 14:45	08/22/16 15:40	1
Selenium	1.4	J	5.0	0.70	ug/L		08/19/16 14:45	08/22/16 15:40	1
Silver	0.054	J	5.0	0.033	ug/L		08/19/16 14:45	08/22/16 15:40	1
Thallium	0.065	J	1.0	0.050	ug/L		08/19/16 14:45	08/22/16 15:40	1
Vanadium	5.0		5.0	0.50	ug/L		08/19/16 14:45	08/22/16 15:40	1
Zinc	4.5	J	10	2.0	ug/L		08/19/16 14:45	08/22/16 15:40	1

General Chemistry

Client Sample ID: AC-MW-1
Date Collected: 08/12/16 11:20
Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3300		150	13	mg/L			08/12/16 20:26	50
Nitrate as N	1.7	J	2.5	0.21	mg/L			08/12/16 20:09	5
Nitrite as N	ND		2.5	0.25	mg/L			08/12/16 20:09	5
Sulfate	1700		250	12	mg/L			08/12/16 20:26	50
Alkalinity	220		5.0	1.1	mg/L			08/17/16 17:19	1
Bicarbonate Alkalinity as CaCO3	220		5.0	1.1	mg/L			08/17/16 17:19	1
Carbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L			08/17/16 17:19	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

General Chemistry

Client Sample ID: AC-MW-4
Date Collected: 08/12/16 12:45
Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	640		60	5.1	mg/L			08/12/16 20:59	20
Nitrate as N	0.82		0.50	0.042	mg/L			08/12/16 20:43	1
Nitrite as N	ND		0.50	0.049	mg/L			08/12/16 20:43	1
Sulfate	2300		100	4.6	mg/L			08/12/16 20:59	20
Alkalinity	820		5.0	1.1	mg/L			08/17/16 17:24	1
Bicarbonate Alkalinity as CaCO3	820		5.0	1.1	mg/L			08/17/16 17:24	1
Carbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L			08/17/16 17:24	1

Surrogate Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (78-120)	DBFM (77-120)	12DCE (70-127)	TOL (80-125)
280-86852-1	AC-P4	97	99	119	98
280-86852-2	AC-MW-1	93	105	121	94
280-86852-3	AC-MW-4	81	107	123	97
280-86852-4	TRIP BLANK	97	107	122	96
LCS 280-338859/6	Lab Control Sample	93	94	103	95
MB 280-338859/8	Method Blank	97	93	98	95

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-338859/8

Matrix: Water

Analysis Batch: 338859

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10	1.9	ug/L			08/22/16 13:02	1
Benzene	ND		1.0	0.16	ug/L			08/22/16 13:02	1
Bromoform	ND		1.0	0.19	ug/L			08/22/16 13:02	1
Bromomethane	ND		2.0	0.21	ug/L			08/22/16 13:02	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			08/22/16 13:02	1
Acrylonitrile	ND		20	1.4	ug/L			08/22/16 13:02	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			08/22/16 13:02	1
Chlorobenzene	ND		1.0	0.17	ug/L			08/22/16 13:02	1
Chlorobromomethane	ND		1.0	0.10	ug/L			08/22/16 13:02	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			08/22/16 13:02	1
Chloroethane	ND		2.0	0.41	ug/L			08/22/16 13:02	1
Chloroform	ND		1.0	0.16	ug/L			08/22/16 13:02	1
Chloromethane	ND		2.0	0.30	ug/L			08/22/16 13:02	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/22/16 13:02	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			08/22/16 13:02	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			08/22/16 13:02	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			08/22/16 13:02	1
Dibromomethane	ND		1.0	0.17	ug/L			08/22/16 13:02	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			08/22/16 13:02	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			08/22/16 13:02	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			08/22/16 13:02	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			08/22/16 13:02	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/22/16 13:02	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			08/22/16 13:02	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			08/22/16 13:02	1
Carbon disulfide	ND		2.0	0.45	ug/L			08/22/16 13:02	1
Ethylbenzene	ND		1.0	0.16	ug/L			08/22/16 13:02	1
2-Hexanone	ND		5.0	1.7	ug/L			08/22/16 13:02	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			08/22/16 13:02	1
m-Xylene & p-Xylene	ND		2.0	0.34	ug/L			08/22/16 13:02	1
o-Xylene	ND		1.0	0.19	ug/L			08/22/16 13:02	1
Styrene	ND		1.0	0.17	ug/L			08/22/16 13:02	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/22/16 13:02	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/22/16 13:02	1
Tetrachloroethene	ND		1.0	0.20	ug/L			08/22/16 13:02	1
Toluene	ND		1.0	0.17	ug/L			08/22/16 13:02	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/22/16 13:02	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			08/22/16 13:02	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			08/22/16 13:02	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			08/22/16 13:02	1
Trichloroethene	ND		1.0	0.16	ug/L			08/22/16 13:02	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			08/22/16 13:02	1
1,2,3-Trichloropropane	ND		2.5	0.33	ug/L			08/22/16 13:02	1
Vinyl chloride	ND		1.0	0.10	ug/L			08/22/16 13:02	1
Xylenes, Total	ND		2.0	0.19	ug/L			08/22/16 13:02	1
trans-1,4-Dichloro-2-butene	ND		3.0	0.80	ug/L			08/22/16 13:02	1
Iodomethane	ND		1.0	0.23	ug/L			08/22/16 13:02	1
Vinyl acetate	ND		3.0	0.94	ug/L			08/22/16 13:02	1

TestAmerica Denver

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		78 - 120		08/22/16 13:02	1
Dibromofluoromethane (Surr)	93		77 - 120		08/22/16 13:02	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 127		08/22/16 13:02	1
Toluene-d8 (Surr)	95		80 - 125		08/22/16 13:02	1

Lab Sample ID: LCS 280-338859/6

Matrix: Water

Analysis Batch: 338859

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	19.3		ug/L		97	39 - 156
Benzene	5.00	4.72		ug/L		94	65 - 135
Bromoform	5.00	4.87		ug/L		97	62 - 135
Bromomethane	5.00	3.58		ug/L		72	45 - 135
2-Butanone (MEK)	20.0	23.6		ug/L		118	44 - 177
Carbon tetrachloride	5.00	4.84		ug/L		97	65 - 135
Chlorobenzene	5.00	4.70		ug/L		94	65 - 135
Chlorobromomethane	5.00	5.09		ug/L		102	65 - 135
Chlorodibromomethane	5.00	4.92		ug/L		98	65 - 135
Chloroethane	5.00	3.99		ug/L		80	46 - 136
Chloroform	5.00	4.85		ug/L		97	65 - 135
Chloromethane	5.00	3.95		ug/L		79	34 - 145
cis-1,2-Dichloroethene	5.00	4.69		ug/L		94	65 - 135
cis-1,3-Dichloropropene	5.00	4.58		ug/L		92	65 - 135
1,2-Dibromo-3-Chloropropane	5.00	4.24	J	ug/L		85	57 - 135
1,2-Dibromoethane	5.00	4.93		ug/L		99	65 - 135
Dibromomethane	5.00	5.44		ug/L		109	65 - 135
1,2-Dichlorobenzene	5.00	5.27		ug/L		105	65 - 135
1,4-Dichlorobenzene	5.00	4.60		ug/L		92	65 - 135
Dichlorobromomethane	5.00	5.38		ug/L		108	65 - 135
1,1-Dichloroethane	5.00	4.46		ug/L		89	65 - 135
1,2-Dichloroethane	5.00	5.64		ug/L		113	65 - 135
1,1-Dichloroethene	5.00	4.20		ug/L		84	65 - 136
1,2-Dichloropropane	5.00	5.17		ug/L		103	64 - 135
Carbon disulfide	5.00	4.27		ug/L		85	55 - 143
Ethylbenzene	5.00	4.36		ug/L		87	65 - 135
2-Hexanone	20.0	20.1		ug/L		101	57 - 139
4-Methyl-2-pentanone (MIBK)	20.0	24.7		ug/L		123	60 - 150
m-Xylene & p-Xylene	5.00	4.53		ug/L		91	65 - 135
o-Xylene	5.00	4.73		ug/L		95	65 - 135
Styrene	5.00	4.68		ug/L		94	65 - 135
1,1,1,2-Tetrachloroethane	5.00	4.51		ug/L		90	65 - 135
1,1,2,2-Tetrachloroethane	5.00	4.50		ug/L		90	58 - 135
Tetrachloroethene	5.00	4.26		ug/L		85	65 - 135
Toluene	5.00	5.47		ug/L		109	65 - 135
trans-1,2-Dichloroethene	5.00	4.51		ug/L		90	65 - 135
trans-1,3-Dichloropropene	5.00	5.67		ug/L		113	65 - 135
1,1,1-Trichloroethane	5.00	4.83		ug/L		97	65 - 135
1,1,2-Trichloroethane	5.00	5.67		ug/L		113	64 - 135
Trichloroethene	5.00	4.88		ug/L		98	65 - 135
Trichlorofluoromethane	5.00	4.19		ug/L		84	53 - 137
1,2,3-Trichloropropane	5.00	4.63		ug/L		93	65 - 135
Vinyl chloride	5.00	3.90		ug/L		78	40 - 137
Xylenes, Total	10.0	9.26		ug/L		93	65 - 135

TestAmerica Denver

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-338859/6

Matrix: Water

Analysis Batch: 338859

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl acetate	10.0	11.2		ug/L		112	11 - 187
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	93		78 - 120				
Dibromofluoromethane (Surr)	94		77 - 120				
1,2-Dichloroethane-d4 (Surr)	103		70 - 127				
Toluene-d8 (Surr)	95		80 - 125				

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 280-338554/1-A

Matrix: Water

Analysis Batch: 338863

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 338554

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		200	35	ug/L		08/19/16 14:45	08/20/16 01:39	1
Magnesium	ND		200	11	ug/L		08/19/16 14:45	08/20/16 01:39	1
Potassium	ND		3000	240	ug/L		08/19/16 14:45	08/20/16 01:39	1
Sodium	ND		1000	92	ug/L		08/19/16 14:45	08/20/16 01:39	1

Lab Sample ID: LCS 280-338554/2-A

Matrix: Water

Analysis Batch: 338863

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 338554

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	51700		ug/L		103	90 - 111
Magnesium	50000	52300		ug/L		105	90 - 113
Potassium	50000	52700		ug/L		105	89 - 114
Sodium	50000	52600		ug/L		105	90 - 115

Lab Sample ID: 280-86852-2 MS

Matrix: Water

Analysis Batch: 338863

Client Sample ID: AC-MW-1

Prep Type: Total/NA

Prep Batch: 338554

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	860000		50000	887000	4	ug/L		52	48 - 153
Magnesium	170000		50000	210000		ug/L		87	62 - 146
Potassium	19000		50000	74200		ug/L		110	76 - 132
Sodium	1800000		50000	1790000	4	ug/L		60	70 - 203

Lab Sample ID: 280-86852-2 MSD

Matrix: Water

Analysis Batch: 338863

Client Sample ID: AC-MW-1

Prep Type: Total/NA

Prep Batch: 338554

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	860000		50000	898000	4	ug/L		74	48 - 153	1	20
Magnesium	170000		50000	216000		ug/L		99	62 - 146	3	20
Potassium	19000		50000	76000		ug/L		114	76 - 132	2	20

TestAmerica Denver

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 280-86852-2 MSD

Matrix: Water

Analysis Batch: 338863

Client Sample ID: AC-MW-1

Prep Type: Total/NA

Prep Batch: 338554

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium	1800000		50000	1830000	4	ug/L		145	70 - 203	2	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-338560/1-A

Matrix: Water

Analysis Batch: 338977

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 338560

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.40	ug/L		08/19/16 14:45	08/22/16 15:29	1
Arsenic	ND		5.0	0.33	ug/L		08/19/16 14:45	08/22/16 15:29	1
Barium	ND		1.0	0.29	ug/L		08/19/16 14:45	08/22/16 15:29	1
Beryllium	ND		1.0	0.080	ug/L		08/19/16 14:45	08/22/16 15:29	1
Cadmium	ND		1.0	0.27	ug/L		08/19/16 14:45	08/22/16 15:29	1
Chromium	ND		2.0	0.50	ug/L		08/19/16 14:45	08/22/16 15:29	1
Cobalt	ND		1.0	0.054	ug/L		08/19/16 14:45	08/22/16 15:29	1
Copper	ND		2.0	0.56	ug/L		08/19/16 14:45	08/22/16 15:29	1
Lead	ND		1.0	0.18	ug/L		08/19/16 14:45	08/22/16 15:29	1
Nickel	ND		2.0	0.30	ug/L		08/19/16 14:45	08/22/16 15:29	1
Selenium	ND		5.0	0.70	ug/L		08/19/16 14:45	08/22/16 15:29	1
Silver	ND		5.0	0.033	ug/L		08/19/16 14:45	08/22/16 15:29	1
Thallium	ND		1.0	0.050	ug/L		08/19/16 14:45	08/22/16 15:29	1
Vanadium	ND		5.0	0.50	ug/L		08/19/16 14:45	08/22/16 15:29	1
Zinc	ND		10	2.0	ug/L		08/19/16 14:45	08/22/16 15:29	1

Lab Sample ID: LCS 280-338560/2-A

Matrix: Water

Analysis Batch: 338977

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 338560

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	40.0	38.2		ug/L		96	85 - 115
Arsenic	40.0	40.1		ug/L		100	85 - 117
Barium	40.0	40.5		ug/L		101	85 - 118
Beryllium	40.0	40.7		ug/L		102	80 - 125
Cadmium	40.0	40.4		ug/L		101	85 - 115
Chromium	40.0	41.3		ug/L		103	84 - 121
Cobalt	40.0	41.1		ug/L		103	85 - 120
Copper	40.0	40.9		ug/L		102	85 - 119
Lead	40.0	41.6		ug/L		104	85 - 118
Nickel	40.0	42.0		ug/L		105	85 - 119
Selenium	40.0	39.0		ug/L		97	77 - 122
Silver	40.0	44.6		ug/L		111	85 - 115
Thallium	40.0	41.5		ug/L		104	85 - 118
Vanadium	40.0	41.0		ug/L		103	85 - 120
Zinc	40.0	41.1		ug/L		103	83 - 122

TestAmerica Denver

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

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

Lab Sample ID: 280-86852-3 MS

Matrix: Water

Analysis Batch: 338977

Client Sample ID: AC-MW-4

Prep Type: Total/NA

Prep Batch: 338560

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	ND		40.0	41.7		ug/L		104	85 - 115
Arsenic	1.3	J	40.0	42.2		ug/L		102	85 - 117
Barium	42		40.0	79.4		ug/L		94	85 - 118
Beryllium	ND		40.0	39.6		ug/L		99	80 - 125
Cadmium	ND		40.0	38.1		ug/L		95	85 - 115
Chromium	1.1	J	40.0	41.1		ug/L		100	84 - 121
Cobalt	0.89	J	40.0	39.7		ug/L		97	85 - 120
Copper	3.8		40.0	41.3		ug/L		94	85 - 119
Lead	ND		40.0	37.4		ug/L		93	85 - 118
Nickel	13		40.0	49.8		ug/L		93	85 - 119
Selenium	1.4	J	40.0	41.8		ug/L		101	77 - 122
Silver	0.054	J	40.0	41.0		ug/L		102	85 - 115
Thallium	0.065	J	40.0	38.1		ug/L		95	85 - 118
Vanadium	5.0		40.0	44.1		ug/L		98	85 - 120
Zinc	4.5	J	40.0	40.3		ug/L		89	83 - 122

Lab Sample ID: 280-86852-3 MSD

Matrix: Water

Analysis Batch: 338977

Client Sample ID: AC-MW-4

Prep Type: Total/NA

Prep Batch: 338560

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	ND		40.0	40.5		ug/L		101	85 - 115	3	20
Arsenic	1.3	J	40.0	42.5		ug/L		103	85 - 117	1	20
Barium	42		40.0	81.3		ug/L		99	85 - 118	2	20
Beryllium	ND		40.0	39.9		ug/L		100	80 - 125	1	20
Cadmium	ND		40.0	37.8		ug/L		95	85 - 115	1	20
Chromium	1.1	J	40.0	41.7		ug/L		101	84 - 121	1	20
Cobalt	0.89	J	40.0	40.4		ug/L		99	85 - 120	2	20
Copper	3.8		40.0	42.0		ug/L		95	85 - 119	2	20
Lead	ND		40.0	37.0		ug/L		92	85 - 118	1	20
Nickel	13		40.0	51.6		ug/L		97	85 - 119	4	20
Selenium	1.4	J	40.0	42.0		ug/L		102	77 - 122	0	20
Silver	0.054	J	40.0	40.8		ug/L		102	85 - 115	1	20
Thallium	0.065	J	40.0	37.6		ug/L		94	85 - 118	1	20
Vanadium	5.0		40.0	45.3		ug/L		101	85 - 120	3	20
Zinc	4.5	J	40.0	41.0		ug/L		91	83 - 122	2	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 280-337659/6

Matrix: Water

Analysis Batch: 337659

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.50	0.042	mg/L			08/12/16 11:35	1
Nitrite as N	ND		0.50	0.049	mg/L			08/12/16 11:35	1

TestAmerica Denver

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 280-337659/4

Matrix: Water

Analysis Batch: 337659

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.04		mg/L		101	90 - 110
Nitrite as N	5.00	5.08		mg/L		102	90 - 110

Lab Sample ID: LCSD 280-337659/5

Matrix: Water

Analysis Batch: 337659

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	5.00	5.05		mg/L		101	90 - 110	0	10
Nitrite as N	5.00	5.05		mg/L		101	90 - 110	0	10

Lab Sample ID: MRL 280-337659/3

Matrix: Water

Analysis Batch: 337659

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.200	0.201	J	mg/L		101	50 - 150
Nitrite as N	0.200	0.179	J	mg/L		89	50 - 150

Lab Sample ID: MB 280-337660/6

Matrix: Water

Analysis Batch: 337660

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	0.25	mg/L			08/12/16 11:35	1
Sulfate	ND		5.0	0.23	mg/L			08/12/16 11:35	1

Lab Sample ID: LCS 280-337660/4

Matrix: Water

Analysis Batch: 337660

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	101		mg/L		101	90 - 110
Sulfate	100	102		mg/L		102	90 - 110

Lab Sample ID: LCSD 280-337660/5

Matrix: Water

Analysis Batch: 337660

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	101		mg/L		101	90 - 110	0	10
Sulfate	100	102		mg/L		102	90 - 110	0	10

Lab Sample ID: MRL 280-337660/3

Matrix: Water

Analysis Batch: 337660

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.50	2.56	J	mg/L		102	50 - 150

TestAmerica Denver

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-337660/3

Matrix: Water

Analysis Batch: 337660

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	2.50	2.59	J	mg/L	-	104	50 - 150

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-338378/31

Matrix: Water

Analysis Batch: 338378

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	ND		5.0	1.1	mg/L	-		08/17/16 15:54	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L	-		08/17/16 15:54	1
Carbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L	-		08/17/16 15:54	1

Lab Sample ID: LCS 280-338378/30

Matrix: Water

Analysis Batch: 338378

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	198		mg/L	-	99	90 - 110

QC Association Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

GC/MS VOA

Analysis Batch: 338859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86852-1	AC-P4	Total/NA	Water	8260B	
280-86852-2	AC-MW-1	Total/NA	Water	8260B	
280-86852-3	AC-MW-4	Total/NA	Water	8260B	
280-86852-4	TRIP BLANK	Total/NA	Water	8260B	
MB 280-338859/8	Method Blank	Total/NA	Water	8260B	
LCS 280-338859/6	Lab Control Sample	Total/NA	Water	8260B	

Metals

Prep Batch: 338554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86852-2	AC-MW-1	Total/NA	Water	3010A	
280-86852-3	AC-MW-4	Total/NA	Water	3010A	
MB 280-338554/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-338554/2-A	Lab Control Sample	Total/NA	Water	3010A	
280-86852-2 MS	AC-MW-1	Total/NA	Water	3010A	
280-86852-2 MSD	AC-MW-1	Total/NA	Water	3010A	

Prep Batch: 338560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86852-2	AC-MW-1	Total/NA	Water	3020A	
280-86852-3	AC-MW-4	Total/NA	Water	3020A	
MB 280-338560/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-338560/2-A	Lab Control Sample	Total/NA	Water	3020A	
280-86852-3 MS	AC-MW-4	Total/NA	Water	3020A	
280-86852-3 MSD	AC-MW-4	Total/NA	Water	3020A	

Analysis Batch: 338863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86852-2	AC-MW-1	Total/NA	Water	6010B	338554
280-86852-3	AC-MW-4	Total/NA	Water	6010B	338554
MB 280-338554/1-A	Method Blank	Total/NA	Water	6010B	338554
LCS 280-338554/2-A	Lab Control Sample	Total/NA	Water	6010B	338554
280-86852-2 MS	AC-MW-1	Total/NA	Water	6010B	338554
280-86852-2 MSD	AC-MW-1	Total/NA	Water	6010B	338554

Analysis Batch: 338977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86852-2	AC-MW-1	Total/NA	Water	6020A	338560
280-86852-3	AC-MW-4	Total/NA	Water	6020A	338560
MB 280-338560/1-A	Method Blank	Total/NA	Water	6020A	338560
LCS 280-338560/2-A	Lab Control Sample	Total/NA	Water	6020A	338560
280-86852-3 MS	AC-MW-4	Total/NA	Water	6020A	338560
280-86852-3 MSD	AC-MW-4	Total/NA	Water	6020A	338560

Analysis Batch: 339113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86852-2	AC-MW-1	Total/NA	Water	6020A	338560

TestAmerica Denver

QC Association Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

General Chemistry

Analysis Batch: 337659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86852-2	AC-MW-1	Total/NA	Water	300.0	
280-86852-3	AC-MW-4	Total/NA	Water	300.0	
MB 280-337659/6	Method Blank	Total/NA	Water	300.0	
LCS 280-337659/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 280-337659/5	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 280-337659/3	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 337660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86852-2	AC-MW-1	Total/NA	Water	300.0	
280-86852-3	AC-MW-4	Total/NA	Water	300.0	
MB 280-337660/6	Method Blank	Total/NA	Water	300.0	
LCS 280-337660/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 280-337660/5	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 280-337660/3	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 338378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86852-2	AC-MW-1	Total/NA	Water	SM 2320B	
280-86852-3	AC-MW-4	Total/NA	Water	SM 2320B	
MB 280-338378/31	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-338378/30	Lab Control Sample	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Client Sample ID: AC-P4

Date Collected: 08/12/16 10:30

Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	338859	08/22/16 18:12	JLS	TAL DEN

Client Sample ID: AC-MW-1

Date Collected: 08/12/16 11:20

Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	338859	08/22/16 18:32	JLS	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	338554	08/19/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			338863	08/20/16 01:44	CRR	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	338560	08/19/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6020A		1			338977	08/22/16 15:36	LMT	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	338560	08/19/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6020A		5			339113	08/23/16 09:20	LMT	TAL DEN
Total/NA	Analysis	300.0		5	5 mL	5 mL	337659	08/12/16 20:09	AFB	TAL DEN
Total/NA	Analysis	300.0		50	5 mL	5 mL	337660	08/12/16 20:26	AFB	TAL DEN
Total/NA	Analysis	SM 2320B		1			338378	08/17/16 17:19	IEU	TAL DEN

Client Sample ID: AC-MW-4

Date Collected: 08/12/16 12:45

Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	338859	08/22/16 18:53	JLS	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	338554	08/19/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			338863	08/20/16 01:56	CRR	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	338560	08/19/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6020A		1			338977	08/22/16 15:40	LMT	TAL DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	337659	08/12/16 20:43	AFB	TAL DEN
Total/NA	Analysis	300.0		20	5 mL	5 mL	337660	08/12/16 20:59	AFB	TAL DEN
Total/NA	Analysis	SM 2320B		1			338378	08/17/16 17:24	IEU	TAL DEN

Client Sample ID: TRIP BLANK

Date Collected: 08/12/16 00:00

Date Received: 08/12/16 14:55

Lab Sample ID: 280-86852-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	338859	08/22/16 19:14	JLS	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TestAmerica Denver

Certification Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86852-1

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	4025	01-09-17

The following analytes are included in this report, but are not certified under this certification:

Analysis Method	Prep Method	Matrix	Analyte
SM 2320B		Water	Carbonate Alkalinity as CaCO3

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
300.0		Water	Chloride
300.0		Water	Nitrate as N
300.0		Water	Nitrite as N
300.0		Water	Sulfate

Chain of Custody Record

[illegible]

Login Sample Receipt Checklist

Client: Quantum Water Consulting

Job Number: 280-86852-1

Login Number: 86852

List Source: TestAmerica Denver

List Number: 1

Creator: White, Denise E

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
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.	False	DATEs on containers do not match the COC. Logged in per COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-89113-1

Client Project/Site: Adams County Shooting Range

For:

Quantum Water Consulting

1746 Cole Blvd

Suite 340

Lakewood, Colorado 80401

Attn: Mr. John Dellaport



Authorized for release by:

10/24/2016 10:19:08 AM

Stephanie Rothmeyer, Project Manager I

(303)736-0182

stephanie.rothmeyer@testamericainc.com

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

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

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

Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	6
Method Summary	7
Sample Summary	8
Client Sample Results	9
QC Sample Results	10
QC Association	15
Chronicle	17
Certification Summary	18
Chain of Custody	19
Receipt Checklists	20



Definitions/Glossary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
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.
α	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)

Case Narrative

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

Job ID: 280-89113-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Quantum Water Consulting

Project: Adams County Shooting Range

Report Number: 280-89113-1

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

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

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

RECEIPT

The sample was received on 10/7/2016 at 1:22 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 11.8° C.

The following sample was received at the laboratory outside the required temperature criteria: AC-MW3-161007 (280-89113-1). The cooler temperature was 11.8 C at the time of sample receipt. The sample is considered acceptable since it was collected and submitted to the laboratory on the same day and there is evidence that the chilling process has begun.

TOTAL METALS

Sample AC-MW3-161007 (280-89113-1) was analyzed for total metals in accordance with EPA SW-846 Method 6010B. The samples were prepared on 10/13/2016 and analyzed on 10/14/2016.

Sodium was detected in method blank MB 280-345917/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Sodium failed the recovery criteria low for the MS and MSD of sample AC-MW3-161007 (280-89113-1) in batch 280-346702. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

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

TOTAL METALS (ICPMS)

Sample AC-MW3-161007 (280-89113-1) was analyzed for total metals (ICPMS) in accordance with SW846 6020A. The samples were prepared and analyzed on 10/14/2016.

Thallium and Zinc were detected in method blank MB 280-346019/1-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. Refer to the QC report for details.

The continuing calibration verification (CCVL) associated with batch 280-346787 recovered above the upper control limit for Ba. The samples associated with this CCVL were greater than 10x the level of the CCVL for the affected analytes; therefore, the data have been reported.

Case Narrative

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

Job ID: 280-89113-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

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

ALKALINITY

Sample AC-MW3-161007 (280-89113-1) was analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 10/20/2016.

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

ANIONS (28 DAYS)

Sample AC-MW3-161007 (280-89113-1) was analyzed for anions (28 days) in accordance with EPA Method 300.0. The samples were analyzed on 10/07/2016.

Samples AC-MW3-161007 (280-89113-1)[2X] and AC-MW3-161007 (280-89113-1)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

ANIONS (48 HOURS)

Sample AC-MW3-161007 (280-89113-1) was analyzed for anions (48 hours) in accordance with EPA Method 300.0. The samples were analyzed on 10/07/2016.

Sample AC-MW3-161007 (280-89113-1)[2X] required dilution prior to analysis due to the Matrix Conductivity Threshold (MCT) of the instrument. The reporting limits have been adjusted accordingly.

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

Detection Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

Client Sample ID: AC-MW3-161007

Lab Sample ID: 280-89113-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Calcium	310000		200	35	ug/L	1		1	6010B	Total/NA
Magnesium	25000		200	11	ug/L	1		1	6010B	Total/NA
Potassium	9900		3000	240	ug/L	1		1	6010B	Total/NA
Sodium	1200000	B	1000	92	ug/L	1		1	6010B	Total/NA
Antimony	1.4	J	2.0	0.40	ug/L	1		1	6020A	Total/NA
Arsenic	1.7	J	5.0	0.33	ug/L	1		1	6020A	Total/NA
Barium	41	^	1.0	0.29	ug/L	1		1	6020A	Total/NA
Beryllium	0.19	J	1.0	0.080	ug/L	1		1	6020A	Total/NA
Chromium	0.77	J	2.0	0.50	ug/L	1		1	6020A	Total/NA
Cobalt	0.67	J	1.0	0.054	ug/L	1		1	6020A	Total/NA
Copper	15		2.0	0.56	ug/L	1		1	6020A	Total/NA
Lead	0.21	J	1.0	0.18	ug/L	1		1	6020A	Total/NA
Nickel	29		2.0	0.30	ug/L	1		1	6020A	Total/NA
Selenium	220		5.0	0.70	ug/L	1		1	6020A	Total/NA
Thallium	0.12	J B	1.0	0.050	ug/L	1		1	6020A	Total/NA
Vanadium	3.9	J	5.0	0.50	ug/L	1		1	6020A	Total/NA
Zinc	7.6	J B	10	2.0	ug/L	1		1	6020A	Total/NA
Chloride	290		6.0	0.51	mg/L	2		2	300.0	Total/NA
Nitrate as N	13		1.0	0.084	mg/L	2		2	300.0	Total/NA
Nitrite as N	0.31	J	1.0	0.098	mg/L	2		2	300.0	Total/NA
Sulfate	2600		250	12	mg/L	50		50	300.0	Total/NA
Alkalinity	250		5.0	1.1	mg/L	1		1	SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	250		5.0	1.1	mg/L	1		1	SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Method Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
300.0	Anions, Ion Chromatography	MCAWW	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN

Protocol References:

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",

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

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-89113-1	AC-MW3-161007	Water	10/07/16 11:00	10/07/16 12:22

Client Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

Method: 6010B - Metals (ICP)

Client Sample ID: AC-MW3-161007

Date Collected: 10/07/16 11:00

Date Received: 10/07/16 12:22

Lab Sample ID: 280-89113-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	310000		200	35	ug/L		10/13/16 07:30	10/14/16 20:48	1
Magnesium	25000		200	11	ug/L		10/13/16 07:30	10/14/16 20:48	1
Potassium	9900		3000	240	ug/L		10/13/16 07:30	10/14/16 20:48	1
Sodium	1200000	B	1000	92	ug/L		10/13/16 07:30	10/14/16 20:48	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: AC-MW3-161007

Date Collected: 10/07/16 11:00

Date Received: 10/07/16 12:22

Lab Sample ID: 280-89113-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.4	J	2.0	0.40	ug/L		10/14/16 07:30	10/14/16 17:06	1
Arsenic	1.7	J	5.0	0.33	ug/L		10/14/16 07:30	10/14/16 17:06	1
Barium	41	^	1.0	0.29	ug/L		10/14/16 07:30	10/14/16 17:06	1
Beryllium	0.19	J	1.0	0.080	ug/L		10/14/16 07:30	10/14/16 17:06	1
Cadmium	ND		1.0	0.27	ug/L		10/14/16 07:30	10/14/16 17:06	1
Chromium	0.77	J	2.0	0.50	ug/L		10/14/16 07:30	10/14/16 17:06	1
Cobalt	0.67	J	1.0	0.054	ug/L		10/14/16 07:30	10/14/16 17:06	1
Copper	15		2.0	0.56	ug/L		10/14/16 07:30	10/14/16 17:06	1
Lead	0.21	J	1.0	0.18	ug/L		10/14/16 07:30	10/14/16 17:06	1
Nickel	29		2.0	0.30	ug/L		10/14/16 07:30	10/14/16 17:06	1
Selenium	220		5.0	0.70	ug/L		10/14/16 07:30	10/14/16 17:06	1
Silver	ND		5.0	0.033	ug/L		10/14/16 07:30	10/14/16 17:06	1
Thallium	0.12	J B	1.0	0.050	ug/L		10/14/16 07:30	10/14/16 17:06	1
Vanadium	3.9	J	5.0	0.50	ug/L		10/14/16 07:30	10/14/16 17:06	1
Zinc	7.6	J B	10	2.0	ug/L		10/14/16 07:30	10/14/16 17:06	1

General Chemistry

Client Sample ID: AC-MW3-161007

Date Collected: 10/07/16 11:00

Date Received: 10/07/16 12:22

Lab Sample ID: 280-89113-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	290		6.0	0.51	mg/L			10/07/16 18:51	2
Nitrate as N	13		1.0	0.084	mg/L			10/07/16 18:51	2
Nitrite as N	0.31	J	1.0	0.098	mg/L			10/07/16 18:51	2
Sulfate	2600		250	12	mg/L			10/07/16 19:08	50
Alkalinity	250		5.0	1.1	mg/L			10/20/16 15:34	1
Bicarbonate Alkalinity as CaCO3	250		5.0	1.1	mg/L			10/20/16 15:34	1
Carbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L			10/20/16 15:34	1

TestAmerica Denver

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 280-345917/1-A
Matrix: Water
Analysis Batch: 346702

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 345917

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		200	35	ug/L		10/13/16 07:30	10/14/16 20:13	1
Magnesium	ND		200	11	ug/L		10/13/16 07:30	10/14/16 20:13	1
Potassium	ND		3000	240	ug/L		10/13/16 07:30	10/14/16 20:13	1
Sodium	109	J	1000	92	ug/L		10/13/16 07:30	10/14/16 20:13	1

Lab Sample ID: LCS 280-345917/2-A
Matrix: Water
Analysis Batch: 346702

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 345917

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	51800		ug/L		104	90 - 111
Magnesium	50000	50700		ug/L		101	90 - 113
Potassium	50000	51400		ug/L		103	89 - 114
Sodium	50000	51400		ug/L		103	90 - 115

Lab Sample ID: LCSD 280-345917/3-A
Matrix: Water
Analysis Batch: 346702

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 345917

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Calcium	50000	52600		ug/L		105	90 - 111	1	20
Magnesium	50000	51300		ug/L		103	90 - 113	1	20
Potassium	50000	52100		ug/L		104	89 - 114	1	20
Sodium	50000	51800		ug/L		104	90 - 115	1	20

Lab Sample ID: 280-89113-1 MS
Matrix: Water
Analysis Batch: 346702

Client Sample ID: AC-MW3-161007
Prep Type: Total/NA
Prep Batch: 345917

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	310000		50000	354000	4	ug/L		88	48 - 153
Magnesium	25000		50000	74700		ug/L		99	62 - 146
Potassium	9900		50000	66200		ug/L		113	76 - 132
Sodium	1200000	B	50000	1180000	4	ug/L		61	70 - 203

Lab Sample ID: 280-89113-1 MSD
Matrix: Water
Analysis Batch: 346702

Client Sample ID: AC-MW3-161007
Prep Type: Total/NA
Prep Batch: 345917

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Calcium	310000		50000	354000	4	ug/L		89	48 - 153	0	20
Magnesium	25000		50000	73400		ug/L		97	62 - 146	2	20
Potassium	9900		50000	65500		ug/L		111	76 - 132	1	20
Sodium	1200000	B	50000	1180000	4	ug/L		68	70 - 203	0	20

TestAmerica Denver

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-346019/1-A

Matrix: Water

Analysis Batch: 346787

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 346019

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		2.0	0.40	ug/L		10/14/16 07:30	10/14/16 16:16	1
Arsenic	ND		5.0	0.33	ug/L		10/14/16 07:30	10/14/16 16:16	1
Barium	ND	^	1.0	0.29	ug/L		10/14/16 07:30	10/14/16 16:16	1
Beryllium	ND		1.0	0.080	ug/L		10/14/16 07:30	10/14/16 16:16	1
Cadmium	ND		1.0	0.27	ug/L		10/14/16 07:30	10/14/16 16:16	1
Chromium	ND		2.0	0.50	ug/L		10/14/16 07:30	10/14/16 16:16	1
Cobalt	ND		1.0	0.054	ug/L		10/14/16 07:30	10/14/16 16:16	1
Copper	ND		2.0	0.56	ug/L		10/14/16 07:30	10/14/16 16:16	1
Lead	ND		1.0	0.18	ug/L		10/14/16 07:30	10/14/16 16:16	1
Nickel	ND		2.0	0.30	ug/L		10/14/16 07:30	10/14/16 16:16	1
Selenium	ND		5.0	0.70	ug/L		10/14/16 07:30	10/14/16 16:16	1
Silver	ND		5.0	0.033	ug/L		10/14/16 07:30	10/14/16 16:16	1
Thallium	0.0590	J	1.0	0.050	ug/L		10/14/16 07:30	10/14/16 16:16	1
Vanadium	ND		5.0	0.50	ug/L		10/14/16 07:30	10/14/16 16:16	1
Zinc	3.07	J	10	2.0	ug/L		10/14/16 07:30	10/14/16 16:16	1

Lab Sample ID: LCS 280-346019/2-A

Matrix: Water

Analysis Batch: 346787

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 346019

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	40.0	37.4		ug/L		93	85 - 115
Arsenic	40.0	40.7		ug/L		102	85 - 117
Barium	40.0	39.7	^	ug/L		99	85 - 118
Beryllium	40.0	42.6		ug/L		106	80 - 125
Cadmium	40.0	38.4		ug/L		96	85 - 115
Chromium	40.0	41.6		ug/L		104	84 - 121
Cobalt	40.0	39.8		ug/L		99	85 - 120
Copper	40.0	39.8		ug/L		99	85 - 119
Lead	40.0	40.4		ug/L		101	85 - 118
Nickel	40.0	41.2		ug/L		103	85 - 119
Selenium	40.0	38.0		ug/L		95	77 - 122
Silver	40.0	39.9		ug/L		100	85 - 115
Thallium	40.0	40.4		ug/L		101	85 - 118
Vanadium	40.0	41.4		ug/L		104	85 - 120
Zinc	40.0	43.5		ug/L		109	83 - 122

Lab Sample ID: LCSD 280-346019/3-A

Matrix: Water

Analysis Batch: 346787

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 346019

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	40.0	37.1		ug/L		93	85 - 115	1	20
Arsenic	40.0	41.2		ug/L		103	85 - 117	1	20
Barium	40.0	37.7	^	ug/L		94	85 - 118	5	20
Beryllium	40.0	39.7		ug/L		99	80 - 125	7	20
Cadmium	40.0	41.0		ug/L		102	85 - 115	7	20
Chromium	40.0	41.3		ug/L		103	84 - 121	1	20

TestAmerica Denver

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

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

Lab Sample ID: LCSD 280-346019/3-A

Matrix: Water

Analysis Batch: 346787

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 346019

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cobalt	40.0	40.4		ug/L		101	85 - 120	2	20
Copper	40.0	41.4		ug/L		104	85 - 119	4	20
Lead	40.0	40.9		ug/L		102	85 - 118	1	20
Nickel	40.0	39.9		ug/L		100	85 - 119	3	20
Selenium	40.0	38.5		ug/L		96	77 - 122	1	20
Silver	40.0	40.4		ug/L		101	85 - 115	1	20
Thallium	40.0	41.0		ug/L		103	85 - 118	1	20
Vanadium	40.0	40.7		ug/L		102	85 - 120	2	20
Zinc	40.0	38.6		ug/L		96	83 - 122	12	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 280-345473/13

Matrix: Water

Analysis Batch: 345473

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.50	0.042	mg/L			10/07/16 12:57	1
Nitrite as N	ND		0.50	0.049	mg/L			10/07/16 12:57	1

Lab Sample ID: LCS 280-345473/11

Matrix: Water

Analysis Batch: 345473

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.00	5.04		mg/L		101	90 - 110
Nitrite as N	5.00	5.18		mg/L		104	90 - 110

Lab Sample ID: LCSD 280-345473/12

Matrix: Water

Analysis Batch: 345473

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	5.00	5.04		mg/L		101	90 - 110	0	10
Nitrite as N	5.00	5.18		mg/L		104	90 - 110	0	10

Lab Sample ID: MRL 280-345473/10

Matrix: Water

Analysis Batch: 345473

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.200	0.205	J	mg/L		103	50 - 150
Nitrite as N	0.200	0.178	J	mg/L		89	50 - 150

TestAmerica Denver

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 280-345474/13

Matrix: Water

Analysis Batch: 345474

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		3.0	0.25	mg/L			10/07/16 12:57	1
Sulfate	ND		5.0	0.23	mg/L			10/07/16 12:57	1

Lab Sample ID: LCS 280-345474/11

Matrix: Water

Analysis Batch: 345474

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	101		mg/L		101	90 - 110
Sulfate	100	101		mg/L		101	90 - 110

Lab Sample ID: LCSD 280-345474/12

Matrix: Water

Analysis Batch: 345474

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	101		mg/L		101	90 - 110	0	10
Sulfate	100	101		mg/L		101	90 - 110	0	10

Lab Sample ID: MRL 280-345474/10

Matrix: Water

Analysis Batch: 345474

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	2.50	2.50	J	mg/L		100	50 - 150
Sulfate	2.50	2.47	J	mg/L		99	50 - 150

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-347523/6

Matrix: Water

Analysis Batch: 347523

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	ND		5.0	1.1	mg/L			10/20/16 15:29	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L			10/20/16 15:29	1
Carbonate Alkalinity as CaCO3	ND		5.0	1.1	mg/L			10/20/16 15:29	1

Lab Sample ID: LCS 280-347523/4

Matrix: Water

Analysis Batch: 347523

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	200		mg/L		100	90 - 110

TestAmerica Denver

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCSD 280-347523/5

Matrix: Water

Analysis Batch: 347523

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity	200	201		mg/L	—	100	90 - 110	0	10

QC Association Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

Metals

Prep Batch: 345917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-89113-1	AC-MW3-161007	Total/NA	Water	3010A	
MB 280-345917/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-345917/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 280-345917/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
280-89113-1 MS	AC-MW3-161007	Total/NA	Water	3010A	
280-89113-1 MSD	AC-MW3-161007	Total/NA	Water	3010A	

Prep Batch: 346019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-89113-1	AC-MW3-161007	Total/NA	Water	3020A	
MB 280-346019/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-346019/2-A	Lab Control Sample	Total/NA	Water	3020A	
LCSD 280-346019/3-A	Lab Control Sample Dup	Total/NA	Water	3020A	

Analysis Batch: 346702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-89113-1	AC-MW3-161007	Total/NA	Water	6010B	345917
MB 280-345917/1-A	Method Blank	Total/NA	Water	6010B	345917
LCS 280-345917/2-A	Lab Control Sample	Total/NA	Water	6010B	345917
LCSD 280-345917/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	345917
280-89113-1 MS	AC-MW3-161007	Total/NA	Water	6010B	345917
280-89113-1 MSD	AC-MW3-161007	Total/NA	Water	6010B	345917

Analysis Batch: 346787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-89113-1	AC-MW3-161007	Total/NA	Water	6020A	346019
MB 280-346019/1-A	Method Blank	Total/NA	Water	6020A	346019
LCS 280-346019/2-A	Lab Control Sample	Total/NA	Water	6020A	346019
LCSD 280-346019/3-A	Lab Control Sample Dup	Total/NA	Water	6020A	346019

General Chemistry

Analysis Batch: 345473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-89113-1	AC-MW3-161007	Total/NA	Water	300.0	
MB 280-345473/13	Method Blank	Total/NA	Water	300.0	
LCS 280-345473/11	Lab Control Sample	Total/NA	Water	300.0	
LCSD 280-345473/12	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 280-345473/10	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 345474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-89113-1	AC-MW3-161007	Total/NA	Water	300.0	
280-89113-1	AC-MW3-161007	Total/NA	Water	300.0	
MB 280-345474/13	Method Blank	Total/NA	Water	300.0	
LCS 280-345474/11	Lab Control Sample	Total/NA	Water	300.0	
LCSD 280-345474/12	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 280-345474/10	Lab Control Sample	Total/NA	Water	300.0	

TestAmerica Denver

QC Association Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

General Chemistry (Continued)

Analysis Batch: 347523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-89113-1	AC-MW3-161007	Total/NA	Water	SM 2320B	
MB 280-347523/6	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-347523/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 280-347523/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

Client Sample ID: AC-MW3-161007

Date Collected: 10/07/16 11:00

Date Received: 10/07/16 12:22

Lab Sample ID: 280-89113-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	345917	10/13/16 07:30	TEB	TAL DEN
Total/NA	Analysis	6010B		1			346702	10/14/16 20:48	CRR	TAL DEN
Total/NA	Prep	3020A			50 mL	50 mL	346019	10/14/16 07:30	TEB	TAL DEN
Total/NA	Analysis	6020A		1			346787	10/14/16 17:06	LMT	TAL DEN
Total/NA	Analysis	300.0		2	5 mL	5 mL	345473	10/07/16 18:51	AFB	TAL DEN
Total/NA	Analysis	300.0		2	5 mL	5 mL	345474	10/07/16 18:51	AFB	TAL DEN
Total/NA	Analysis	300.0		50	5 mL	5 mL	345474	10/07/16 19:08	AFB	TAL DEN
Total/NA	Analysis	SM 2320B		1			347523	10/20/16 15:34	CCJ	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-89113-1

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	4025	01-09-17

The following analytes are included in this report, but are not certified under this certification:

Analysis Method	Prep Method	Matrix	Analyte
SM 2320B		Water	Carbonate Alkalinity as CaCO ₃

Sampler ID _____
 Temperature on Receipt _____
 Drinking Water? Yes ☐ No ☐

Chain of Custody Record

TAL-4124-280 (0508)

Client QUANTUM WATER & ENV.		Project Manager JOHN DELLAPORT	Date 10/7/16	Chain of Custody Number 160325
Address 1746 COLE BLVD Suite 340		Telephone Number (Area Code)/Fax Number 720-622-6671	Lab Number	
City LAKEWOOD	State CO	Zip Code 80401	Page _____ of _____	

Project Name and Location (State) ADAMS COUNTY SHOOTING RANGE		Lab Contact STEPHANIE	Analysis (Attach list if more space is needed)
Contract/Purchase Order/Quote No. 132E-15		Site Contact JCO	
Carrier/Waybill Number			

Contract/Purchase Order/Quote No. 132E-15			Matrix			Containers & Preservatives						Conditions of Receipt					
Sample I.D. No. and Description (Containers for each sample may be combined on one line)			Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3		HCl	NaOH	ZnAc/NaOH		
AC-MW3-161007			10/7/16	1100	X				X		X				X	TOTAL METALS	
																X	60106/6020
																X	NITRATE
																X	CHLORIDE
																X	SULFATE
																X	ALKALINITY



280-89113 Chain of Custody

John C. Dellaport
 10/7/16

Possible Hazard Identification	Sample Disposal	QC Requirements (Specify)
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other	☒ Disposal By Lab ☐ Return To Client ☐ Archive For _____ Months	(A fee may be assessed if samples are retained longer than 1 month)

1. Relinquished By <i>John C. Dellaport</i>	Date 10/7/16	Time 1322
2. Relinquished By	Date	Time
3. Relinquished By	Date	Time

Comments
11-8 DRAS 0.0 Transfer RP 10-7-16



Login Sample Receipt Checklist

Client: Quantum Water Consulting

Job Number: 280-89113-1

Login Number: 89113

List Source: TestAmerica Denver

List Number: 1

Creator: Pottruff, Reed W

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

**Appendix F4 - Laboratory
Analysis Reports - Shooting
Range Results**

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-85801-2

Client Project/Site: Adams County Shooting Range

For:

Quantum Water Consulting

1746 Cole Blvd

Suite 340

Lakewood, Colorado 80401

Attn: Mr. John Dellaport



Authorized for release by:

10/17/2016 10:20:18 AM

Stephanie Rothmeyer, Project Manager I

(303)736-0182

stephanie.rothmeyer@testamericainc.com

LINKS

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results through

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Have a Question?



Visit us at:

www.testamericainc.com

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

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

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

Table of Contents

Cover Page 1

Table of Contents 2

Definitions 3

Case Narrative 4

Detection Summary 6

Method Summary 7

Sample Summary 8

Client Sample Results 9

QC Sample Results 10

QC Association 13

Chronicle 14

Certification Summary 15

Chain of Custody 16

Receipt Checklists 19



Definitions/Glossary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85801-2

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.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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)

Case Narrative

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85801-2

Job ID: 280-85801-2

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Quantum Water Consulting

Project: Adams County Shooting Range

Report Number: 280-85801-2

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

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

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

RECEIPT

The samples were received on 7/19/2016 at 5:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 27.1° C.

Total Metals for samples NRBB-5 (0) (280-85801-20) and SRRF-7 (0-3) (280-85801-26) was missed during login for this job. All other analyses were reported in 280-85801-1. This report, 280-85801-2, contains the Total Metals results for these two samples.

TOTAL METALS (ICP)

Samples NRBB-5 (0) (280-85801-20) and SRRF-7 (0-3) (280-85801-26) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 10/04/2016 and analyzed on 10/04/2016, 10/10/2016 and 10/14/2016.

Copper was detected in method blank MB 280-344825/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Tin and Lead were detected in method blank MB 280-344825/1-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. Refer to the QC report for details.

Arsenic and Tin failed the recovery criteria low for the MS of sample SRRF-7 (0-3) (280-85801-26) in batch 280-346589. Antimony, Copper and Lead failed the recovery criteria high. For the MSD of sample SRRF-7 (0-3) (280-85801-26) in batch 280-346589, Tin, Antimony and Lead failed the recovery criteria low. Zinc and Copper failed the recovery criteria high. Also, Zinc, Antimony, Copper and Lead exceeded the RPD limit. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

The instrument blank for analytical batch 280-346589 contained Pb greater one-half than the reporting limit (RL). The samples were not re-analyzed because they contained Pb results greater than 10x the result found in the contaminated CCB. The sample results have been qualified and reported.

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

PERCENT SOLIDS

Samples NRBB-5 (0) (280-85801-20) and SRRF-7 (0-3) (280-85801-26) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 10/06/2016 and 10/10/2016.

Case Narrative

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85801-2

Job ID: 280-85801-2 (Continued)

Laboratory: TestAmerica Denver (Continued)

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

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Detection Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85801-2

Client Sample ID: NRBB-5 (0)

Lab Sample ID: 280-85801-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	1.5		1.1	0.27	mg/Kg	1		☼	6010C	Total/NA
Arsenic	4.6		1.4	0.46	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.23	J	0.35	0.029	mg/Kg	1		☼	6010C	Total/NA
Copper	33	B	1.4	0.15	mg/Kg	1		☼	6010C	Total/NA
Lead	360	B	0.63	0.19	mg/Kg	1		☼	6010C	Total/NA
Tin	1.5	J B	7.0	0.64	mg/Kg	1		☼	6010C	Total/NA
Zinc	44		2.1	0.28	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: SRRF-7 (0-3)

Lab Sample ID: 280-85801-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	610	F2	1.5	0.38	mg/Kg	1		☼	6010C	Total/NA
Arsenic	48	F1	2.0	0.66	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.37	J	0.50	0.041	mg/Kg	1		☼	6010C	Total/NA
Copper	120	B F2	2.0	0.22	mg/Kg	1		☼	6010C	Total/NA
Lead	17000	B F2	0.90	0.27	mg/Kg	1		☼	6010C	Total/NA
Tin	210	B F1	10	0.91	mg/Kg	1		☼	6010C	Total/NA
Zinc	63	F1 F2	3.0	0.40	mg/Kg	1		☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Method Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85801-2

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85801-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-85801-20	NRBB-5 (0)	Solid	07/19/16 14:15	07/19/16 17:10
280-85801-26	SRRF-7 (0-3)	Solid	07/19/16 15:20	07/19/16 17:10

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Client Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85801-2

Method: 6010C - Metals (ICP)

Client Sample ID: NRBB-5 (0)
Date Collected: 07/19/16 14:15
Date Received: 07/19/16 17:10

Lab Sample ID: 280-85801-20
Matrix: Solid
Percent Solids: 96.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.5		1.1	0.27	mg/Kg	☼	10/04/16 14:45	10/10/16 19:47	1
Arsenic	4.6		1.4	0.46	mg/Kg	☼	10/04/16 14:45	10/04/16 23:48	1
Cadmium	0.23	J	0.35	0.029	mg/Kg	☼	10/04/16 14:45	10/04/16 23:48	1
Copper	33	B	1.4	0.15	mg/Kg	☼	10/04/16 14:45	10/14/16 11:04	1
Lead	360	B	0.63	0.19	mg/Kg	☼	10/04/16 14:45	10/14/16 11:04	1
Tin	1.5	J B	7.0	0.64	mg/Kg	☼	10/04/16 14:45	10/04/16 23:48	1
Zinc	44		2.1	0.28	mg/Kg	☼	10/04/16 14:45	10/04/16 23:48	1

Client Sample ID: SRRF-7 (0-3)
Date Collected: 07/19/16 15:20
Date Received: 07/19/16 17:10

Lab Sample ID: 280-85801-26
Matrix: Solid
Percent Solids: 89.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	610	F2	1.5	0.38	mg/Kg	☼	10/04/16 14:45	10/10/16 19:50	1
Arsenic	48	F1	2.0	0.66	mg/Kg	☼	10/04/16 14:45	10/04/16 23:50	1
Cadmium	0.37	J	0.50	0.041	mg/Kg	☼	10/04/16 14:45	10/04/16 23:50	1
Copper	120	B F2	2.0	0.22	mg/Kg	☼	10/04/16 14:45	10/14/16 11:06	1
Lead	17000	B F2	0.90	0.27	mg/Kg	☼	10/04/16 14:45	10/14/16 11:06	1
Tin	210	B F1	10	0.91	mg/Kg	☼	10/04/16 14:45	10/04/16 23:50	1
Zinc	63	F1 F2	3.0	0.40	mg/Kg	☼	10/04/16 14:45	10/04/16 23:50	1

General Chemistry

Client Sample ID: NRBB-5 (0)
Date Collected: 07/19/16 14:15
Date Received: 07/19/16 17:10

Lab Sample ID: 280-85801-20
Matrix: Solid
Percent Solids: 96.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.4		0.1	0.1	%			10/06/16 07:32	1
Percent Solids	96.6		0.1	0.1	%			10/06/16 07:32	1

Client Sample ID: SRRF-7 (0-3)
Date Collected: 07/19/16 15:20
Date Received: 07/19/16 17:10

Lab Sample ID: 280-85801-26
Matrix: Solid
Percent Solids: 89.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10.6		0.1	0.1	%			10/10/16 20:13	1
Percent Solids	89.4		0.1	0.1	%			10/10/16 20:13	1

TestAmerica Denver

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85801-2

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-344825/1-A

Matrix: Solid

Analysis Batch: 345099

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 344825

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.66	mg/Kg		10/04/16 14:45	10/04/16 23:43	1
Cadmium	ND		0.50	0.041	mg/Kg		10/04/16 14:45	10/04/16 23:43	1
Tin	1.03	J	10	0.91	mg/Kg		10/04/16 14:45	10/04/16 23:43	1
Zinc	ND		3.0	0.40	mg/Kg		10/04/16 14:45	10/04/16 23:43	1

Lab Sample ID: MB 280-344825/1-A

Matrix: Solid

Analysis Batch: 345925

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 344825

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg		10/04/16 14:45	10/10/16 19:42	1

Lab Sample ID: MB 280-344825/1-A

Matrix: Solid

Analysis Batch: 346589

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 344825

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	2.73		2.0	0.22	mg/Kg		10/04/16 14:45	10/14/16 10:59	1
Lead	0.459	J	0.90	0.27	mg/Kg		10/04/16 14:45	10/14/16 10:59	1

Lab Sample ID: LCS 280-344825/2-A

Matrix: Solid

Analysis Batch: 345099

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 344825

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	93.8		mg/Kg		94	85 - 110
Cadmium	10.0	9.35		mg/Kg		93	87 - 110
Tin	200	187		mg/Kg		93	84 - 110
Zinc	50.0	48.2		mg/Kg		96	76 - 114

Lab Sample ID: LCS 280-344825/2-A

Matrix: Solid

Analysis Batch: 345925

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 344825

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	52.0		mg/Kg		104	82 - 110

Lab Sample ID: LCS 280-344825/2-A

Matrix: Solid

Analysis Batch: 346589

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 344825

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	25.0	26.0		mg/Kg		104	88 - 110
Lead	50.0	49.5		mg/Kg		99	86 - 110

TestAmerica Denver

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85801-2

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-85801-26 MS

Matrix: Solid

Analysis Batch: 345099

Client Sample ID: SRRF-7 (0-3)

Prep Type: Total/NA

Prep Batch: 344825

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	48	F1	110	117	F1	mg/Kg	☼	62	76 - 111
Cadmium	0.37	J	11.0	8.76		mg/Kg	☼	76	40 - 130
Tin	210	B F1	221	232	F1	mg/Kg	☼	9	77 - 126
Zinc	63	F1 F2	55.2	121		mg/Kg	☼	106	70 - 200

Lab Sample ID: 280-85801-26 MS

Matrix: Solid

Analysis Batch: 345925

Client Sample ID: SRRF-7 (0-3)

Prep Type: Total/NA

Prep Batch: 344825

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	610	F2	55.2	977	4	mg/Kg	☼	659	20 - 200

Lab Sample ID: 280-85801-26 MS

Matrix: Solid

Analysis Batch: 346589

Client Sample ID: SRRF-7 (0-3)

Prep Type: Total/NA

Prep Batch: 344825

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Copper	120	B F2	27.6	262	4	mg/Kg	☼	511	37 - 187
Lead	17000	B F2	55.2	59800	E 4	mg/Kg	☼	76955	70 - 200

Lab Sample ID: 280-85801-26 MSD

Matrix: Solid

Analysis Batch: 345099

Client Sample ID: SRRF-7 (0-3)

Prep Type: Total/NA

Prep Batch: 344825

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	48	F1	93.4	121		mg/Kg	☼	77	76 - 111	3	20
Cadmium	0.37	J	9.34	7.66		mg/Kg	☼	78	40 - 130	13	20
Tin	210	B F1	187	205	F1	mg/Kg	☼	-4	77 - 126	13	20
Zinc	63	F1 F2	46.7	184	F1 F2	mg/Kg	☼	259	70 - 200	41	20

Lab Sample ID: 280-85801-26 MSD

Matrix: Solid

Analysis Batch: 345925

Client Sample ID: SRRF-7 (0-3)

Prep Type: Total/NA

Prep Batch: 344825

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	610	F2	46.7	445	4 F2	mg/Kg	☼	-361	20 - 200	75	20

Lab Sample ID: 280-85801-26 MSD

Matrix: Solid

Analysis Batch: 346589

Client Sample ID: SRRF-7 (0-3)

Prep Type: Total/NA

Prep Batch: 344825

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Copper	120	B F2	23.4	865	4 F2	mg/Kg	☼	3188	37 - 187	107	20
Lead	17000	B F2	46.7	15200	4 F2	mg/Kg	☼	-4524	70 - 200	119	20

TestAmerica Denver

QC Sample Results

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85801-2

Method: Moisture - Percent Moisture

Lab Sample ID: 280-85801-20 DU

Matrix: Solid

Analysis Batch: 345253

Client Sample ID: NRBB-5 (0)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	3.4		3.4		%		1	20
Percent Solids	96.6		96.6		%		0	20

QC Association Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85801-2

Metals

Prep Batch: 344825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85801-20	NRBB-5 (0)	Total/NA	Solid	3050B	
280-85801-26	SRRF-7 (0-3)	Total/NA	Solid	3050B	
MB 280-344825/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-344825/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-85801-26 MS	SRRF-7 (0-3)	Total/NA	Solid	3050B	
280-85801-26 MSD	SRRF-7 (0-3)	Total/NA	Solid	3050B	

Analysis Batch: 345099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85801-20	NRBB-5 (0)	Total/NA	Solid	6010C	344825
280-85801-26	SRRF-7 (0-3)	Total/NA	Solid	6010C	344825
MB 280-344825/1-A	Method Blank	Total/NA	Solid	6010C	344825
LCS 280-344825/2-A	Lab Control Sample	Total/NA	Solid	6010C	344825
280-85801-26 MS	SRRF-7 (0-3)	Total/NA	Solid	6010C	344825
280-85801-26 MSD	SRRF-7 (0-3)	Total/NA	Solid	6010C	344825

Analysis Batch: 345925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85801-20	NRBB-5 (0)	Total/NA	Solid	6010C	344825
280-85801-26	SRRF-7 (0-3)	Total/NA	Solid	6010C	344825
MB 280-344825/1-A	Method Blank	Total/NA	Solid	6010C	344825
LCS 280-344825/2-A	Lab Control Sample	Total/NA	Solid	6010C	344825
280-85801-26 MS	SRRF-7 (0-3)	Total/NA	Solid	6010C	344825
280-85801-26 MSD	SRRF-7 (0-3)	Total/NA	Solid	6010C	344825

Analysis Batch: 346589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85801-20	NRBB-5 (0)	Total/NA	Solid	6010C	344825
280-85801-26	SRRF-7 (0-3)	Total/NA	Solid	6010C	344825
MB 280-344825/1-A	Method Blank	Total/NA	Solid	6010C	344825
LCS 280-344825/2-A	Lab Control Sample	Total/NA	Solid	6010C	344825
280-85801-26 MS	SRRF-7 (0-3)	Total/NA	Solid	6010C	344825
280-85801-26 MSD	SRRF-7 (0-3)	Total/NA	Solid	6010C	344825

General Chemistry

Analysis Batch: 345253

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85801-20	NRBB-5 (0)	Total/NA	Solid	Moisture	
280-85801-20 DU	NRBB-5 (0)	Total/NA	Solid	Moisture	

Analysis Batch: 345881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85801-26	SRRF-7 (0-3)	Total/NA	Solid	Moisture	

TestAmerica Denver

Lab Chronicle

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85801-2

Client Sample ID: NRBB-5 (0)

Date Collected: 07/19/16 14:15

Date Received: 07/19/16 17:10

Lab Sample ID: 280-85801-20

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			345253	10/06/16 07:32	IEU	TAL DEN

Client Sample ID: NRBB-5 (0)

Date Collected: 07/19/16 14:15

Date Received: 07/19/16 17:10

Lab Sample ID: 280-85801-20

Matrix: Solid

Percent Solids: 96.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.479 g	100 mL	344825	10/04/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			345099	10/04/16 23:48	CRR	TAL DEN
Total/NA	Prep	3050B			1.479 g	100 mL	344825	10/04/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			345925	10/10/16 19:47	CRR	TAL DEN
Total/NA	Prep	3050B			1.479 g	100 mL	344825	10/04/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			346589	10/14/16 11:04	CRR	TAL DEN

Client Sample ID: SRRF-7 (0-3)

Date Collected: 07/19/16 15:20

Date Received: 07/19/16 17:10

Lab Sample ID: 280-85801-26

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			345881	10/10/16 20:13	SVC	TAL DEN

Client Sample ID: SRRF-7 (0-3)

Date Collected: 07/19/16 15:20

Date Received: 07/19/16 17:10

Lab Sample ID: 280-85801-26

Matrix: Solid

Percent Solids: 89.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.116 g	100 mL	344825	10/04/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			345099	10/04/16 23:50	CRR	TAL DEN
Total/NA	Prep	3050B			1.116 g	100 mL	344825	10/04/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			345925	10/10/16 19:50	CRR	TAL DEN
Total/NA	Prep	3050B			1.116 g	100 mL	344825	10/04/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			346589	10/14/16 11:06	CRR	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TestAmerica Denver

Certification Summary

Client: Quantum Water Consulting
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85801-2

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	4025	01-09-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Chain of Custody Record

Client Information Client Contact: Mr. John Dellaport Company: Quantum Water & Environment Address: 1746 Cole Boulevard, Suite 340 City: Lakewood State/Zip: CO, 80401 Phone: 720-524-4294 (Tel) Email: John@quantumwaterco.com Project Name: Adams County Shooting Range Site:		Sampler: TCB/JAL Lab Pkt: Kupper, Stephanie K Phone: 720-524-4294 E-Mail: stephanie.kupper@testamericainc.com		Carrier Tracking No(s): COC No: 280-55183-19671.1 Page: Job #:	
Due Date Requested: TAT Requested (days): PO #: Purchase Order Requested WO #: Project #: 28014702 SSOW#:		Analysis Requested EPA 6010 - Shooting Range Lead, Antimony, Arsenic, Cadmium, Copper, Zinc			
Sample Identification NRLB-1I(0) NRLB-2I(0) NRLB-3I(0) NRLB-4I(0) NRLB-10(0) NRLB-20(0) NRLB-30(0) NRLB-40(0) NRLB-5I(0) NRLB-6I(0) NRLB-7I(0)		Sample Date 7/19/16	Sample Time 0945 1000 1005 1120 0940 0950 0955 1005 1250 1030 1121	Sample Type (C=comp, G=grab) B S S S S S S S S S S	Matrix (Water, Sediment, Soil, Sludge, Other) S S S S S S S S S S S
Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No)		Total Number of Containers			
Special Instructions/Note: 280-85801 Chain of Custody		Special Instructions/Note:			
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:					
Empty Kit Relinquished by:		Date:		Method of Shipment:	
Relinquished by:		Date/Time: 7/19/16 1710		Company: TAD	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: 29.1 FRS 600 transferred s/w 7-20-16			

Chain of Custody Record

Client Information		Sampler: <u>TCS/JAL</u>		Lab PM: <u>Kupper, Stephanie K</u>		Carrier Tracking No(s):		COC No: <u>280-55183-19671.1</u>	
Client Contact: Mr. John Dellaport		Phone: <u>720-524-4294</u>		E-Mail: <u>stephanie.kupper@testamericainc.com</u>		Page:			
Company: Quantum Water & Environment		Address: 1746 Cole Boulevard, Suite 340 City: Lakewood State, Zip: CO, 80401 Phone: <u>720-524-4294</u> (Tel) Email: <u>John@quantumwaterco.com</u> Project Name: <u>Adams County Shooting Range</u> Site:		Due Date Requested: TAT Requested (days): PO #: <u>720-524-4294</u> Purchase Order Requested WO #: Project #: <u>28014702</u> SSOW#:		Analysis Requested		Job #:	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=sediment, O=wastewater)	
NRRF-1(0)		7/19/16		1235		G		S	
NRRF-2(0)				1230					
NRRF-3(0)				1215					
NRRF-4(0)				1220					
NRBB-1(0)				1422					
NRBB-2(0)				1330					
NRBB-3(0)				1345					
NRBB-4(0)				1550					
NRBB-5(0)				1415					
NRBB-6(0)				1335					
NRBB-7(0)				1355					
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		Date:		Time:		Method of Shipment:		Special Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by:		Date:		Time:		Special Instructions/QC Requirements:	
Relinquished by: <u>[Signature]</u>		Date/Time: <u>7/19/16 1710</u>		Company:		Received by: <u>[Signature]</u>		Date/Time: <u>7-19-16 1710</u>	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:					

Chain of Custody Record

Client Information Client Contact: Mr. John Dellaport Company: Quantum Water & Environment Address: 1746 Cole Boulevard, Suite 340 City: Lakewood State, Zip: CO, 80401 Phone: 720-524-4294(Tel) Email: John@quantumwaterco.com Project Name: Adams County Shooting Range Site:		Sampler: TCB/JAL Lab PM: Kupper, Stephanie K Phone: 720-524-4294 E-Mail: stephanie.kupper@testamericainc.com		Carrier Tracking No(s): COC No: 280-55183-19671.1 Page: Job #:	
Analysis Requested Due Date Requested: TAT Requested (days): PO #: Purchase Order Requested WO #: Project #: 28014702 SSOW#:		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2CO3 E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:			
Sample Identification NRBB-8 (0) NRBB-9 (0) NRBB-10 (0) SRRF-7 (0-3) SRRF-10 (3-6) SRRF-8 (0) DUPE-1 RINSE-1 RINSE-2		Sample Date 7/19/16 1425 1430 1520 1535 1530 1550 1555	Sample Time 1400 1425 1430 1520 1535 1530 1550 1555	Sample Type (C=Comp, G=grab) B B B B B B B B	Matrix (W=water, S=solid, O=other) S S S S S S S S
Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) EPA 6010 Shooting Range CCS EPA 6010 TCEP		Total Number of Containers 1 1 1 1 1 1 1 1		Special Instructions/Note: 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:	
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date/Time: 7/19/16 1710 Company: TAB Relinquished by: _____ Date/Time: _____ Company: _____ Relinquished by: _____ Date/Time: _____ Company: _____			
Custody Seals Intact: _____ Δ Yes Δ No		Custody Seal No.: _____		Cooler Temperature(s) °C and Other Remarks: 22.1 F 5 C 0.0 + 1.5 Grad S Plw 7-20-16	

Login Sample Receipt Checklist

Client: Quantum Water Consulting

Job Number: 280-85801-2

Login Number: 85801

List Source: TestAmerica Denver

List Number: 1

Creator: Woodworth, Sean P

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
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.	False	IDs on containers do not match the COC. Logged in per COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	False	SEE CUR
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-85876-1

Client Project/Site: Adams County Shooting Range

For:

Quantum Water & Environment

1746 Cole Boulevard, Suite 340

Lakewood, Colorado 80401

Attn: Mr. John Dellaport



Authorized for release by:

8/3/2016 1:05:02 PM

Stephanie Kupper, Project Manager I

(303)736-0182

stephanie.kupper@testamericainc.com

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www.testamericainc.com

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

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

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

Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	6
Method Summary	15
Sample Summary	16
Client Sample Results	17
QC Sample Results	33
QC Association	38
Chronicle	43
Certification Summary	58
Chain of Custody	59
Receipt Checklists	63



Definitions/Glossary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

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.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
L	A negative instrument reading had an absolute value greater than the reporting limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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)

Case Narrative

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Job ID: 280-85876-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Quantum Water & Environment

Project: Adams County Shooting Range

Report Number: 280-85876-1

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

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

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

RECEIPT

The samples were received on 7/20/2016 at 3:43 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 17.0° C.

All samples were logged per the COC sample ID and time; some labels did not have sample date written on the container labels.

The laboratory received a 4oz soil jar with ID I SRF-2(3) at 1105, which was not listed on COC; sample was logged per the container for Method 6010 Total Metals.

TOTAL METALS

Samples RINSE-3 (280-85876-40) and RINSE-4 (280-85876-41) were analyzed for total metals in accordance with EPA SW-846 Method 6010B. The samples were prepared on 07/25/2016 and analyzed on 07/30/2016.

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

TCLP METALS

Samples SRRF-2(0) (280-85876-3), SRBB-6(0) (280-85876-17) and SRLB-50(0) (280-85876-23) were analyzed for TCLP Metals in accordance with EPA SW-846 Method 1311/6010C. The samples were leached on 07/26/2016, and prepared and analyzed on 07/28/2016.

Copper and Lead were detected in method blank LB 280-335267/1-C 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. Refer to the QC report for details.

Lead failed the recovery criteria low for the MS and MSD of sample SRRF-2(0) (280-85876-3) in batch 280-335636. Refer to the QC report for details.

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

TOTAL METALS (ICP)

Samples SRLB-3I(0) (280-85876-1), SRRF-1(0) (280-85876-2), SRRF-2(0) (280-85876-3), SRRF-3(3) (280-85876-4), SRRF-4(0) (280-85876-5), SRRF-4(3) (280-85876-6), SRRF-5(0) (280-85876-7), SRIB-1(0) (280-85876-8), SRIB-2(0) (280-85876-9), SRIB-3(0) (280-85876-10), SRIB-3(6) (280-85876-11), SRBB-1(0) (280-85876-12), SRBB-2(0) (280-85876-13), SRBB-3(0) (280-85876-14), SRBB-4(0) (280-85876-15), SRBB-5(0) (280-85876-16), SRBB-6(0) (280-85876-17), SRBB-6(3) (280-85876-18), SRLB-10(0)

Case Narrative

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Job ID: 280-85876-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

(280-85876-19), SRLB-20(0) (280-85876-20), SRLB-30(0) (280-85876-21), SRLB-40(0) (280-85876-22), SRLB-50(0) (280-85876-23), SRLB-50(15) (280-85876-24), SRLB-60(0) (280-85876-25), SRLB-70(0) (280-85876-26), SRLB-80(0) (280-85876-27), SRLB-4I(0) (280-85876-28), SRLB-4I(6) (280-85876-29), SRLB-7I(0) (280-85876-30), SRLB-8I(0) (280-85876-31), SRLB-1I(0) (280-85876-32), SRLB-2I(0) (280-85876-33), SRIB-4(0) (280-85876-34), SRIB-5(0) (280-85876-35), SRIB-6(0) (280-85876-36), SRIB-6(3) (280-85876-37), DUPE-2 (280-85876-38), DUPE-3 (280-85876-39) and SRRF-2(3) (280-85876-42) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 07/26/2016 and analyzed on 07/29/2016, 07/30/2016 and 08/01/2016.

Lead and Tin were detected in method blank MB 280-334889/1-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. Refer to the QC report for details.

Lead failed the recovery criteria low for the MS and MSD of sample SRLB-3I(0) (280-85876-1) in batch 280-335814. Refer to the QC report for details.

Lead failed the recovery criteria high for the MS and MSD of sample SRLB-30(0) (280-85876-21) in batch 280-335814. Antimony exceeded the RPD limit. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

Sample SRIB-6(3) (280-85876-37)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The low level continuing calibration verification (CCVL) associated with batch 280-335814 recovered above the upper control limit for Zn. The samples associated with this CCVL were 10x greater than the reporting limit for the affected analyte so the samples report from the higher CCV; therefore, the data have been reported.

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

PERCENT SOLIDS

Samples SRLB-3I(0) (280-85876-1), SRRF-1(0) (280-85876-2), SRRF-2(0) (280-85876-3), SRRF-3(3) (280-85876-4), SRRF-4(0) (280-85876-5), SRRF-4(3) (280-85876-6), SRRF-5(0) (280-85876-7), SRIB-1(0) (280-85876-8), SRIB-2(0) (280-85876-9), SRIB-3(0) (280-85876-10), SRIB-3(6) (280-85876-11), SRBB-1(0) (280-85876-12), SRBB-2(0) (280-85876-13), SRBB-3(0) (280-85876-14), SRBB-4(0) (280-85876-15), SRBB-5(0) (280-85876-16), SRBB-6(0) (280-85876-17), SRBB-6(3) (280-85876-18), SRLB-10(0) (280-85876-19), SRLB-20(0) (280-85876-20), SRLB-30(0) (280-85876-21), SRLB-40(0) (280-85876-22), SRLB-50(0) (280-85876-23), SRLB-50(15) (280-85876-24), SRLB-60(0) (280-85876-25), SRLB-70(0) (280-85876-26), SRLB-80(0) (280-85876-27), SRLB-4I(0) (280-85876-28), SRLB-4I(6) (280-85876-29), SRLB-7I(0) (280-85876-30), SRLB-8I(0) (280-85876-31), SRLB-1I(0) (280-85876-32), SRLB-2I(0) (280-85876-33), SRIB-4(0) (280-85876-34), SRIB-5(0) (280-85876-35), SRIB-6(0) (280-85876-36), SRIB-6(3) (280-85876-37), DUPE-2 (280-85876-38), DUPE-3 (280-85876-39) and SRRF-2(3) (280-85876-42) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 07/26/2016.

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

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRLB-3(0)

Lab Sample ID: 280-85876-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.7		1.9	0.61	mg/Kg	1	☼	6010C	Total/NA
Copper	11		1.9	0.20	mg/Kg	1	☼	6010C	Total/NA
Lead	61	F1 B	0.84	0.25	mg/Kg	1	☼	6010C	Total/NA
Tin	1.1	J B	9.3	0.85	mg/Kg	1	☼	6010C	Total/NA
Zinc	30		2.8	0.37	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.22	J	0.47	0.038	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRRF-1(0)

Lab Sample ID: 280-85876-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.6		1.6	0.52	mg/Kg	1	☼	6010C	Total/NA
Copper	15		1.6	0.17	mg/Kg	1	☼	6010C	Total/NA
Lead	34	B	0.71	0.21	mg/Kg	1	☼	6010C	Total/NA
Tin	1.1	J B	7.9	0.72	mg/Kg	1	☼	6010C	Total/NA
Zinc	41		2.4	0.31	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.24	J	0.39	0.032	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRRF-2(0)

Lab Sample ID: 280-85876-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	5.2		1.2	0.29	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.2		1.5	0.51	mg/Kg	1	☼	6010C	Total/NA
Copper	85		1.5	0.17	mg/Kg	1	☼	6010C	Total/NA
Lead	1200	B	0.70	0.21	mg/Kg	1	☼	6010C	Total/NA
Tin	3.4	J B	7.7	0.71	mg/Kg	1	☼	6010C	Total/NA
Zinc	41		2.3	0.31	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.29	J	0.39	0.032	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.12	J	0.20	0.016	mg/L	1		6010C	TCLP
Copper	0.28	J B	2.0	0.021	mg/L	1		6010C	TCLP
Lead	18	B F1	0.50	0.013	mg/L	1		6010C	TCLP
Zinc	0.048	J	2.0	0.022	mg/L	1		6010C	TCLP
Cadmium	0.0022	J	0.10	0.0020	mg/L	1		6010C	TCLP

Client Sample ID: SRRF-3(3)

Lab Sample ID: 280-85876-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	3.3		1.6	0.39	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.6		2.1	0.69	mg/Kg	1	☼	6010C	Total/NA
Copper	37		2.1	0.23	mg/Kg	1	☼	6010C	Total/NA
Lead	770	B	0.93	0.28	mg/Kg	1	☼	6010C	Total/NA
Tin	2.1	J B	10	0.95	mg/Kg	1	☼	6010C	Total/NA
Zinc	43		3.1	0.41	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.29	J	0.52	0.043	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRRF-4(0)

Lab Sample ID: 280-85876-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	30		1.1	0.28	mg/Kg	1	☼	6010C	Total/NA
Arsenic	7.5		1.5	0.49	mg/Kg	1	☼	6010C	Total/NA
Copper	40		1.5	0.16	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRRF-4(0) (Continued)

Lab Sample ID: 280-85876-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	3900	B	0.67	0.20	mg/Kg	1	☼	6010C	Total/NA
Tin	34	B	7.5	0.68	mg/Kg	1	☼	6010C	Total/NA
Zinc	51		2.2	0.30	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.24	J	0.37	0.031	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRRF-4(3)

Lab Sample ID: 280-85876-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.2		1.6	0.54	mg/Kg	1	☼	6010C	Total/NA
Copper	21		1.6	0.18	mg/Kg	1	☼	6010C	Total/NA
Lead	110	B	0.73	0.22	mg/Kg	1	☼	6010C	Total/NA
Tin	1.4	J B	8.2	0.74	mg/Kg	1	☼	6010C	Total/NA
Zinc	39		2.4	0.32	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.18	J	0.41	0.033	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRRF-5(0)

Lab Sample ID: 280-85876-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.82	J	1.1	0.27	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.7		1.4	0.47	mg/Kg	1	☼	6010C	Total/NA
Copper	13		1.4	0.15	mg/Kg	1	☼	6010C	Total/NA
Lead	220	B	0.64	0.19	mg/Kg	1	☼	6010C	Total/NA
Tin	2.0	J B	7.1	0.64	mg/Kg	1	☼	6010C	Total/NA
Zinc	29		2.1	0.28	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.14	J	0.35	0.029	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRIB-1(0)

Lab Sample ID: 280-85876-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.69	J	1.1	0.29	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.9		1.5	0.50	mg/Kg	1	☼	6010C	Total/NA
Copper	11		1.5	0.16	mg/Kg	1	☼	6010C	Total/NA
Lead	120	B	0.68	0.20	mg/Kg	1	☼	6010C	Total/NA
Tin	1.8	J B	7.5	0.69	mg/Kg	1	☼	6010C	Total/NA
Zinc	34		2.3	0.30	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.14	J	0.38	0.031	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRIB-2(0)

Lab Sample ID: 280-85876-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	1.9		1.2	0.29	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.9		1.5	0.51	mg/Kg	1	☼	6010C	Total/NA
Copper	14		1.5	0.17	mg/Kg	1	☼	6010C	Total/NA
Lead	270	B	0.69	0.21	mg/Kg	1	☼	6010C	Total/NA
Tin	3.2	J B	7.7	0.70	mg/Kg	1	☼	6010C	Total/NA
Zinc	37		2.3	0.31	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.20	J	0.39	0.032	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRIB-3(0)

Lab Sample ID: 280-85876-10

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRIB-3(0) (Continued)

Lab Sample ID: 280-85876-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.89	J	1.3	0.33	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.2		1.7	0.57	mg/Kg	1	☼	6010C	Total/NA
Copper	14		1.7	0.19	mg/Kg	1	☼	6010C	Total/NA
Lead	180	B	0.78	0.23	mg/Kg	1	☼	6010C	Total/NA
Tin	1.9	J B	8.7	0.79	mg/Kg	1	☼	6010C	Total/NA
Zinc	34		2.6	0.35	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.15	J	0.43	0.036	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRIB-3(6)

Lab Sample ID: 280-85876-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.77	J	1.6	0.41	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.7		2.1	0.71	mg/Kg	1	☼	6010C	Total/NA
Copper	19		2.1	0.23	mg/Kg	1	☼	6010C	Total/NA
Lead	150	B	0.96	0.29	mg/Kg	1	☼	6010C	Total/NA
Tin	1.8	J B	11	0.98	mg/Kg	1	☼	6010C	Total/NA
Zinc	47		3.2	0.43	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.23	J	0.54	0.044	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRBB-1(0)

Lab Sample ID: 280-85876-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.55	J	1.2	0.30	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.6		1.6	0.53	mg/Kg	1	☼	6010C	Total/NA
Copper	15		1.6	0.17	mg/Kg	1	☼	6010C	Total/NA
Lead	160	B	0.72	0.22	mg/Kg	1	☼	6010C	Total/NA
Tin	1.3	J B	8.0	0.73	mg/Kg	1	☼	6010C	Total/NA
Zinc	35		2.4	0.32	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.16	J	0.40	0.033	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRBB-2(0)

Lab Sample ID: 280-85876-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	1.6		1.1	0.29	mg/Kg	1	☼	6010C	Total/NA
Arsenic	9.9		1.5	0.51	mg/Kg	1	☼	6010C	Total/NA
Copper	26		1.5	0.17	mg/Kg	1	☼	6010C	Total/NA
Lead	470	B	0.69	0.21	mg/Kg	1	☼	6010C	Total/NA
Tin	2.1	J B	7.7	0.70	mg/Kg	1	☼	6010C	Total/NA
Zinc	33		2.3	0.30	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.11	J	0.38	0.031	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRBB-3(0)

Lab Sample ID: 280-85876-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.2		1.5	0.51	mg/Kg	1	☼	6010C	Total/NA
Copper	12		1.5	0.17	mg/Kg	1	☼	6010C	Total/NA
Lead	13	B	0.69	0.21	mg/Kg	1	☼	6010C	Total/NA
Tin	0.88	J B	7.7	0.70	mg/Kg	1	☼	6010C	Total/NA
Zinc	39		2.3	0.31	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.14	J	0.39	0.032	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRBB-4(0)

Lab Sample ID: 280-85876-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.0		1.4	0.46	mg/Kg	1		✱	6010C	Total/NA
Copper	8.7		1.4	0.15	mg/Kg	1		✱	6010C	Total/NA
Lead	37	B	0.62	0.19	mg/Kg	1		✱	6010C	Total/NA
Tin	0.73	J B	6.9	0.63	mg/Kg	1		✱	6010C	Total/NA
Zinc	24		2.1	0.28	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.089	J	0.35	0.028	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: SRBB-5(0)

Lab Sample ID: 280-85876-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	13		1.1	0.28	mg/Kg	1		✱	6010C	Total/NA
Arsenic	5.8		1.5	0.49	mg/Kg	1		✱	6010C	Total/NA
Copper	15		1.5	0.16	mg/Kg	1		✱	6010C	Total/NA
Lead	980	B	0.66	0.20	mg/Kg	1		✱	6010C	Total/NA
Tin	1.1	J B	7.4	0.67	mg/Kg	1		✱	6010C	Total/NA
Zinc	30		2.2	0.29	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.10	J	0.37	0.030	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: SRBB-6(0)

Lab Sample ID: 280-85876-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	20		1.3	0.32	mg/Kg	1		✱	6010C	Total/NA
Arsenic	6.3		1.7	0.55	mg/Kg	1		✱	6010C	Total/NA
Copper	13		1.7	0.18	mg/Kg	1		✱	6010C	Total/NA
Lead	2400	B	0.75	0.23	mg/Kg	1		✱	6010C	Total/NA
Tin	13	B	8.4	0.76	mg/Kg	1		✱	6010C	Total/NA
Zinc	18		2.5	0.33	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.074	J	0.42	0.034	mg/Kg	1		✱	6010C	Total/NA
Antimony	0.036	J	0.20	0.016	mg/L	1			6010C	TCLP
Copper	0.087	J B	2.0	0.021	mg/L	1			6010C	TCLP
Lead	6.5	B	0.50	0.013	mg/L	1			6010C	TCLP

Client Sample ID: SRBB-6(3)

Lab Sample ID: 280-85876-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.7		1.5	0.49	mg/Kg	1		✱	6010C	Total/NA
Copper	9.6		1.5	0.16	mg/Kg	1		✱	6010C	Total/NA
Lead	87	B	0.66	0.20	mg/Kg	1		✱	6010C	Total/NA
Tin	0.90	J B	7.4	0.67	mg/Kg	1		✱	6010C	Total/NA
Zinc	16		2.2	0.29	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.081	J	0.37	0.030	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: SRLB-10(0)

Lab Sample ID: 280-85876-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	2.9		1.8	0.60	mg/Kg	1		✱	6010C	Total/NA
Copper	18		1.8	0.20	mg/Kg	1		✱	6010C	Total/NA
Lead	23	B	0.82	0.25	mg/Kg	1		✱	6010C	Total/NA
Tin	1.3	J B	9.1	0.83	mg/Kg	1		✱	6010C	Total/NA
Zinc	54		2.7	0.36	mg/Kg	1		✱	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRLB-10(0) (Continued)

Lab Sample ID: 280-85876-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.20	J	0.46	0.037	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRLB-20(0)

Lab Sample ID: 280-85876-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.8		1.6	0.51	mg/Kg	1	☼	6010C	Total/NA
Copper	17		1.6	0.17	mg/Kg	1	☼	6010C	Total/NA
Lead	20	B	0.70	0.21	mg/Kg	1	☼	6010C	Total/NA
Tin	1.3	J B	7.8	0.71	mg/Kg	1	☼	6010C	Total/NA
Zinc	50		2.3	0.31	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.21	J	0.39	0.032	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRLB-30(0)

Lab Sample ID: 280-85876-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.62	J F2	1.2	0.30	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.7		1.6	0.53	mg/Kg	1	☼	6010C	Total/NA
Copper	15		1.6	0.17	mg/Kg	1	☼	6010C	Total/NA
Lead	150	F1	0.72	0.21	mg/Kg	1	☼	6010C	Total/NA
Tin	1.6	J	8.0	0.73	mg/Kg	1	☼	6010C	Total/NA
Zinc	43	^	2.4	0.32	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.32	J	0.40	0.033	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRLB-40(0)

Lab Sample ID: 280-85876-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.1		1.7	0.55	mg/Kg	1	☼	6010C	Total/NA
Copper	18		1.7	0.18	mg/Kg	1	☼	6010C	Total/NA
Lead	13		0.75	0.23	mg/Kg	1	☼	6010C	Total/NA
Tin	1.2	J	8.4	0.76	mg/Kg	1	☼	6010C	Total/NA
Zinc	51	^	2.5	0.33	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.37	J	0.42	0.034	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRLB-50(0)

Lab Sample ID: 280-85876-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	40		1.1	0.28	mg/Kg	1	☼	6010C	Total/NA
Arsenic	8.8		1.5	0.49	mg/Kg	1	☼	6010C	Total/NA
Copper	21		1.5	0.16	mg/Kg	1	☼	6010C	Total/NA
Lead	4000		0.66	0.20	mg/Kg	1	☼	6010C	Total/NA
Tin	25		7.4	0.67	mg/Kg	1	☼	6010C	Total/NA
Zinc	42	^	2.2	0.29	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.16	J	0.37	0.030	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.31		0.20	0.016	mg/L	1		6010C	TCLP
Arsenic	0.053	J	0.50	0.022	mg/L	1		6010C	TCLP
Copper	0.094	J B	2.0	0.021	mg/L	1		6010C	TCLP
Lead	64	B	0.50	0.013	mg/L	1		6010C	TCLP
Cadmium	0.0026	J	0.10	0.0020	mg/L	1		6010C	TCLP

Client Sample ID: SRLB-50(15)

Lab Sample ID: 280-85876-24

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRLB-50(15) (Continued)

Lab Sample ID: 280-85876-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	2.9		1.5	0.50	mg/Kg	1		☼	6010C	Total/NA
Copper	18		1.5	0.17	mg/Kg	1		☼	6010C	Total/NA
Lead	21		0.69	0.21	mg/Kg	1		☼	6010C	Total/NA
Tin	1.1	J	7.6	0.69	mg/Kg	1		☼	6010C	Total/NA
Zinc	43	^	2.3	0.30	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.37	J	0.38	0.031	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: SRLB-60(0)

Lab Sample ID: 280-85876-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	58		1.1	0.29	mg/Kg	1		☼	6010C	Total/NA
Arsenic	11		1.5	0.50	mg/Kg	1		☼	6010C	Total/NA
Copper	18		1.5	0.16	mg/Kg	1		☼	6010C	Total/NA
Lead	5400		0.68	0.20	mg/Kg	1		☼	6010C	Total/NA
Tin	5.8	J	7.5	0.69	mg/Kg	1		☼	6010C	Total/NA
Zinc	39	^	2.3	0.30	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.22	J	0.38	0.031	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: SRLB-70(0)

Lab Sample ID: 280-85876-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	73		1.0	0.26	mg/Kg	1		☼	6010C	Total/NA
Arsenic	12		1.4	0.45	mg/Kg	1		☼	6010C	Total/NA
Copper	13		1.4	0.15	mg/Kg	1		☼	6010C	Total/NA
Lead	4600		0.62	0.18	mg/Kg	1		☼	6010C	Total/NA
Tin	43		6.8	0.62	mg/Kg	1		☼	6010C	Total/NA
Zinc	29	^	2.1	0.27	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.10	J	0.34	0.028	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: SRLB-80(0)

Lab Sample ID: 280-85876-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.4		1.6	0.52	mg/Kg	1		☼	6010C	Total/NA
Copper	10		1.6	0.17	mg/Kg	1		☼	6010C	Total/NA
Lead	16		0.71	0.21	mg/Kg	1		☼	6010C	Total/NA
Tin	1.0	J	7.9	0.72	mg/Kg	1		☼	6010C	Total/NA
Zinc	31	^	2.4	0.31	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.19	J	0.40	0.032	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: SRLB-4I(0)

Lab Sample ID: 280-85876-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	0.81	J	1.3	0.33	mg/Kg	1		☼	6010C	Total/NA
Arsenic	2.9		1.7	0.57	mg/Kg	1		☼	6010C	Total/NA
Copper	28		1.7	0.19	mg/Kg	1		☼	6010C	Total/NA
Lead	330		0.78	0.23	mg/Kg	1		☼	6010C	Total/NA
Tin	1.6	J	8.6	0.79	mg/Kg	1		☼	6010C	Total/NA
Zinc	40	^	2.6	0.34	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.20	J	0.43	0.035	mg/Kg	1		☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRLB-4I(6)

Lab Sample ID: 280-85876-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.7		2.2	0.72	mg/Kg	1		✱	6010C	Total/NA
Copper	20		2.2	0.24	mg/Kg	1		✱	6010C	Total/NA
Lead	100		0.98	0.29	mg/Kg	1		✱	6010C	Total/NA
Tin	1.3	J	11	0.99	mg/Kg	1		✱	6010C	Total/NA
Zinc	44	^	3.3	0.43	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.17	J	0.54	0.044	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: SRLB-7I(0)

Lab Sample ID: 280-85876-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	2.7		1.6	0.53	mg/Kg	1		✱	6010C	Total/NA
Copper	22		1.6	0.17	mg/Kg	1		✱	6010C	Total/NA
Lead	68		0.72	0.22	mg/Kg	1		✱	6010C	Total/NA
Tin	1.3	J	8.0	0.73	mg/Kg	1		✱	6010C	Total/NA
Zinc	46	^	2.4	0.32	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.37	J	0.40	0.033	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: SRLB-8I(0)

Lab Sample ID: 280-85876-31

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.3		1.5	0.50	mg/Kg	1		✱	6010C	Total/NA
Copper	11		1.5	0.16	mg/Kg	1		✱	6010C	Total/NA
Lead	31		0.68	0.20	mg/Kg	1		✱	6010C	Total/NA
Tin	0.93	J	7.5	0.69	mg/Kg	1		✱	6010C	Total/NA
Zinc	31	^	2.3	0.30	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.21	J	0.38	0.031	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: SRLB-1I(0)

Lab Sample ID: 280-85876-32

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	5.2		1.5	0.49	mg/Kg	1		✱	6010C	Total/NA
Copper	49		1.5	0.16	mg/Kg	1		✱	6010C	Total/NA
Lead	80		0.67	0.20	mg/Kg	1		✱	6010C	Total/NA
Tin	1.1	J	7.4	0.68	mg/Kg	1		✱	6010C	Total/NA
Zinc	42	^	2.2	0.29	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.16	J	0.37	0.030	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: SRLB-2I(0)

Lab Sample ID: 280-85876-33

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	18		1.3	0.34	mg/Kg	1		✱	6010C	Total/NA
Arsenic	6.8		1.8	0.58	mg/Kg	1		✱	6010C	Total/NA
Copper	12		1.8	0.19	mg/Kg	1		✱	6010C	Total/NA
Lead	940		0.80	0.24	mg/Kg	1		✱	6010C	Total/NA
Tin	4.8	J	8.8	0.81	mg/Kg	1		✱	6010C	Total/NA
Zinc	34	^	2.7	0.35	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.12	J	0.44	0.036	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: SRIB-4(0)

Lab Sample ID: 280-85876-34

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRIB-4(0) (Continued)

Lab Sample ID: 280-85876-34

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	1.1	J	1.2	0.29	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.4		1.6	0.51	mg/Kg	1	☼	6010C	Total/NA
Copper	23		1.6	0.17	mg/Kg	1	☼	6010C	Total/NA
Lead	340		0.70	0.21	mg/Kg	1	☼	6010C	Total/NA
Tin	2.4	J	7.8	0.71	mg/Kg	1	☼	6010C	Total/NA
Zinc	41	^	2.3	0.31	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.20	J	0.39	0.032	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRIB-5(0)

Lab Sample ID: 280-85876-35

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.6		1.8	0.58	mg/Kg	1	☼	6010C	Total/NA
Copper	14		1.8	0.19	mg/Kg	1	☼	6010C	Total/NA
Lead	28		0.79	0.24	mg/Kg	1	☼	6010C	Total/NA
Tin	1.1	J	8.8	0.80	mg/Kg	1	☼	6010C	Total/NA
Zinc	41	^	2.6	0.35	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.23	J	0.44	0.036	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRIB-6(0)

Lab Sample ID: 280-85876-36

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	5.7		1.4	0.35	mg/Kg	1	☼	6010C	Total/NA
Arsenic	4.9		1.9	0.61	mg/Kg	1	☼	6010C	Total/NA
Copper	51		1.9	0.20	mg/Kg	1	☼	6010C	Total/NA
Lead	1400		0.83	0.25	mg/Kg	1	☼	6010C	Total/NA
Tin	3.0	J	9.3	0.84	mg/Kg	1	☼	6010C	Total/NA
Zinc	43	^	2.8	0.37	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.22	J	0.46	0.038	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRIB-6(3)

Lab Sample ID: 280-85876-37

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	1100		1.3	0.34	mg/Kg	1	☼	6010C	Total/NA
Arsenic	70		1.8	0.58	mg/Kg	1	☼	6010C	Total/NA
Copper	83		1.8	0.19	mg/Kg	1	☼	6010C	Total/NA
Lead	34000		4.0	1.2	mg/Kg	5	☼	6010C	Total/NA
Tin	400		8.8	0.80	mg/Kg	1	☼	6010C	Total/NA
Zinc	46	^	2.6	0.35	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: DUPE-2

Lab Sample ID: 280-85876-38

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	18		1.2	0.30	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.8		1.6	0.53	mg/Kg	1	☼	6010C	Total/NA
Copper	82		1.6	0.17	mg/Kg	1	☼	6010C	Total/NA
Lead	1700		0.72	0.22	mg/Kg	1	☼	6010C	Total/NA
Tin	15		8.0	0.73	mg/Kg	1	☼	6010C	Total/NA
Zinc	53	^	2.4	0.32	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.28	J	0.40	0.033	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: DUPE-3

Lab Sample ID: 280-85876-39

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.6		1.6	0.52	mg/Kg	1		☼	6010C	Total/NA
Copper	20		1.6	0.17	mg/Kg	1		☼	6010C	Total/NA
Lead	29		0.71	0.21	mg/Kg	1		☼	6010C	Total/NA
Tin	1.1	J	7.9	0.72	mg/Kg	1		☼	6010C	Total/NA
Zinc	44	^	2.4	0.31	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.39		0.39	0.032	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: RINSE-3

Lab Sample ID: 280-85876-40

No Detections.

Client Sample ID: RINSE-4

Lab Sample ID: 280-85876-41

No Detections.

Client Sample ID: SRRF-2(3)

Lab Sample ID: 280-85876-42

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	0.82	J	1.3	0.34	mg/Kg	1		☼	6010C	Total/NA
Arsenic	3.4		1.8	0.59	mg/Kg	1		☼	6010C	Total/NA
Copper	44		1.8	0.19	mg/Kg	1		☼	6010C	Total/NA
Lead	220		0.80	0.24	mg/Kg	1		☼	6010C	Total/NA
Tin	1.6	J	8.9	0.81	mg/Kg	1		☼	6010C	Total/NA
Zinc	40	^	2.7	0.35	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.21	J	0.45	0.037	mg/Kg	1		☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Method Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-85876-1	SRLB-3I(0)	Solid	07/20/16 09:10	07/20/16 15:43
280-85876-2	SRRF-1(0)	Solid	07/20/16 10:50	07/20/16 15:43
280-85876-3	SRRF-2(0)	Solid	07/20/16 10:55	07/20/16 15:43
280-85876-4	SRRF-3(3)	Solid	07/20/16 12:05	07/20/16 15:43
280-85876-5	SRRF-4(0)	Solid	07/20/16 13:25	07/20/16 15:43
280-85876-6	SRRF-4(3)	Solid	07/20/16 12:15	07/20/16 15:43
280-85876-7	SRRF-5(0)	Solid	07/20/16 12:25	07/20/16 15:43
280-85876-8	SRIB-1(0)	Solid	07/20/16 08:55	07/20/16 15:43
280-85876-9	SRIB-2(0)	Solid	07/20/16 08:45	07/20/16 15:43
280-85876-10	SRIB-3(0)	Solid	07/20/16 08:30	07/20/16 15:43
280-85876-11	SRIB-3(6)	Solid	07/20/16 08:35	07/20/16 15:43
280-85876-12	SRBB-1(0)	Solid	07/20/16 07:35	07/20/16 15:43
280-85876-13	SRBB-2(0)	Solid	07/20/16 07:40	07/20/16 15:43
280-85876-14	SRBB-3(0)	Solid	07/20/16 07:55	07/20/16 15:43
280-85876-15	SRBB-4(0)	Solid	07/20/16 08:05	07/20/16 15:43
280-85876-16	SRBB-5(0)	Solid	07/20/16 08:50	07/20/16 15:43
280-85876-17	SRBB-6(0)	Solid	07/20/16 13:30	07/20/16 15:43
280-85876-18	SRBB-6(3)	Solid	07/20/16 09:05	07/20/16 15:43
280-85876-19	SRLB-10(0)	Solid	07/20/16 09:17	07/20/16 15:43
280-85876-20	SRLB-20(0)	Solid	07/20/16 09:25	07/20/16 15:43
280-85876-21	SRLB-30(0)	Solid	07/20/16 09:35	07/20/16 15:43
280-85876-22	SRLB-40(0)	Solid	07/20/16 10:45	07/20/16 15:43
280-85876-23	SRLB-50(0)	Solid	07/20/16 11:10	07/20/16 15:43
280-85876-24	SRLB-50(15)	Solid	07/20/16 12:00	07/20/16 15:43
280-85876-25	SRLB-60(0)	Solid	07/20/16 12:05	07/20/16 15:43
280-85876-26	SRLB-70(0)	Solid	07/20/16 12:10	07/20/16 15:43
280-85876-27	SRLB-80(0)	Solid	07/20/16 12:15	07/20/16 15:43
280-85876-28	SRLB-4I(0)	Solid	07/20/16 13:35	07/20/16 15:43
280-85876-29	SRLB-4I(6)	Solid	07/20/16 13:40	07/20/16 15:43
280-85876-30	SRLB-7I(0)	Solid	07/20/16 13:45	07/20/16 15:43
280-85876-31	SRLB-8I(0)	Solid	07/20/16 13:40	07/20/16 15:43
280-85876-32	SRLB-1I(0)	Solid	07/20/16 10:40	07/20/16 15:43
280-85876-33	SRLB-2I(0)	Solid	07/20/16 10:30	07/20/16 15:43
280-85876-34	SRIB-4(0)	Solid	07/20/16 08:15	07/20/16 15:43
280-85876-35	SRIB-5(0)	Solid	07/20/16 08:05	07/20/16 15:43
280-85876-36	SRIB-6(0)	Solid	07/20/16 07:55	07/20/16 15:43
280-85876-37	SRIB-6(3)	Solid	07/20/16 07:50	07/20/16 15:43
280-85876-38	DUPE-2	Solid	07/20/16 00:00	07/20/16 15:43
280-85876-39	DUPE-3	Solid	07/20/16 00:00	07/20/16 15:43
280-85876-40	RINSE-3	Water	07/20/16 15:30	07/20/16 15:43
280-85876-41	RINSE-4	Water	07/20/16 15:30	07/20/16 15:43
280-85876-42	SRRF-2(3)	Solid	07/20/16 11:05	07/20/16 15:43

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010B - Metals (ICP)

Client Sample ID: RINSE-3
Date Collected: 07/20/16 15:30
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-40
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		20	3.1	ug/L		07/25/16 14:30	07/30/16 20:08	1
Arsenic	ND		15	4.4	ug/L		07/25/16 14:30	07/30/16 06:15	1
Copper	ND		15	4.2	ug/L		07/25/16 14:30	07/30/16 06:15	1
Lead	ND		9.0	2.6	ug/L		07/25/16 14:30	07/30/16 06:15	1
Zinc	ND		20	4.5	ug/L		07/25/16 14:30	07/30/16 20:08	1
Tin	ND		100	5.8	ug/L		07/25/16 14:30	07/30/16 06:15	1
Cadmium	ND		5.0	0.45	ug/L		07/25/16 14:30	07/30/16 06:15	1

Client Sample ID: RINSE-4
Date Collected: 07/20/16 15:30
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-41
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		20	3.1	ug/L		07/25/16 14:30	07/30/16 20:10	1
Arsenic	ND		15	4.4	ug/L		07/25/16 14:30	07/30/16 06:17	1
Copper	ND		15	4.2	ug/L		07/25/16 14:30	07/30/16 06:17	1
Lead	ND		9.0	2.6	ug/L		07/25/16 14:30	07/30/16 06:17	1
Zinc	ND		20	4.5	ug/L		07/25/16 14:30	07/30/16 20:10	1
Tin	ND		100	5.8	ug/L		07/25/16 14:30	07/30/16 06:17	1
Cadmium	ND		5.0	0.45	ug/L		07/25/16 14:30	07/30/16 06:17	1

Method: 6010C - Metals (ICP)

Client Sample ID: SRLB-3I(0)
Date Collected: 07/20/16 09:10
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-1
Matrix: Solid
Percent Solids: 97.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.35	mg/Kg	☼	07/26/16 14:20	07/29/16 18:04	1
Arsenic	4.7		1.9	0.61	mg/Kg	☼	07/26/16 14:20	07/29/16 18:04	1
Copper	11		1.9	0.20	mg/Kg	☼	07/26/16 14:20	07/29/16 18:04	1
Lead	61	F1 B	0.84	0.25	mg/Kg	☼	07/26/16 14:20	07/29/16 18:04	1
Tin	1.1	J B	9.3	0.85	mg/Kg	☼	07/26/16 14:20	07/29/16 18:04	1
Zinc	30		2.8	0.37	mg/Kg	☼	07/26/16 14:20	07/29/16 18:04	1
Cadmium	0.22	J	0.47	0.038	mg/Kg	☼	07/26/16 14:20	07/29/16 18:04	1

Client Sample ID: SRRF-1(0)
Date Collected: 07/20/16 10:50
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-2
Matrix: Solid
Percent Solids: 94.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.30	mg/Kg	☼	07/26/16 14:20	07/29/16 18:17	1
Arsenic	3.6		1.6	0.52	mg/Kg	☼	07/26/16 14:20	07/29/16 18:17	1
Copper	15		1.6	0.17	mg/Kg	☼	07/26/16 14:20	07/29/16 18:17	1
Lead	34	B	0.71	0.21	mg/Kg	☼	07/26/16 14:20	07/29/16 18:17	1
Tin	1.1	J B	7.9	0.72	mg/Kg	☼	07/26/16 14:20	07/29/16 18:17	1
Zinc	41		2.4	0.31	mg/Kg	☼	07/26/16 14:20	07/29/16 18:17	1
Cadmium	0.24	J	0.39	0.032	mg/Kg	☼	07/26/16 14:20	07/29/16 18:17	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010C - Metals (ICP)

Client Sample ID: SRRF-2(0)
Date Collected: 07/20/16 10:55
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-3
Matrix: Solid
Percent Solids: 97.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.2		1.2	0.29	mg/Kg	☼	07/26/16 14:20	07/29/16 18:19	1
Arsenic	3.2		1.5	0.51	mg/Kg	☼	07/26/16 14:20	07/29/16 18:19	1
Copper	85		1.5	0.17	mg/Kg	☼	07/26/16 14:20	07/29/16 18:19	1
Lead	1200	B	0.70	0.21	mg/Kg	☼	07/26/16 14:20	07/29/16 18:19	1
Tin	3.4	J B	7.7	0.71	mg/Kg	☼	07/26/16 14:20	07/29/16 18:19	1
Zinc	41		2.3	0.31	mg/Kg	☼	07/26/16 14:20	07/29/16 18:19	1
Cadmium	0.29	J	0.39	0.032	mg/Kg	☼	07/26/16 14:20	07/29/16 18:19	1

Client Sample ID: SRRF-3(3)
Date Collected: 07/20/16 12:05
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-4
Matrix: Solid
Percent Solids: 93.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.3		1.6	0.39	mg/Kg	☼	07/26/16 14:20	07/29/16 18:32	1
Arsenic	2.6		2.1	0.69	mg/Kg	☼	07/26/16 14:20	07/29/16 18:32	1
Copper	37		2.1	0.23	mg/Kg	☼	07/26/16 14:20	07/29/16 18:32	1
Lead	770	B	0.93	0.28	mg/Kg	☼	07/26/16 14:20	07/29/16 18:32	1
Tin	2.1	J B	10	0.95	mg/Kg	☼	07/26/16 14:20	07/29/16 18:32	1
Zinc	43		3.1	0.41	mg/Kg	☼	07/26/16 14:20	07/29/16 18:32	1
Cadmium	0.29	J	0.52	0.043	mg/Kg	☼	07/26/16 14:20	07/29/16 18:32	1

Client Sample ID: SRRF-4(0)
Date Collected: 07/20/16 13:25
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-5
Matrix: Solid
Percent Solids: 97.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	30		1.1	0.28	mg/Kg	☼	07/26/16 14:20	07/29/16 18:35	1
Arsenic	7.5		1.5	0.49	mg/Kg	☼	07/26/16 14:20	07/29/16 18:35	1
Copper	40		1.5	0.16	mg/Kg	☼	07/26/16 14:20	07/29/16 18:35	1
Lead	3900	B	0.67	0.20	mg/Kg	☼	07/26/16 14:20	07/29/16 18:35	1
Tin	34	B	7.5	0.68	mg/Kg	☼	07/26/16 14:20	07/29/16 18:35	1
Zinc	51		2.2	0.30	mg/Kg	☼	07/26/16 14:20	07/29/16 18:35	1
Cadmium	0.24	J	0.37	0.031	mg/Kg	☼	07/26/16 14:20	07/29/16 18:35	1

Client Sample ID: SRRF-4(3)
Date Collected: 07/20/16 12:15
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-6
Matrix: Solid
Percent Solids: 94.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.31	mg/Kg	☼	07/26/16 14:20	07/29/16 18:37	1
Arsenic	4.2		1.6	0.54	mg/Kg	☼	07/26/16 14:20	07/29/16 18:37	1
Copper	21		1.6	0.18	mg/Kg	☼	07/26/16 14:20	07/29/16 18:37	1
Lead	110	B	0.73	0.22	mg/Kg	☼	07/26/16 14:20	07/29/16 18:37	1
Tin	1.4	J B	8.2	0.74	mg/Kg	☼	07/26/16 14:20	07/29/16 18:37	1
Zinc	39		2.4	0.32	mg/Kg	☼	07/26/16 14:20	07/29/16 18:37	1
Cadmium	0.18	J	0.41	0.033	mg/Kg	☼	07/26/16 14:20	07/29/16 18:37	1

Client Sample ID: SRRF-5(0)
Date Collected: 07/20/16 12:25
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-7
Matrix: Solid
Percent Solids: 97.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.82	J	1.1	0.27	mg/Kg	☼	07/26/16 14:20	07/29/16 18:40	1
Arsenic	2.7		1.4	0.47	mg/Kg	☼	07/26/16 14:20	07/29/16 18:40	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: SRRF-5(0)
Date Collected: 07/20/16 12:25
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-7
Matrix: Solid
Percent Solids: 97.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	13		1.4	0.15	mg/Kg	☼	07/26/16 14:20	07/29/16 18:40	1
Lead	220	B	0.64	0.19	mg/Kg	☼	07/26/16 14:20	07/29/16 18:40	1
Tin	2.0	J B	7.1	0.64	mg/Kg	☼	07/26/16 14:20	07/29/16 18:40	1
Zinc	29		2.1	0.28	mg/Kg	☼	07/26/16 14:20	07/29/16 18:40	1
Cadmium	0.14	J	0.35	0.029	mg/Kg	☼	07/26/16 14:20	07/29/16 18:40	1

Client Sample ID: SRIB-1(0)
Date Collected: 07/20/16 08:55
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-8
Matrix: Solid
Percent Solids: 96.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.69	J	1.1	0.29	mg/Kg	☼	07/26/16 14:20	07/29/16 18:42	1
Arsenic	2.9		1.5	0.50	mg/Kg	☼	07/26/16 14:20	07/29/16 18:42	1
Copper	11		1.5	0.16	mg/Kg	☼	07/26/16 14:20	07/29/16 18:42	1
Lead	120	B	0.68	0.20	mg/Kg	☼	07/26/16 14:20	07/29/16 18:42	1
Tin	1.8	J B	7.5	0.69	mg/Kg	☼	07/26/16 14:20	07/29/16 18:42	1
Zinc	34		2.3	0.30	mg/Kg	☼	07/26/16 14:20	07/29/16 18:42	1
Cadmium	0.14	J	0.38	0.031	mg/Kg	☼	07/26/16 14:20	07/29/16 18:42	1

Client Sample ID: SRIB-2(0)
Date Collected: 07/20/16 08:45
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-9
Matrix: Solid
Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.9		1.2	0.29	mg/Kg	☼	07/26/16 14:20	07/29/16 18:45	1
Arsenic	2.9		1.5	0.51	mg/Kg	☼	07/26/16 14:20	07/29/16 18:45	1
Copper	14		1.5	0.17	mg/Kg	☼	07/26/16 14:20	07/29/16 18:45	1
Lead	270	B	0.69	0.21	mg/Kg	☼	07/26/16 14:20	07/29/16 18:45	1
Tin	3.2	J B	7.7	0.70	mg/Kg	☼	07/26/16 14:20	07/29/16 18:45	1
Zinc	37		2.3	0.31	mg/Kg	☼	07/26/16 14:20	07/29/16 18:45	1
Cadmium	0.20	J	0.39	0.032	mg/Kg	☼	07/26/16 14:20	07/29/16 18:45	1

Client Sample ID: SRIB-3(0)
Date Collected: 07/20/16 08:30
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-10
Matrix: Solid
Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.89	J	1.3	0.33	mg/Kg	☼	07/26/16 14:20	07/29/16 18:47	1
Arsenic	3.2		1.7	0.57	mg/Kg	☼	07/26/16 14:20	07/29/16 18:47	1
Copper	14		1.7	0.19	mg/Kg	☼	07/26/16 14:20	07/29/16 18:47	1
Lead	180	B	0.78	0.23	mg/Kg	☼	07/26/16 14:20	07/29/16 18:47	1
Tin	1.9	J B	8.7	0.79	mg/Kg	☼	07/26/16 14:20	07/29/16 18:47	1
Zinc	34		2.6	0.35	mg/Kg	☼	07/26/16 14:20	07/29/16 18:47	1
Cadmium	0.15	J	0.43	0.036	mg/Kg	☼	07/26/16 14:20	07/29/16 18:47	1

Client Sample ID: SRIB-3(6)
Date Collected: 07/20/16 08:35
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-11
Matrix: Solid
Percent Solids: 91.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.77	J	1.6	0.41	mg/Kg	☼	07/26/16 14:20	07/29/16 18:50	1
Arsenic	3.7		2.1	0.71	mg/Kg	☼	07/26/16 14:20	07/29/16 18:50	1
Copper	19		2.1	0.23	mg/Kg	☼	07/26/16 14:20	07/29/16 18:50	1
Lead	150	B	0.96	0.29	mg/Kg	☼	07/26/16 14:20	07/29/16 18:50	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: SRIB-3(6)
Date Collected: 07/20/16 08:35
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-11
Matrix: Solid
Percent Solids: 91.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tin	1.8	J B	11	0.98	mg/Kg	☼	07/26/16 14:20	07/29/16 18:50	1
Zinc	47		3.2	0.43	mg/Kg	☼	07/26/16 14:20	07/29/16 18:50	1
Cadmium	0.23	J	0.54	0.044	mg/Kg	☼	07/26/16 14:20	07/29/16 18:50	1

Client Sample ID: SRBB-1(0)
Date Collected: 07/20/16 07:35
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-12
Matrix: Solid
Percent Solids: 95.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.55	J	1.2	0.30	mg/Kg	☼	07/26/16 14:20	07/29/16 18:52	1
Arsenic	3.6		1.6	0.53	mg/Kg	☼	07/26/16 14:20	07/29/16 18:52	1
Copper	15		1.6	0.17	mg/Kg	☼	07/26/16 14:20	07/29/16 18:52	1
Lead	160	B	0.72	0.22	mg/Kg	☼	07/26/16 14:20	07/29/16 18:52	1
Tin	1.3	J B	8.0	0.73	mg/Kg	☼	07/26/16 14:20	07/29/16 18:52	1
Zinc	35		2.4	0.32	mg/Kg	☼	07/26/16 14:20	07/29/16 18:52	1
Cadmium	0.16	J	0.40	0.033	mg/Kg	☼	07/26/16 14:20	07/29/16 18:52	1

Client Sample ID: SRBB-2(0)
Date Collected: 07/20/16 07:40
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-13
Matrix: Solid
Percent Solids: 96.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.6		1.1	0.29	mg/Kg	☼	07/26/16 14:20	07/29/16 19:05	1
Arsenic	9.9		1.5	0.51	mg/Kg	☼	07/26/16 14:20	07/29/16 19:05	1
Copper	26		1.5	0.17	mg/Kg	☼	07/26/16 14:20	07/29/16 19:05	1
Lead	470	B	0.69	0.21	mg/Kg	☼	07/26/16 14:20	07/29/16 19:05	1
Tin	2.1	J B	7.7	0.70	mg/Kg	☼	07/26/16 14:20	07/29/16 19:05	1
Zinc	33		2.3	0.30	mg/Kg	☼	07/26/16 14:20	07/30/16 14:43	1
Cadmium	0.11	J	0.38	0.031	mg/Kg	☼	07/26/16 14:20	07/29/16 19:05	1

Client Sample ID: SRBB-3(0)
Date Collected: 07/20/16 07:55
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-14
Matrix: Solid
Percent Solids: 96.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.29	mg/Kg	☼	07/26/16 14:20	07/29/16 19:08	1
Arsenic	4.2		1.5	0.51	mg/Kg	☼	07/26/16 14:20	07/29/16 19:08	1
Copper	12		1.5	0.17	mg/Kg	☼	07/26/16 14:20	07/29/16 19:08	1
Lead	13	B	0.69	0.21	mg/Kg	☼	07/26/16 14:20	07/29/16 19:08	1
Tin	0.88	J B	7.7	0.70	mg/Kg	☼	07/26/16 14:20	07/29/16 19:08	1
Zinc	39		2.3	0.31	mg/Kg	☼	07/26/16 14:20	07/30/16 14:46	1
Cadmium	0.14	J	0.39	0.032	mg/Kg	☼	07/26/16 14:20	07/29/16 19:08	1

Client Sample ID: SRBB-4(0)
Date Collected: 07/20/16 08:05
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-15
Matrix: Solid
Percent Solids: 97.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.0	0.26	mg/Kg	☼	07/26/16 14:20	07/29/16 19:10	1
Arsenic	3.0		1.4	0.46	mg/Kg	☼	07/26/16 14:20	07/29/16 19:10	1
Copper	8.7		1.4	0.15	mg/Kg	☼	07/26/16 14:20	07/29/16 19:10	1
Lead	37	B	0.62	0.19	mg/Kg	☼	07/26/16 14:20	07/29/16 19:10	1
Tin	0.73	J B	6.9	0.63	mg/Kg	☼	07/26/16 14:20	07/29/16 19:10	1
Zinc	24		2.1	0.28	mg/Kg	☼	07/26/16 14:20	07/30/16 14:48	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: SRBB-4(0)
Date Collected: 07/20/16 08:05
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-15
Matrix: Solid
Percent Solids: 97.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.089	J	0.35	0.028	mg/Kg	☼	07/26/16 14:20	07/29/16 19:10	1

Client Sample ID: SRBB-5(0)
Date Collected: 07/20/16 08:50
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-16
Matrix: Solid
Percent Solids: 98.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	13		1.1	0.28	mg/Kg	☼	07/26/16 14:20	07/29/16 19:13	1
Arsenic	5.8		1.5	0.49	mg/Kg	☼	07/26/16 14:20	07/29/16 19:13	1
Copper	15		1.5	0.16	mg/Kg	☼	07/26/16 14:20	07/29/16 19:13	1
Lead	980	B	0.66	0.20	mg/Kg	☼	07/26/16 14:20	07/29/16 19:13	1
Tin	1.1	J B	7.4	0.67	mg/Kg	☼	07/26/16 14:20	07/29/16 19:13	1
Zinc	30		2.2	0.29	mg/Kg	☼	07/26/16 14:20	07/30/16 14:51	1
Cadmium	0.10	J	0.37	0.030	mg/Kg	☼	07/26/16 14:20	07/29/16 19:13	1

Client Sample ID: SRBB-6(0)
Date Collected: 07/20/16 13:30
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-17
Matrix: Solid
Percent Solids: 99.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	20		1.3	0.32	mg/Kg	☼	07/26/16 14:20	07/29/16 19:15	1
Arsenic	6.3		1.7	0.55	mg/Kg	☼	07/26/16 14:20	07/29/16 19:15	1
Copper	13		1.7	0.18	mg/Kg	☼	07/26/16 14:20	07/29/16 19:15	1
Lead	2400	B	0.75	0.23	mg/Kg	☼	07/26/16 14:20	07/29/16 19:15	1
Tin	13	B	8.4	0.76	mg/Kg	☼	07/26/16 14:20	07/29/16 19:15	1
Zinc	18		2.5	0.33	mg/Kg	☼	07/26/16 14:20	07/30/16 14:54	1
Cadmium	0.074	J	0.42	0.034	mg/Kg	☼	07/26/16 14:20	07/29/16 19:15	1

Client Sample ID: SRBB-6(3)
Date Collected: 07/20/16 09:05
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-18
Matrix: Solid
Percent Solids: 98.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.1	0.28	mg/Kg	☼	07/26/16 14:20	07/29/16 19:18	1
Arsenic	3.7		1.5	0.49	mg/Kg	☼	07/26/16 14:20	07/29/16 19:18	1
Copper	9.6		1.5	0.16	mg/Kg	☼	07/26/16 14:20	07/29/16 19:18	1
Lead	87	B	0.66	0.20	mg/Kg	☼	07/26/16 14:20	07/29/16 19:18	1
Tin	0.90	J B	7.4	0.67	mg/Kg	☼	07/26/16 14:20	07/29/16 19:18	1
Zinc	16		2.2	0.29	mg/Kg	☼	07/26/16 14:20	07/30/16 14:56	1
Cadmium	0.081	J	0.37	0.030	mg/Kg	☼	07/26/16 14:20	07/29/16 19:18	1

Client Sample ID: SRLB-10(0)
Date Collected: 07/20/16 09:17
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-19
Matrix: Solid
Percent Solids: 93.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.35	mg/Kg	☼	07/26/16 14:20	07/29/16 19:20	1
Arsenic	2.9		1.8	0.60	mg/Kg	☼	07/26/16 14:20	07/29/16 19:20	1
Copper	18		1.8	0.20	mg/Kg	☼	07/26/16 14:20	07/29/16 19:20	1
Lead	23	B	0.82	0.25	mg/Kg	☼	07/26/16 14:20	07/29/16 19:20	1
Tin	1.3	J B	9.1	0.83	mg/Kg	☼	07/26/16 14:20	07/29/16 19:20	1
Zinc	54		2.7	0.36	mg/Kg	☼	07/26/16 14:20	07/30/16 14:59	1
Cadmium	0.20	J	0.46	0.037	mg/Kg	☼	07/26/16 14:20	07/29/16 19:20	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010C - Metals (ICP)

Client Sample ID: SRLB-20(0)
Date Collected: 07/20/16 09:25
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-20
Matrix: Solid
Percent Solids: 95.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.30	mg/Kg	☼	07/26/16 14:20	07/29/16 19:23	1
Arsenic	3.8		1.6	0.51	mg/Kg	☼	07/26/16 14:20	07/29/16 19:23	1
Copper	17		1.6	0.17	mg/Kg	☼	07/26/16 14:20	07/29/16 19:23	1
Lead	20	B	0.70	0.21	mg/Kg	☼	07/26/16 14:20	07/29/16 19:23	1
Tin	1.3	J B	7.8	0.71	mg/Kg	☼	07/26/16 14:20	07/29/16 19:23	1
Zinc	50		2.3	0.31	mg/Kg	☼	07/26/16 14:20	07/30/16 15:02	1
Cadmium	0.21	J	0.39	0.032	mg/Kg	☼	07/26/16 14:20	07/29/16 19:23	1

Client Sample ID: SRLB-30(0)
Date Collected: 07/20/16 09:35
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-21
Matrix: Solid
Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.62	J F2	1.2	0.30	mg/Kg	☼	07/26/16 14:20	07/29/16 19:41	1
Arsenic	3.7		1.6	0.53	mg/Kg	☼	07/26/16 14:20	07/29/16 19:41	1
Copper	15		1.6	0.17	mg/Kg	☼	07/26/16 14:20	07/29/16 19:41	1
Lead	150	F1	0.72	0.21	mg/Kg	☼	07/26/16 14:20	07/29/16 19:41	1
Tin	1.6	J	8.0	0.73	mg/Kg	☼	07/26/16 14:20	07/29/16 19:41	1
Zinc	43	^	2.4	0.32	mg/Kg	☼	07/26/16 14:20	07/29/16 19:41	1
Cadmium	0.32	J	0.40	0.033	mg/Kg	☼	07/26/16 14:20	07/29/16 19:41	1

Client Sample ID: SRLB-40(0)
Date Collected: 07/20/16 10:45
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-22
Matrix: Solid
Percent Solids: 95.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.32	mg/Kg	☼	07/26/16 14:20	07/29/16 19:54	1
Arsenic	2.1		1.7	0.55	mg/Kg	☼	07/26/16 14:20	07/29/16 19:54	1
Copper	18		1.7	0.18	mg/Kg	☼	07/26/16 14:20	07/29/16 19:54	1
Lead	13		0.75	0.23	mg/Kg	☼	07/26/16 14:20	07/29/16 19:54	1
Tin	1.2	J	8.4	0.76	mg/Kg	☼	07/26/16 14:20	07/29/16 19:54	1
Zinc	51	^	2.5	0.33	mg/Kg	☼	07/26/16 14:20	07/29/16 19:54	1
Cadmium	0.37	J	0.42	0.034	mg/Kg	☼	07/26/16 14:20	07/29/16 19:54	1

Client Sample ID: SRLB-50(0)
Date Collected: 07/20/16 11:10
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-23
Matrix: Solid
Percent Solids: 97.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	40		1.1	0.28	mg/Kg	☼	07/26/16 14:20	07/29/16 19:56	1
Arsenic	8.8		1.5	0.49	mg/Kg	☼	07/26/16 14:20	07/29/16 19:56	1
Copper	21		1.5	0.16	mg/Kg	☼	07/26/16 14:20	07/29/16 19:56	1
Lead	4000		0.66	0.20	mg/Kg	☼	07/26/16 14:20	07/29/16 19:56	1
Tin	25		7.4	0.67	mg/Kg	☼	07/26/16 14:20	07/29/16 19:56	1
Zinc	42	^	2.2	0.29	mg/Kg	☼	07/26/16 14:20	07/29/16 19:56	1
Cadmium	0.16	J	0.37	0.030	mg/Kg	☼	07/26/16 14:20	07/29/16 19:56	1

Client Sample ID: SRLB-50(15)
Date Collected: 07/20/16 12:00
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-24
Matrix: Solid
Percent Solids: 96.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.1	0.29	mg/Kg	☼	07/26/16 14:20	07/29/16 20:09	1
Arsenic	2.9		1.5	0.50	mg/Kg	☼	07/26/16 14:20	07/29/16 20:09	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: SRLB-50(15)
Date Collected: 07/20/16 12:00
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-24
Matrix: Solid
Percent Solids: 96.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	18		1.5	0.17	mg/Kg	☼	07/26/16 14:20	07/29/16 20:09	1
Lead	21		0.69	0.21	mg/Kg	☼	07/26/16 14:20	07/29/16 20:09	1
Tin	1.1	J	7.6	0.69	mg/Kg	☼	07/26/16 14:20	07/29/16 20:09	1
Zinc	43	^	2.3	0.30	mg/Kg	☼	07/26/16 14:20	07/29/16 20:09	1
Cadmium	0.37	J	0.38	0.031	mg/Kg	☼	07/26/16 14:20	07/29/16 20:09	1

Client Sample ID: SRLB-60(0)
Date Collected: 07/20/16 12:05
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-25
Matrix: Solid
Percent Solids: 97.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	58		1.1	0.29	mg/Kg	☼	07/26/16 14:20	07/29/16 20:12	1
Arsenic	11		1.5	0.50	mg/Kg	☼	07/26/16 14:20	07/29/16 20:12	1
Copper	18		1.5	0.16	mg/Kg	☼	07/26/16 14:20	07/29/16 20:12	1
Lead	5400		0.68	0.20	mg/Kg	☼	07/26/16 14:20	07/29/16 20:12	1
Tin	5.8	J	7.5	0.69	mg/Kg	☼	07/26/16 14:20	07/29/16 20:12	1
Zinc	39	^	2.3	0.30	mg/Kg	☼	07/26/16 14:20	07/29/16 20:12	1
Cadmium	0.22	J	0.38	0.031	mg/Kg	☼	07/26/16 14:20	07/29/16 20:12	1

Client Sample ID: SRLB-70(0)
Date Collected: 07/20/16 12:10
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-26
Matrix: Solid
Percent Solids: 98.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	73		1.0	0.26	mg/Kg	☼	07/26/16 14:20	07/29/16 20:14	1
Arsenic	12		1.4	0.45	mg/Kg	☼	07/26/16 14:20	07/29/16 20:14	1
Copper	13		1.4	0.15	mg/Kg	☼	07/26/16 14:20	07/29/16 20:14	1
Lead	4600		0.62	0.18	mg/Kg	☼	07/26/16 14:20	07/29/16 20:14	1
Tin	43		6.8	0.62	mg/Kg	☼	07/26/16 14:20	07/29/16 20:14	1
Zinc	29	^	2.1	0.27	mg/Kg	☼	07/26/16 14:20	07/29/16 20:14	1
Cadmium	0.10	J	0.34	0.028	mg/Kg	☼	07/26/16 14:20	07/29/16 20:14	1

Client Sample ID: SRLB-80(0)
Date Collected: 07/20/16 12:15
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-27
Matrix: Solid
Percent Solids: 98.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.30	mg/Kg	☼	07/26/16 14:20	07/29/16 20:17	1
Arsenic	3.4		1.6	0.52	mg/Kg	☼	07/26/16 14:20	07/29/16 20:17	1
Copper	10		1.6	0.17	mg/Kg	☼	07/26/16 14:20	07/29/16 20:17	1
Lead	16		0.71	0.21	mg/Kg	☼	07/26/16 14:20	07/29/16 20:17	1
Tin	1.0	J	7.9	0.72	mg/Kg	☼	07/26/16 14:20	07/29/16 20:17	1
Zinc	31	^	2.4	0.31	mg/Kg	☼	07/26/16 14:20	07/29/16 20:17	1
Cadmium	0.19	J	0.40	0.032	mg/Kg	☼	07/26/16 14:20	07/29/16 20:17	1

Client Sample ID: SRLB-4I(0)
Date Collected: 07/20/16 13:35
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-28
Matrix: Solid
Percent Solids: 96.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.81	J	1.3	0.33	mg/Kg	☼	07/26/16 14:20	07/29/16 20:19	1
Arsenic	2.9		1.7	0.57	mg/Kg	☼	07/26/16 14:20	07/29/16 20:19	1
Copper	28		1.7	0.19	mg/Kg	☼	07/26/16 14:20	07/29/16 20:19	1
Lead	330		0.78	0.23	mg/Kg	☼	07/26/16 14:20	07/29/16 20:19	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: SRLB-4I(0)
Date Collected: 07/20/16 13:35
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-28
Matrix: Solid
Percent Solids: 96.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tin	1.6	J	8.6	0.79	mg/Kg	☼	07/26/16 14:20	07/29/16 20:19	1
Zinc	40	^	2.6	0.34	mg/Kg	☼	07/26/16 14:20	07/29/16 20:19	1
Cadmium	0.20	J	0.43	0.035	mg/Kg	☼	07/26/16 14:20	07/29/16 20:19	1

Client Sample ID: SRLB-4I(6)
Date Collected: 07/20/16 13:40
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-29
Matrix: Solid
Percent Solids: 89.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.6	0.41	mg/Kg	☼	07/26/16 14:20	07/29/16 20:22	1
Arsenic	3.7		2.2	0.72	mg/Kg	☼	07/26/16 14:20	07/29/16 20:22	1
Copper	20		2.2	0.24	mg/Kg	☼	07/26/16 14:20	07/29/16 20:22	1
Lead	100		0.98	0.29	mg/Kg	☼	07/26/16 14:20	07/29/16 20:22	1
Tin	1.3	J	11	0.99	mg/Kg	☼	07/26/16 14:20	07/29/16 20:22	1
Zinc	44	^	3.3	0.43	mg/Kg	☼	07/26/16 14:20	07/29/16 20:22	1
Cadmium	0.17	J	0.54	0.044	mg/Kg	☼	07/26/16 14:20	07/29/16 20:22	1

Client Sample ID: SRLB-7I(0)
Date Collected: 07/20/16 13:45
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-30
Matrix: Solid
Percent Solids: 93.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.30	mg/Kg	☼	07/26/16 14:20	07/29/16 20:24	1
Arsenic	2.7		1.6	0.53	mg/Kg	☼	07/26/16 14:20	07/29/16 20:24	1
Copper	22		1.6	0.17	mg/Kg	☼	07/26/16 14:20	07/29/16 20:24	1
Lead	68		0.72	0.22	mg/Kg	☼	07/26/16 14:20	07/29/16 20:24	1
Tin	1.3	J	8.0	0.73	mg/Kg	☼	07/26/16 14:20	07/29/16 20:24	1
Zinc	46	^	2.4	0.32	mg/Kg	☼	07/26/16 14:20	07/29/16 20:24	1
Cadmium	0.37	J	0.40	0.033	mg/Kg	☼	07/26/16 14:20	07/29/16 20:24	1

Client Sample ID: SRLB-8I(0)
Date Collected: 07/20/16 13:40
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-31
Matrix: Solid
Percent Solids: 95.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.1	0.29	mg/Kg	☼	07/26/16 14:20	07/29/16 20:27	1
Arsenic	4.3		1.5	0.50	mg/Kg	☼	07/26/16 14:20	07/29/16 20:27	1
Copper	11		1.5	0.16	mg/Kg	☼	07/26/16 14:20	07/29/16 20:27	1
Lead	31		0.68	0.20	mg/Kg	☼	07/26/16 14:20	07/29/16 20:27	1
Tin	0.93	J	7.5	0.69	mg/Kg	☼	07/26/16 14:20	07/29/16 20:27	1
Zinc	31	^	2.3	0.30	mg/Kg	☼	07/26/16 14:20	07/29/16 20:27	1
Cadmium	0.21	J	0.38	0.031	mg/Kg	☼	07/26/16 14:20	07/29/16 20:27	1

Client Sample ID: SRLB-1I(0)
Date Collected: 07/20/16 10:40
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-32
Matrix: Solid
Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.1	0.28	mg/Kg	☼	07/26/16 14:20	07/29/16 20:29	1
Arsenic	5.2		1.5	0.49	mg/Kg	☼	07/26/16 14:20	07/29/16 20:29	1
Copper	49		1.5	0.16	mg/Kg	☼	07/26/16 14:20	07/29/16 20:29	1
Lead	80		0.67	0.20	mg/Kg	☼	07/26/16 14:20	07/29/16 20:29	1
Tin	1.1	J	7.4	0.68	mg/Kg	☼	07/26/16 14:20	07/29/16 20:29	1
Zinc	42	^	2.2	0.29	mg/Kg	☼	07/26/16 14:20	07/29/16 20:29	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: SRLB-1I(0)
Date Collected: 07/20/16 10:40
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-32
Matrix: Solid
Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.16	J	0.37	0.030	mg/Kg	☼	07/26/16 14:20	07/29/16 20:29	1

Client Sample ID: SRLB-2I(0)
Date Collected: 07/20/16 10:30
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-33
Matrix: Solid
Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	18		1.3	0.34	mg/Kg	☼	07/26/16 14:20	07/29/16 20:42	1
Arsenic	6.8		1.8	0.58	mg/Kg	☼	07/26/16 14:20	07/29/16 20:42	1
Copper	12		1.8	0.19	mg/Kg	☼	07/26/16 14:20	07/29/16 20:42	1
Lead	940		0.80	0.24	mg/Kg	☼	07/26/16 14:20	07/29/16 20:42	1
Tin	4.8	J	8.8	0.81	mg/Kg	☼	07/26/16 14:20	07/29/16 20:42	1
Zinc	34	^	2.7	0.35	mg/Kg	☼	07/26/16 14:20	07/29/16 20:42	1
Cadmium	0.12	J	0.44	0.036	mg/Kg	☼	07/26/16 14:20	07/29/16 20:42	1

Client Sample ID: SRIB-4(0)
Date Collected: 07/20/16 08:15
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-34
Matrix: Solid
Percent Solids: 95.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.1	J	1.2	0.29	mg/Kg	☼	07/26/16 14:20	07/29/16 20:45	1
Arsenic	3.4		1.6	0.51	mg/Kg	☼	07/26/16 14:20	07/29/16 20:45	1
Copper	23		1.6	0.17	mg/Kg	☼	07/26/16 14:20	07/29/16 20:45	1
Lead	340		0.70	0.21	mg/Kg	☼	07/26/16 14:20	07/29/16 20:45	1
Tin	2.4	J	7.8	0.71	mg/Kg	☼	07/26/16 14:20	07/29/16 20:45	1
Zinc	41	^	2.3	0.31	mg/Kg	☼	07/26/16 14:20	07/29/16 20:45	1
Cadmium	0.20	J	0.39	0.032	mg/Kg	☼	07/26/16 14:20	07/29/16 20:45	1

Client Sample ID: SRIB-5(0)
Date Collected: 07/20/16 08:05
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-35
Matrix: Solid
Percent Solids: 92.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.33	mg/Kg	☼	07/26/16 14:20	07/29/16 20:47	1
Arsenic	4.6		1.8	0.58	mg/Kg	☼	07/26/16 14:20	07/29/16 20:47	1
Copper	14		1.8	0.19	mg/Kg	☼	07/26/16 14:20	07/29/16 20:47	1
Lead	28		0.79	0.24	mg/Kg	☼	07/26/16 14:20	07/29/16 20:47	1
Tin	1.1	J	8.8	0.80	mg/Kg	☼	07/26/16 14:20	07/29/16 20:47	1
Zinc	41	^	2.6	0.35	mg/Kg	☼	07/26/16 14:20	07/29/16 20:47	1
Cadmium	0.23	J	0.44	0.036	mg/Kg	☼	07/26/16 14:20	07/29/16 20:47	1

Client Sample ID: SRIB-6(0)
Date Collected: 07/20/16 07:55
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-36
Matrix: Solid
Percent Solids: 91.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.7		1.4	0.35	mg/Kg	☼	07/26/16 14:20	07/29/16 20:50	1
Arsenic	4.9		1.9	0.61	mg/Kg	☼	07/26/16 14:20	07/29/16 20:50	1
Copper	51		1.9	0.20	mg/Kg	☼	07/26/16 14:20	07/29/16 20:50	1
Lead	1400		0.83	0.25	mg/Kg	☼	07/26/16 14:20	07/29/16 20:50	1
Tin	3.0	J	9.3	0.84	mg/Kg	☼	07/26/16 14:20	07/29/16 20:50	1
Zinc	43	^	2.8	0.37	mg/Kg	☼	07/26/16 14:20	07/29/16 20:50	1
Cadmium	0.22	J	0.46	0.038	mg/Kg	☼	07/26/16 14:20	07/29/16 20:50	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010C - Metals (ICP)

Client Sample ID: SRIB-6(3)
Date Collected: 07/20/16 07:50
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-37
Matrix: Solid
Percent Solids: 95.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1100		1.3	0.34	mg/Kg	☼	07/26/16 14:20	07/29/16 20:52	1
Arsenic	70		1.8	0.58	mg/Kg	☼	07/26/16 14:20	07/29/16 20:52	1
Copper	83		1.8	0.19	mg/Kg	☼	07/26/16 14:20	07/29/16 20:52	1
Lead	34000		4.0	1.2	mg/Kg	☼	07/26/16 14:20	08/01/16 19:18	5
Tin	400		8.8	0.80	mg/Kg	☼	07/26/16 14:20	07/29/16 20:52	1
Zinc	46	^	2.6	0.35	mg/Kg	☼	07/26/16 14:20	07/29/16 20:52	1
Cadmium	ND	L	0.44	0.036	mg/Kg	☼	07/26/16 14:20	07/29/16 20:52	1

Client Sample ID: DUPE-2
Date Collected: 07/20/16 00:00
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-38
Matrix: Solid
Percent Solids: 97.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	18		1.2	0.30	mg/Kg	☼	07/26/16 14:20	07/29/16 20:55	1
Arsenic	3.8		1.6	0.53	mg/Kg	☼	07/26/16 14:20	07/29/16 20:55	1
Copper	82		1.6	0.17	mg/Kg	☼	07/26/16 14:20	07/29/16 20:55	1
Lead	1700		0.72	0.22	mg/Kg	☼	07/26/16 14:20	07/29/16 20:55	1
Tin	15		8.0	0.73	mg/Kg	☼	07/26/16 14:20	07/29/16 20:55	1
Zinc	53	^	2.4	0.32	mg/Kg	☼	07/26/16 14:20	07/29/16 20:55	1
Cadmium	0.28	J	0.40	0.033	mg/Kg	☼	07/26/16 14:20	07/29/16 20:55	1

Client Sample ID: DUPE-3
Date Collected: 07/20/16 00:00
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-39
Matrix: Solid
Percent Solids: 96.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.30	mg/Kg	☼	07/26/16 14:20	07/29/16 20:57	1
Arsenic	3.6		1.6	0.52	mg/Kg	☼	07/26/16 14:20	07/29/16 20:57	1
Copper	20		1.6	0.17	mg/Kg	☼	07/26/16 14:20	07/29/16 20:57	1
Lead	29		0.71	0.21	mg/Kg	☼	07/26/16 14:20	07/29/16 20:57	1
Tin	1.1	J	7.9	0.72	mg/Kg	☼	07/26/16 14:20	07/29/16 20:57	1
Zinc	44	^	2.4	0.31	mg/Kg	☼	07/26/16 14:20	07/29/16 20:57	1
Cadmium	0.39		0.39	0.032	mg/Kg	☼	07/26/16 14:20	07/29/16 20:57	1

Client Sample ID: SRRF-2(3)
Date Collected: 07/20/16 11:05
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-42
Matrix: Solid
Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.82	J	1.3	0.34	mg/Kg	☼	07/26/16 14:20	07/29/16 21:00	1
Arsenic	3.4		1.8	0.59	mg/Kg	☼	07/26/16 14:20	07/29/16 21:00	1
Copper	44		1.8	0.19	mg/Kg	☼	07/26/16 14:20	07/29/16 21:00	1
Lead	220		0.80	0.24	mg/Kg	☼	07/26/16 14:20	07/29/16 21:00	1
Tin	1.6	J	8.9	0.81	mg/Kg	☼	07/26/16 14:20	07/29/16 21:00	1
Zinc	40	^	2.7	0.35	mg/Kg	☼	07/26/16 14:20	07/29/16 21:00	1
Cadmium	0.21	J	0.45	0.037	mg/Kg	☼	07/26/16 14:20	07/29/16 21:00	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010C - Metals (ICP) - TCLP

Client Sample ID: SRRF-2(0)
Date Collected: 07/20/16 10:55
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.12	J	0.20	0.016	mg/L	—	07/28/16 08:40	07/28/16 22:45	1
Arsenic	ND		0.50	0.022	mg/L	—	07/28/16 08:40	07/28/16 22:45	1
Copper	0.28	J B	2.0	0.021	mg/L	—	07/28/16 08:40	07/28/16 22:45	1
Lead	18	B F1	0.50	0.013	mg/L	—	07/28/16 08:40	07/28/16 22:45	1
Tin	ND		0.20	0.029	mg/L	—	07/28/16 08:40	07/28/16 22:45	1
Zinc	0.048	J	2.0	0.022	mg/L	—	07/28/16 08:40	07/28/16 22:45	1
Cadmium	0.0022	J	0.10	0.0020	mg/L	—	07/28/16 08:40	07/28/16 22:45	1

Client Sample ID: SRBB-6(0)
Date Collected: 07/20/16 13:30
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-17
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.036	J	0.20	0.016	mg/L	—	07/28/16 08:40	07/28/16 22:59	1
Arsenic	ND		0.50	0.022	mg/L	—	07/28/16 08:40	07/28/16 22:59	1
Copper	0.087	J B	2.0	0.021	mg/L	—	07/28/16 08:40	07/28/16 22:59	1
Lead	6.5	B	0.50	0.013	mg/L	—	07/28/16 08:40	07/28/16 22:59	1
Tin	ND		0.20	0.029	mg/L	—	07/28/16 08:40	07/28/16 22:59	1
Zinc	ND		2.0	0.022	mg/L	—	07/28/16 08:40	07/28/16 22:59	1
Cadmium	ND		0.10	0.0020	mg/L	—	07/28/16 08:40	07/28/16 22:59	1

Client Sample ID: SRLB-50(0)
Date Collected: 07/20/16 11:10
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-23
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.31		0.20	0.016	mg/L	—	07/28/16 08:40	07/28/16 23:02	1
Arsenic	0.053	J	0.50	0.022	mg/L	—	07/28/16 08:40	07/28/16 23:02	1
Copper	0.094	J B	2.0	0.021	mg/L	—	07/28/16 08:40	07/28/16 23:02	1
Lead	64	B	0.50	0.013	mg/L	—	07/28/16 08:40	07/28/16 23:02	1
Tin	ND		0.20	0.029	mg/L	—	07/28/16 08:40	07/28/16 23:02	1
Zinc	ND		2.0	0.022	mg/L	—	07/28/16 08:40	07/28/16 23:02	1
Cadmium	0.0026	J	0.10	0.0020	mg/L	—	07/28/16 08:40	07/28/16 23:02	1

General Chemistry

Client Sample ID: SRLB-3I(0)
Date Collected: 07/20/16 09:10
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-1
Matrix: Solid
Percent Solids: 97.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.8		0.1	0.1	%	—		07/26/16 19:40	1

Client Sample ID: SRRF-1(0)
Date Collected: 07/20/16 10:50
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-2
Matrix: Solid
Percent Solids: 94.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.1		0.1	0.1	%	—		07/26/16 19:40	1

Client Sample ID: SRRF-2(0)
Date Collected: 07/20/16 10:55
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.3		0.1	0.1	%	—		07/26/16 19:40	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRRF-3(3)
Date Collected: 07/20/16 12:05
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-4
Matrix: Solid
Percent Solids: 93.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.6		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRRF-4(0)
Date Collected: 07/20/16 13:25
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-5
Matrix: Solid
Percent Solids: 97.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.5		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRRF-4(3)
Date Collected: 07/20/16 12:15
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-6
Matrix: Solid
Percent Solids: 94.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.5		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRRF-5(0)
Date Collected: 07/20/16 12:25
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-7
Matrix: Solid
Percent Solids: 97.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.9		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRIB-1(0)
Date Collected: 07/20/16 08:55
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-8
Matrix: Solid
Percent Solids: 96.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.2		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRIB-2(0)
Date Collected: 07/20/16 08:45
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-9
Matrix: Solid
Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.3		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRIB-3(0)
Date Collected: 07/20/16 08:30
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-10
Matrix: Solid
Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.7		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRIB-3(6)
Date Collected: 07/20/16 08:35
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-11
Matrix: Solid
Percent Solids: 91.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.7		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRBB-1(0)
Date Collected: 07/20/16 07:35
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-12
Matrix: Solid
Percent Solids: 95.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.0		0.1	0.1	%			07/26/16 19:40	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

General Chemistry

Client Sample ID: SRBB-2(0)
Date Collected: 07/20/16 07:40
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-13
Matrix: Solid
Percent Solids: 96.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.8		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRBB-3(0)
Date Collected: 07/20/16 07:55
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-14
Matrix: Solid
Percent Solids: 96.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.6		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRBB-4(0)
Date Collected: 07/20/16 08:05
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-15
Matrix: Solid
Percent Solids: 97.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.3		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRBB-5(0)
Date Collected: 07/20/16 08:50
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-16
Matrix: Solid
Percent Solids: 98.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.9		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRBB-6(0)
Date Collected: 07/20/16 13:30
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-17
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.8		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRBB-6(3)
Date Collected: 07/20/16 09:05
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-18
Matrix: Solid
Percent Solids: 98.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.5		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRLB-10(0)
Date Collected: 07/20/16 09:17
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-19
Matrix: Solid
Percent Solids: 93.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.2		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRLB-20(0)
Date Collected: 07/20/16 09:25
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-20
Matrix: Solid
Percent Solids: 95.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.4		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRLB-30(0)
Date Collected: 07/20/16 09:35
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-21
Matrix: Solid
Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.3		0.1	0.1	%			07/26/16 19:40	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

General Chemistry

Client Sample ID: SRLB-40(0)
Date Collected: 07/20/16 10:45
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-22
Matrix: Solid
Percent Solids: 95.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.0		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRLB-50(0)
Date Collected: 07/20/16 11:10
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-23
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.0		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRLB-50(15)
Date Collected: 07/20/16 12:00
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-24
Matrix: Solid
Percent Solids: 96.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.5		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRLB-60(0)
Date Collected: 07/20/16 12:05
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-25
Matrix: Solid
Percent Solids: 97.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.3		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRLB-70(0)
Date Collected: 07/20/16 12:10
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-26
Matrix: Solid
Percent Solids: 98.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.0		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRLB-80(0)
Date Collected: 07/20/16 12:15
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-27
Matrix: Solid
Percent Solids: 98.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.4		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRLB-4I(0)
Date Collected: 07/20/16 13:35
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-28
Matrix: Solid
Percent Solids: 96.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.8		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRLB-4I(6)
Date Collected: 07/20/16 13:40
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-29
Matrix: Solid
Percent Solids: 89.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10.8		0.1	0.1	%			07/26/16 19:40	1

Client Sample ID: SRLB-7I(0)
Date Collected: 07/20/16 13:45
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-30
Matrix: Solid
Percent Solids: 93.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.3		0.1	0.1	%			07/26/16 19:40	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

General Chemistry

Client Sample ID: SRLB-8I(0)
Date Collected: 07/20/16 13:40
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-31
Matrix: Solid
Percent Solids: 95.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.7		0.1	0.1	%	-		07/26/16 19:40	1

Client Sample ID: SRLB-1I(0)
Date Collected: 07/20/16 10:40
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-32
Matrix: Solid
Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.1		0.1	0.1	%	-		07/26/16 19:40	1

Client Sample ID: SRLB-2I(0)
Date Collected: 07/20/16 10:30
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-33
Matrix: Solid
Percent Solids: 96.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.0		0.1	0.1	%	-		07/26/16 19:40	1

Client Sample ID: SRIB-4(0)
Date Collected: 07/20/16 08:15
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-34
Matrix: Solid
Percent Solids: 95.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.0		0.1	0.1	%	-		07/26/16 19:40	1

Client Sample ID: SRIB-5(0)
Date Collected: 07/20/16 08:05
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-35
Matrix: Solid
Percent Solids: 92.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.9		0.1	0.1	%	-		07/26/16 19:40	1

Client Sample ID: SRIB-6(0)
Date Collected: 07/20/16 07:55
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-36
Matrix: Solid
Percent Solids: 91.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.9		0.1	0.1	%	-		07/26/16 19:40	1

Client Sample ID: SRIB-6(3)
Date Collected: 07/20/16 07:50
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-37
Matrix: Solid
Percent Solids: 95.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.8		0.1	0.1	%	-		07/26/16 19:40	1

Client Sample ID: DUPE-2
Date Collected: 07/20/16 00:00
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-38
Matrix: Solid
Percent Solids: 97.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.4		0.1	0.1	%	-		07/26/16 19:40	1

Client Sample ID: DUPE-3
Date Collected: 07/20/16 00:00
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-39
Matrix: Solid
Percent Solids: 96.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.9		0.1	0.1	%	-		07/26/16 19:40	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

General Chemistry

Client Sample ID: SRRF-2(3)
Date Collected: 07/20/16 11:05
Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-42
Matrix: Solid
Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.3		0.1	0.1	%			07/26/16 19:40	1

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 280-334814/1-A

Matrix: Water

Analysis Batch: 335822

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 334814

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		15	4.4	ug/L		07/25/16 14:30	07/30/16 05:08	1
Copper	ND		15	4.2	ug/L		07/25/16 14:30	07/30/16 05:08	1
Lead	ND		9.0	2.6	ug/L		07/25/16 14:30	07/30/16 05:08	1
Tin	ND		100	5.8	ug/L		07/25/16 14:30	07/30/16 05:08	1
Cadmium	ND		5.0	0.45	ug/L		07/25/16 14:30	07/30/16 05:08	1

Lab Sample ID: MB 280-334814/1-A

Matrix: Water

Analysis Batch: 335917

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 334814

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		20	3.1	ug/L		07/25/16 14:30	07/30/16 19:16	1
Zinc	ND		20	4.5	ug/L		07/25/16 14:30	07/30/16 19:16	1

Lab Sample ID: LCS 280-334814/2-A

Matrix: Water

Analysis Batch: 335822

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 334814

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	1100		ug/L		110	88 - 110
Copper	250	266		ug/L		106	86 - 112
Lead	500	507		ug/L		101	89 - 110
Tin	2000	2030		ug/L		102	85 - 113
Cadmium	100	100		ug/L		100	88 - 111

Lab Sample ID: LCS 280-334814/2-A

Matrix: Water

Analysis Batch: 335917

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 334814

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	514		ug/L		103	88 - 110
Zinc	500	478		ug/L		96	85 - 111

Lab Sample ID: LCSD 280-334814/3-A

Matrix: Water

Analysis Batch: 335822

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 334814

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	1000	1100		ug/L		110	88 - 110	0	20
Copper	250	264		ug/L		106	86 - 112	1	20
Lead	500	503		ug/L		101	89 - 110	1	20
Tin	2000	2020		ug/L		101	85 - 113	1	20
Cadmium	100	99.7		ug/L		100	88 - 111	1	20

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCSD 280-334814/3-A

Matrix: Water

Analysis Batch: 335917

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 334814

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	500	505		ug/L		101	88 - 110	2	20
Zinc	500	480		ug/L		96	85 - 111	0	20

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-334889/1-A

Matrix: Solid

Analysis Batch: 335814

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 334889

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg		07/26/16 14:20	07/29/16 17:59	1
Arsenic	ND		2.0	0.66	mg/Kg		07/26/16 14:20	07/29/16 17:59	1
Copper	ND		2.0	0.22	mg/Kg		07/26/16 14:20	07/29/16 17:59	1
Lead	0.747	J	0.90	0.27	mg/Kg		07/26/16 14:20	07/29/16 17:59	1
Tin	0.983	J	10	0.91	mg/Kg		07/26/16 14:20	07/29/16 17:59	1
Zinc	ND		3.0	0.40	mg/Kg		07/26/16 14:20	07/29/16 17:59	1
Cadmium	ND		0.50	0.041	mg/Kg		07/26/16 14:20	07/29/16 17:59	1

Lab Sample ID: LCS 280-334889/2-A

Matrix: Solid

Analysis Batch: 335814

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 334889

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	50.0	49.9		mg/Kg		100	82 - 110
Arsenic	100	102		mg/Kg		102	85 - 110
Copper	25.0	26.2		mg/Kg		105	88 - 110
Lead	50.0	51.9		mg/Kg		104	86 - 110
Tin	200	195		mg/Kg		97	84 - 110
Zinc	50.0	49.1		mg/Kg		98	76 - 114
Cadmium	10.0	8.88		mg/Kg		89	87 - 110

Lab Sample ID: 280-85876-1 MS

Matrix: Solid

Analysis Batch: 335814

Client Sample ID: SRLB-3I(0)

Prep Type: Total/NA

Prep Batch: 334889

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	ND		39.0	17.9		mg/Kg	☼	46	20 - 200
Arsenic	4.7		78.0	77.3		mg/Kg	☼	93	76 - 111
Copper	11		19.5	30.4		mg/Kg	☼	99	37 - 187
Lead	61	F1 B	39.0	82.0	F1	mg/Kg	☼	53	70 - 200
Tin	1.1	J B	156	131		mg/Kg	☼	83	77 - 126
Zinc	30		39.0	64.0		mg/Kg	☼	87	70 - 200
Cadmium	0.22	J	7.80	6.62		mg/Kg	☼	82	40 - 130

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-85876-1 MSD

Matrix: Solid

Analysis Batch: 335814

Client Sample ID: SRLB-3I(0)

Prep Type: Total/NA

Prep Batch: 334889

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	ND		45.5	21.0		mg/Kg	☼	46	20 - 200	16	20
Arsenic	4.7		91.0	90.3		mg/Kg	☼	94	76 - 111	16	20
Copper	11		22.8	35.5		mg/Kg	☼	107	37 - 187	16	20
Lead	61	F1 B	45.5	91.5	F1	mg/Kg	☼	66	70 - 200	11	20
Tin	1.1	J B	182	153		mg/Kg	☼	84	77 - 126	16	20
Zinc	30		45.5	77.7		mg/Kg	☼	105	70 - 200	19	20
Cadmium	0.22	J	9.10	7.74		mg/Kg	☼	83	40 - 130	16	20

Lab Sample ID: MB 280-334890/1-A

Matrix: Solid

Analysis Batch: 335814

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 334890

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg		07/26/16 14:20	07/29/16 19:35	1
Arsenic	ND		2.0	0.66	mg/Kg		07/26/16 14:20	07/29/16 19:35	1
Copper	ND		2.0	0.22	mg/Kg		07/26/16 14:20	07/29/16 19:35	1
Lead	ND		0.90	0.27	mg/Kg		07/26/16 14:20	07/29/16 19:35	1
Tin	ND		10	0.91	mg/Kg		07/26/16 14:20	07/29/16 19:35	1
Zinc	ND	^	3.0	0.40	mg/Kg		07/26/16 14:20	07/29/16 19:35	1
Cadmium	ND		0.50	0.041	mg/Kg		07/26/16 14:20	07/29/16 19:35	1

Lab Sample ID: LCS 280-334890/2-A

Matrix: Solid

Analysis Batch: 335814

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 334890

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	50.0	51.2		mg/Kg		102	82 - 110
Arsenic	100	104		mg/Kg		104	85 - 110
Copper	25.0	26.7		mg/Kg		107	88 - 110
Lead	50.0	50.8		mg/Kg		102	86 - 110
Tin	200	197		mg/Kg		99	84 - 110
Zinc	50.0	48.7	^	mg/Kg		97	76 - 114
Cadmium	10.0	9.07		mg/Kg		91	87 - 110

Lab Sample ID: 280-85876-21 MS

Matrix: Solid

Analysis Batch: 335814

Client Sample ID: SRLB-30(0)

Prep Type: Total/NA

Prep Batch: 334890

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	0.62	J F2	42.6	17.1		mg/Kg	☼	39	20 - 200
Arsenic	3.7		85.2	79.6		mg/Kg	☼	89	76 - 111
Copper	15		21.3	36.4		mg/Kg	☼	102	37 - 187
Lead	150	F1	42.6	328	F1	mg/Kg	☼	414	70 - 200
Tin	1.6	J	170	136		mg/Kg	☼	79	77 - 126
Zinc	43	^	42.6	85.3	^	mg/Kg	☼	100	70 - 200
Cadmium	0.32	J	8.52	7.10		mg/Kg	☼	80	40 - 130

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-85876-21 MSD

Matrix: Solid

Analysis Batch: 335814

Client Sample ID: SRLB-30(0)

Prep Type: Total/NA

Prep Batch: 334890

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.62	J F2	37.1	13.1	F2	mg/Kg	☼	34	20 - 200	26	20
Arsenic	3.7		74.3	70.0		mg/Kg	☼	89	76 - 111	13	20
Copper	15		18.6	34.1		mg/Kg	☼	104	37 - 187	7	20
Lead	150	F1	37.1	269	4	mg/Kg	☼	317	70 - 200	20	20
Tin	1.6	J	149	116		mg/Kg	☼	77	77 - 126	16	20
Zinc	43	^	37.1	82.9	^	mg/Kg	☼	108	70 - 200	3	20
Cadmium	0.32	J	7.43	6.21		mg/Kg	☼	79	40 - 130	13	20

Lab Sample ID: LB 280-335267/1-C

Matrix: Solid

Analysis Batch: 335636

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 335438

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.20	0.016	mg/L		07/28/16 08:40	07/28/16 22:40	1
Arsenic	ND		0.50	0.022	mg/L		07/28/16 08:40	07/28/16 22:40	1
Copper	0.0633	J	2.0	0.021	mg/L		07/28/16 08:40	07/28/16 22:40	1
Lead	0.0276	J	0.50	0.013	mg/L		07/28/16 08:40	07/28/16 22:40	1
Tin	ND		0.20	0.029	mg/L		07/28/16 08:40	07/28/16 22:40	1
Zinc	ND		2.0	0.022	mg/L		07/28/16 08:40	07/28/16 22:40	1
Cadmium	ND		0.10	0.0020	mg/L		07/28/16 08:40	07/28/16 22:40	1

Lab Sample ID: LCS 280-335267/2-C

Matrix: Solid

Analysis Batch: 335636

Client Sample ID: Lab Control Sample

Prep Type: TCLP

Prep Batch: 335438

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.493		mg/L		99	80 - 120
Arsenic	4.00	4.03		mg/L		101	80 - 120
Copper	2.25	2.47		mg/L		110	80 - 120
Lead	5.50	5.43		mg/L		99	80 - 120
Tin	2.00	1.90		mg/L		95	80 - 120
Zinc	2.50	2.55		mg/L		102	80 - 120
Cadmium	1.10	1.10		mg/L		100	80 - 120

Lab Sample ID: 280-85876-3 MS

Matrix: Solid

Analysis Batch: 335636

Client Sample ID: SRRF-2(0)

Prep Type: TCLP

Prep Batch: 335438

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.12	J	0.500	0.638		mg/L		104	80 - 120
Arsenic	ND		4.00	4.09		mg/L		102	80 - 120
Copper	0.28	J B	2.25	2.68		mg/L		106	80 - 120
Lead	18	B F1	5.50	22.1	F1	mg/L		72	80 - 120
Tin	ND		2.00	1.95		mg/L		98	80 - 120
Zinc	0.048	J	2.50	2.69		mg/L		106	80 - 120
Cadmium	0.0022	J	1.10	1.13		mg/L		102	80 - 120

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-85876-3 MSD

Matrix: Solid

Analysis Batch: 335636

Client Sample ID: SRRF-2(0)

Prep Type: TCLP

Prep Batch: 335438

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	0.12	J	0.500	0.596		mg/L		96	80 - 120	7	20
Arsenic	ND		4.00	4.02		mg/L		101	80 - 120	2	20
Copper	0.28	J B	2.25	2.63		mg/L		104	80 - 120	2	20
Lead	18	B F1	5.50	21.7	F1	mg/L		65	80 - 120	2	20
Tin	ND		2.00	1.92		mg/L		96	80 - 120	1	20
Zinc	0.048	J	2.50	2.61		mg/L		102	80 - 120	3	20
Cadmium	0.0022	J	1.10	1.11		mg/L		101	80 - 120	1	20

Method: Moisture - Percent Moisture

Lab Sample ID: 280-85876-1 DU

Matrix: Solid

Analysis Batch: 335276

Client Sample ID: SRLB-31(0)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	2.8		2.8		%		0.9	20

Lab Sample ID: 280-85876-21 DU

Matrix: Solid

Analysis Batch: 335276

Client Sample ID: SRLB-30(0)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	4.3		4.1		%		4	20

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Metals

Prep Batch: 334814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-40	RINSE-3	Total/NA	Water	3010A	
280-85876-41	RINSE-4	Total/NA	Water	3010A	
MB 280-334814/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-334814/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 280-334814/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	

Prep Batch: 334889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-1	SRLB-3I(0)	Total/NA	Solid	3050B	
280-85876-2	SRRF-1(0)	Total/NA	Solid	3050B	
280-85876-3	SRRF-2(0)	Total/NA	Solid	3050B	
280-85876-4	SRRF-3(3)	Total/NA	Solid	3050B	
280-85876-5	SRRF-4(0)	Total/NA	Solid	3050B	
280-85876-6	SRRF-4(3)	Total/NA	Solid	3050B	
280-85876-7	SRRF-5(0)	Total/NA	Solid	3050B	
280-85876-8	SRIB-1(0)	Total/NA	Solid	3050B	
280-85876-9	SRIB-2(0)	Total/NA	Solid	3050B	
280-85876-10	SRIB-3(0)	Total/NA	Solid	3050B	
280-85876-11	SRIB-3(6)	Total/NA	Solid	3050B	
280-85876-12	SRBB-1(0)	Total/NA	Solid	3050B	
280-85876-13	SRBB-2(0)	Total/NA	Solid	3050B	
280-85876-14	SRBB-3(0)	Total/NA	Solid	3050B	
280-85876-15	SRBB-4(0)	Total/NA	Solid	3050B	
280-85876-16	SRBB-5(0)	Total/NA	Solid	3050B	
280-85876-17	SRBB-6(0)	Total/NA	Solid	3050B	
280-85876-18	SRBB-6(3)	Total/NA	Solid	3050B	
280-85876-19	SRLB-10(0)	Total/NA	Solid	3050B	
280-85876-20	SRLB-20(0)	Total/NA	Solid	3050B	
MB 280-334889/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-334889/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-85876-1 MS	SRLB-3I(0)	Total/NA	Solid	3050B	
280-85876-1 MSD	SRLB-3I(0)	Total/NA	Solid	3050B	

Prep Batch: 334890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-21	SRLB-30(0)	Total/NA	Solid	3050B	
280-85876-22	SRLB-40(0)	Total/NA	Solid	3050B	
280-85876-23	SRLB-50(0)	Total/NA	Solid	3050B	
280-85876-24	SRLB-50(15)	Total/NA	Solid	3050B	
280-85876-25	SRLB-60(0)	Total/NA	Solid	3050B	
280-85876-26	SRLB-70(0)	Total/NA	Solid	3050B	
280-85876-27	SRLB-80(0)	Total/NA	Solid	3050B	
280-85876-28	SRLB-4I(0)	Total/NA	Solid	3050B	
280-85876-29	SRLB-4I(6)	Total/NA	Solid	3050B	
280-85876-30	SRLB-7I(0)	Total/NA	Solid	3050B	
280-85876-31	SRLB-8I(0)	Total/NA	Solid	3050B	
280-85876-32	SRLB-1I(0)	Total/NA	Solid	3050B	
280-85876-33	SRLB-2I(0)	Total/NA	Solid	3050B	
280-85876-34	SRIB-4(0)	Total/NA	Solid	3050B	
280-85876-35	SRIB-5(0)	Total/NA	Solid	3050B	
280-85876-36	SRIB-6(0)	Total/NA	Solid	3050B	

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Metals (Continued)

Prep Batch: 334890 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-37	SRIB-6(3)	Total/NA	Solid	3050B	
280-85876-38	DUPE-2	Total/NA	Solid	3050B	
280-85876-39	DUPE-3	Total/NA	Solid	3050B	
280-85876-42	SRRF-2(3)	Total/NA	Solid	3050B	
MB 280-334890/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-334890/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-85876-21 MS	SRLB-30(0)	Total/NA	Solid	3050B	
280-85876-21 MSD	SRLB-30(0)	Total/NA	Solid	3050B	

Leach Batch: 335267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-3	SRRF-2(0)	TCLP	Solid	1311	
280-85876-17	SRBB-6(0)	TCLP	Solid	1311	
280-85876-23	SRLB-50(0)	TCLP	Solid	1311	
LB 280-335267/1-C	Method Blank	TCLP	Solid	1311	
LCS 280-335267/2-C	Lab Control Sample	TCLP	Solid	1311	
280-85876-3 MS	SRRF-2(0)	TCLP	Solid	1311	
280-85876-3 MSD	SRRF-2(0)	TCLP	Solid	1311	

Prep Batch: 335438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-3	SRRF-2(0)	TCLP	Solid	3010A	335267
280-85876-17	SRBB-6(0)	TCLP	Solid	3010A	335267
280-85876-23	SRLB-50(0)	TCLP	Solid	3010A	335267
LB 280-335267/1-C	Method Blank	TCLP	Solid	3010A	335267
LCS 280-335267/2-C	Lab Control Sample	TCLP	Solid	3010A	335267
280-85876-3 MS	SRRF-2(0)	TCLP	Solid	3010A	335267
280-85876-3 MSD	SRRF-2(0)	TCLP	Solid	3010A	335267

Analysis Batch: 335636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-3	SRRF-2(0)	TCLP	Solid	6010C	335438
280-85876-17	SRBB-6(0)	TCLP	Solid	6010C	335438
280-85876-23	SRLB-50(0)	TCLP	Solid	6010C	335438
LB 280-335267/1-C	Method Blank	TCLP	Solid	6010C	335438
LCS 280-335267/2-C	Lab Control Sample	TCLP	Solid	6010C	335438
280-85876-3 MS	SRRF-2(0)	TCLP	Solid	6010C	335438
280-85876-3 MSD	SRRF-2(0)	TCLP	Solid	6010C	335438

Analysis Batch: 335814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-1	SRLB-3I(0)	Total/NA	Solid	6010C	334889
280-85876-2	SRRF-1(0)	Total/NA	Solid	6010C	334889
280-85876-3	SRRF-2(0)	Total/NA	Solid	6010C	334889
280-85876-4	SRRF-3(3)	Total/NA	Solid	6010C	334889
280-85876-5	SRRF-4(0)	Total/NA	Solid	6010C	334889
280-85876-6	SRRF-4(3)	Total/NA	Solid	6010C	334889
280-85876-7	SRRF-5(0)	Total/NA	Solid	6010C	334889
280-85876-8	SRIB-1(0)	Total/NA	Solid	6010C	334889
280-85876-9	SRIB-2(0)	Total/NA	Solid	6010C	334889
280-85876-10	SRIB-3(0)	Total/NA	Solid	6010C	334889

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Metals (Continued)

Analysis Batch: 335814 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-11	SRIB-3(6)	Total/NA	Solid	6010C	334889
280-85876-12	SRBB-1(0)	Total/NA	Solid	6010C	334889
280-85876-13	SRBB-2(0)	Total/NA	Solid	6010C	334889
280-85876-14	SRBB-3(0)	Total/NA	Solid	6010C	334889
280-85876-15	SRBB-4(0)	Total/NA	Solid	6010C	334889
280-85876-16	SRBB-5(0)	Total/NA	Solid	6010C	334889
280-85876-17	SRBB-6(0)	Total/NA	Solid	6010C	334889
280-85876-18	SRBB-6(3)	Total/NA	Solid	6010C	334889
280-85876-19	SRLB-10(0)	Total/NA	Solid	6010C	334889
280-85876-20	SRLB-20(0)	Total/NA	Solid	6010C	334889
280-85876-21	SRLB-30(0)	Total/NA	Solid	6010C	334890
280-85876-22	SRLB-40(0)	Total/NA	Solid	6010C	334890
280-85876-23	SRLB-50(0)	Total/NA	Solid	6010C	334890
280-85876-24	SRLB-50(15)	Total/NA	Solid	6010C	334890
280-85876-25	SRLB-60(0)	Total/NA	Solid	6010C	334890
280-85876-26	SRLB-70(0)	Total/NA	Solid	6010C	334890
280-85876-27	SRLB-80(0)	Total/NA	Solid	6010C	334890
280-85876-28	SRLB-4I(0)	Total/NA	Solid	6010C	334890
280-85876-29	SRLB-4I(6)	Total/NA	Solid	6010C	334890
280-85876-30	SRLB-7I(0)	Total/NA	Solid	6010C	334890
280-85876-31	SRLB-8I(0)	Total/NA	Solid	6010C	334890
280-85876-32	SRLB-1I(0)	Total/NA	Solid	6010C	334890
280-85876-33	SRLB-2I(0)	Total/NA	Solid	6010C	334890
280-85876-34	SRIB-4(0)	Total/NA	Solid	6010C	334890
280-85876-35	SRIB-5(0)	Total/NA	Solid	6010C	334890
280-85876-36	SRIB-6(0)	Total/NA	Solid	6010C	334890
280-85876-37	SRIB-6(3)	Total/NA	Solid	6010C	334890
280-85876-38	DUPE-2	Total/NA	Solid	6010C	334890
280-85876-39	DUPE-3	Total/NA	Solid	6010C	334890
280-85876-42	SRRF-2(3)	Total/NA	Solid	6010C	334890
MB 280-334889/1-A	Method Blank	Total/NA	Solid	6010C	334889
MB 280-334890/1-A	Method Blank	Total/NA	Solid	6010C	334890
LCS 280-334889/2-A	Lab Control Sample	Total/NA	Solid	6010C	334889
LCS 280-334890/2-A	Lab Control Sample	Total/NA	Solid	6010C	334890
280-85876-1 MS	SRLB-3I(0)	Total/NA	Solid	6010C	334889
280-85876-1 MSD	SRLB-3I(0)	Total/NA	Solid	6010C	334889
280-85876-21 MS	SRLB-30(0)	Total/NA	Solid	6010C	334890
280-85876-21 MSD	SRLB-30(0)	Total/NA	Solid	6010C	334890

Analysis Batch: 335822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-40	RINSE-3	Total/NA	Water	6010B	334814
280-85876-41	RINSE-4	Total/NA	Water	6010B	334814
MB 280-334814/1-A	Method Blank	Total/NA	Water	6010B	334814
LCS 280-334814/2-A	Lab Control Sample	Total/NA	Water	6010B	334814
LCSD 280-334814/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	334814

Analysis Batch: 335917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-40	RINSE-3	Total/NA	Water	6010B	334814
280-85876-41	RINSE-4	Total/NA	Water	6010B	334814

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Metals (Continued)

Analysis Batch: 335917 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-334814/1-A	Method Blank	Total/NA	Water	6010B	334814
LCS 280-334814/2-A	Lab Control Sample	Total/NA	Water	6010B	334814
LCSD 280-334814/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	334814

Analysis Batch: 335923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-13	SRBB-2(0)	Total/NA	Solid	6010C	334889
280-85876-14	SRBB-3(0)	Total/NA	Solid	6010C	334889
280-85876-15	SRBB-4(0)	Total/NA	Solid	6010C	334889
280-85876-16	SRBB-5(0)	Total/NA	Solid	6010C	334889
280-85876-17	SRBB-6(0)	Total/NA	Solid	6010C	334889
280-85876-18	SRBB-6(3)	Total/NA	Solid	6010C	334889
280-85876-19	SRLB-10(0)	Total/NA	Solid	6010C	334889
280-85876-20	SRLB-20(0)	Total/NA	Solid	6010C	334889

Analysis Batch: 336090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-37	SRIB-6(3)	Total/NA	Solid	6010C	334890

General Chemistry

Analysis Batch: 335276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-1	SRLB-3I(0)	Total/NA	Solid	Moisture	
280-85876-2	SRRF-1(0)	Total/NA	Solid	Moisture	
280-85876-3	SRRF-2(0)	Total/NA	Solid	Moisture	
280-85876-4	SRRF-3(3)	Total/NA	Solid	Moisture	
280-85876-5	SRRF-4(0)	Total/NA	Solid	Moisture	
280-85876-6	SRRF-4(3)	Total/NA	Solid	Moisture	
280-85876-7	SRRF-5(0)	Total/NA	Solid	Moisture	
280-85876-8	SRIB-1(0)	Total/NA	Solid	Moisture	
280-85876-9	SRIB-2(0)	Total/NA	Solid	Moisture	
280-85876-10	SRIB-3(0)	Total/NA	Solid	Moisture	
280-85876-11	SRIB-3(6)	Total/NA	Solid	Moisture	
280-85876-12	SRBB-1(0)	Total/NA	Solid	Moisture	
280-85876-13	SRBB-2(0)	Total/NA	Solid	Moisture	
280-85876-14	SRBB-3(0)	Total/NA	Solid	Moisture	
280-85876-15	SRBB-4(0)	Total/NA	Solid	Moisture	
280-85876-16	SRBB-5(0)	Total/NA	Solid	Moisture	
280-85876-17	SRBB-6(0)	Total/NA	Solid	Moisture	
280-85876-18	SRBB-6(3)	Total/NA	Solid	Moisture	
280-85876-19	SRLB-10(0)	Total/NA	Solid	Moisture	
280-85876-20	SRLB-20(0)	Total/NA	Solid	Moisture	
280-85876-21	SRLB-30(0)	Total/NA	Solid	Moisture	
280-85876-22	SRLB-40(0)	Total/NA	Solid	Moisture	
280-85876-23	SRLB-50(0)	Total/NA	Solid	Moisture	
280-85876-24	SRLB-50(15)	Total/NA	Solid	Moisture	
280-85876-25	SRLB-60(0)	Total/NA	Solid	Moisture	
280-85876-26	SRLB-70(0)	Total/NA	Solid	Moisture	
280-85876-27	SRLB-80(0)	Total/NA	Solid	Moisture	

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

General Chemistry (Continued)

Analysis Batch: 335276 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85876-28	SRLB-4I(0)	Total/NA	Solid	Moisture	
280-85876-29	SRLB-4I(6)	Total/NA	Solid	Moisture	
280-85876-30	SRLB-7I(0)	Total/NA	Solid	Moisture	
280-85876-31	SRLB-8I(0)	Total/NA	Solid	Moisture	
280-85876-32	SRLB-1I(0)	Total/NA	Solid	Moisture	
280-85876-33	SRLB-2I(0)	Total/NA	Solid	Moisture	
280-85876-34	SRIB-4(0)	Total/NA	Solid	Moisture	
280-85876-35	SRIB-5(0)	Total/NA	Solid	Moisture	
280-85876-36	SRIB-6(0)	Total/NA	Solid	Moisture	
280-85876-37	SRIB-6(3)	Total/NA	Solid	Moisture	
280-85876-38	DUPE-2	Total/NA	Solid	Moisture	
280-85876-39	DUPE-3	Total/NA	Solid	Moisture	
280-85876-42	SRRF-2(3)	Total/NA	Solid	Moisture	
280-85876-1 DU	SRLB-3I(0)	Total/NA	Solid	Moisture	
280-85876-21 DU	SRLB-30(0)	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRLB-3I(0)

Date Collected: 07/20/16 09:10

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-3I(0)

Date Collected: 07/20/16 09:10

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-1

Matrix: Solid

Percent Solids: 97.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.106 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 18:04	CMK	TAL DEN

Client Sample ID: SRRF-1(0)

Date Collected: 07/20/16 10:50

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRRF-1(0)

Date Collected: 07/20/16 10:50

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-2

Matrix: Solid

Percent Solids: 94.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.342 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 18:17	CMK	TAL DEN

Client Sample ID: SRRF-2(0)

Date Collected: 07/20/16 10:55

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	335267	07/26/16 18:28	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	335438	07/28/16 08:40	MLS	TAL DEN
TCLP	Analysis	6010C		1			335636	07/28/16 22:45	LLB	TAL DEN
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRRF-2(0)

Date Collected: 07/20/16 10:55

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-3

Matrix: Solid

Percent Solids: 97.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.321 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 18:19	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRRF-3(3)

Date Collected: 07/20/16 12:05

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRRF-3(3)

Date Collected: 07/20/16 12:05

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-4

Matrix: Solid

Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.031 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 18:32	CMK	TAL DEN

Client Sample ID: SRRF-4(0)

Date Collected: 07/20/16 13:25

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRRF-4(0)

Date Collected: 07/20/16 13:25

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-5

Matrix: Solid

Percent Solids: 97.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.368 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 18:35	CMK	TAL DEN

Client Sample ID: SRRF-4(3)

Date Collected: 07/20/16 12:15

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRRF-4(3)

Date Collected: 07/20/16 12:15

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-6

Matrix: Solid

Percent Solids: 94.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.296 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 18:37	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRRF-5(0)

Date Collected: 07/20/16 12:25

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRRF-5(0)

Date Collected: 07/20/16 12:25

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-7

Matrix: Solid

Percent Solids: 97.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.456 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 18:40	CMK	TAL DEN

Client Sample ID: SRIB-1(0)

Date Collected: 07/20/16 08:55

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRIB-1(0)

Date Collected: 07/20/16 08:55

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-8

Matrix: Solid

Percent Solids: 96.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.369 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 18:42	CMK	TAL DEN

Client Sample ID: SRIB-2(0)

Date Collected: 07/20/16 08:45

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRIB-2(0)

Date Collected: 07/20/16 08:45

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-9

Matrix: Solid

Percent Solids: 95.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.354 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 18:45	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRIB-3(0)

Date Collected: 07/20/16 08:30

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRIB-3(0)

Date Collected: 07/20/16 08:30

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-10

Matrix: Solid

Percent Solids: 96.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.195 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 18:47	CMK	TAL DEN

Client Sample ID: SRIB-3(6)

Date Collected: 07/20/16 08:35

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRIB-3(6)

Date Collected: 07/20/16 08:35

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-11

Matrix: Solid

Percent Solids: 91.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.022 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 18:50	CMK	TAL DEN

Client Sample ID: SRBB-1(0)

Date Collected: 07/20/16 07:35

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRBB-1(0)

Date Collected: 07/20/16 07:35

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-12

Matrix: Solid

Percent Solids: 95.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.315 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 18:52	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRBB-2(0)

Date Collected: 07/20/16 07:40

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRBB-2(0)

Date Collected: 07/20/16 07:40

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-13

Matrix: Solid

Percent Solids: 96.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.358 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 19:05	CMK	TAL DEN
Total/NA	Prep	3050B			1.358 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335923	07/30/16 14:43	LLB	TAL DEN

Client Sample ID: SRBB-3(0)

Date Collected: 07/20/16 07:55

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-14

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRBB-3(0)

Date Collected: 07/20/16 07:55

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-14

Matrix: Solid

Percent Solids: 96.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.345 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 19:08	CMK	TAL DEN
Total/NA	Prep	3050B			1.345 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335923	07/30/16 14:46	LLB	TAL DEN

Client Sample ID: SRBB-4(0)

Date Collected: 07/20/16 08:05

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-15

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRBB-4(0)

Date Collected: 07/20/16 08:05

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-15

Matrix: Solid

Percent Solids: 97.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.480 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRBB-4(0)

Date Collected: 07/20/16 08:05

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-15

Matrix: Solid

Percent Solids: 97.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010C		1			335814	07/29/16 19:10	CMK	TAL DEN
Total/NA	Prep	3050B			1.480 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335923	07/30/16 14:48	LLB	TAL DEN

Client Sample ID: SRBB-5(0)

Date Collected: 07/20/16 08:50

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-16

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRBB-5(0)

Date Collected: 07/20/16 08:50

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-16

Matrix: Solid

Percent Solids: 98.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.386 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 19:13	CMK	TAL DEN
Total/NA	Prep	3050B			1.386 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335923	07/30/16 14:51	LLB	TAL DEN

Client Sample ID: SRBB-6(0)

Date Collected: 07/20/16 13:30

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-17

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	335267	07/26/16 18:28	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	335438	07/28/16 08:40	MLS	TAL DEN
TCLP	Analysis	6010C		1			335636	07/28/16 22:59	LLB	TAL DEN
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRBB-6(0)

Date Collected: 07/20/16 13:30

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-17

Matrix: Solid

Percent Solids: 99.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.203 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 19:15	CMK	TAL DEN
Total/NA	Prep	3050B			1.203 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335923	07/30/16 14:54	LLB	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRBB-6(3)

Date Collected: 07/20/16 09:05

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-18

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRBB-6(3)

Date Collected: 07/20/16 09:05

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-18

Matrix: Solid

Percent Solids: 98.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.380 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 19:18	CMK	TAL DEN
Total/NA	Prep	3050B			1.380 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335923	07/30/16 14:56	LLB	TAL DEN

Client Sample ID: SRLB-10(0)

Date Collected: 07/20/16 09:17

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-19

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-10(0)

Date Collected: 07/20/16 09:17

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-19

Matrix: Solid

Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.168 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 19:20	CMK	TAL DEN
Total/NA	Prep	3050B			1.168 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335923	07/30/16 14:59	LLB	TAL DEN

Client Sample ID: SRLB-20(0)

Date Collected: 07/20/16 09:25

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-20

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-20(0)

Date Collected: 07/20/16 09:25

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-20

Matrix: Solid

Percent Solids: 95.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.343 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRLB-20(0)

Date Collected: 07/20/16 09:25

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-20

Matrix: Solid

Percent Solids: 95.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010C		1			335814	07/29/16 19:23	CMK	TAL DEN
Total/NA	Prep	3050B			1.343 g	100 mL	334889	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335923	07/30/16 15:02	LLB	TAL DEN

Client Sample ID: SRLB-30(0)

Date Collected: 07/20/16 09:35

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-21

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-30(0)

Date Collected: 07/20/16 09:35

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-21

Matrix: Solid

Percent Solids: 95.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.313 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 19:41	CMK	TAL DEN

Client Sample ID: SRLB-40(0)

Date Collected: 07/20/16 10:45

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-22

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-40(0)

Date Collected: 07/20/16 10:45

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-22

Matrix: Solid

Percent Solids: 95.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.260 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 19:54	CMK	TAL DEN

Client Sample ID: SRLB-50(0)

Date Collected: 07/20/16 11:10

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-23

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	335267	07/26/16 18:28	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	335438	07/28/16 08:40	MLS	TAL DEN
TCLP	Analysis	6010C		1			335636	07/28/16 23:02	LLB	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRLB-50(0)

Date Collected: 07/20/16 11:10

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-23

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-50(0)

Date Collected: 07/20/16 11:10

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-23

Matrix: Solid

Percent Solids: 97.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.398 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 19:56	CMK	TAL DEN

Client Sample ID: SRLB-50(15)

Date Collected: 07/20/16 12:00

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-24

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-50(15)

Date Collected: 07/20/16 12:00

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-24

Matrix: Solid

Percent Solids: 96.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.360 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:09	CMK	TAL DEN

Client Sample ID: SRLB-60(0)

Date Collected: 07/20/16 12:05

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-25

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-60(0)

Date Collected: 07/20/16 12:05

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-25

Matrix: Solid

Percent Solids: 97.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.359 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:12	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRLB-70(0)

Date Collected: 07/20/16 12:10

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-26

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-70(0)

Date Collected: 07/20/16 12:10

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-26

Matrix: Solid

Percent Solids: 98.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.491 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:14	CMK	TAL DEN

Client Sample ID: SRLB-80(0)

Date Collected: 07/20/16 12:15

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-27

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-80(0)

Date Collected: 07/20/16 12:15

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-27

Matrix: Solid

Percent Solids: 98.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.282 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:17	CMK	TAL DEN

Client Sample ID: SRLB-4I(0)

Date Collected: 07/20/16 13:35

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-28

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-4I(0)

Date Collected: 07/20/16 13:35

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-28

Matrix: Solid

Percent Solids: 96.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.205 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:19	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRLB-4I(6)

Date Collected: 07/20/16 13:40

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-29

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-4I(6)

Date Collected: 07/20/16 13:40

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-29

Matrix: Solid

Percent Solids: 89.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.035 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:22	CMK	TAL DEN

Client Sample ID: SRLB-7I(0)

Date Collected: 07/20/16 13:45

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-30

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-7I(0)

Date Collected: 07/20/16 13:45

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-30

Matrix: Solid

Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.333 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:24	CMK	TAL DEN

Client Sample ID: SRLB-8I(0)

Date Collected: 07/20/16 13:40

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-31

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-8I(0)

Date Collected: 07/20/16 13:40

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-31

Matrix: Solid

Percent Solids: 95.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.397 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:27	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRLB-1I(0)

Date Collected: 07/20/16 10:40

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-32

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-1I(0)

Date Collected: 07/20/16 10:40

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-32

Matrix: Solid

Percent Solids: 96.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.394 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:29	CMK	TAL DEN

Client Sample ID: SRLB-2I(0)

Date Collected: 07/20/16 10:30

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-33

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRLB-2I(0)

Date Collected: 07/20/16 10:30

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-33

Matrix: Solid

Percent Solids: 96.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.177 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:42	CMK	TAL DEN

Client Sample ID: SRIB-4(0)

Date Collected: 07/20/16 08:15

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-34

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRIB-4(0)

Date Collected: 07/20/16 08:15

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-34

Matrix: Solid

Percent Solids: 95.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.358 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:45	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: SRIB-5(0)

Date Collected: 07/20/16 08:05

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-35

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRIB-5(0)

Date Collected: 07/20/16 08:05

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-35

Matrix: Solid

Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.240 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:47	CMK	TAL DEN

Client Sample ID: SRIB-6(0)

Date Collected: 07/20/16 07:55

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-36

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRIB-6(0)

Date Collected: 07/20/16 07:55

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-36

Matrix: Solid

Percent Solids: 91.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.186 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:50	CMK	TAL DEN

Client Sample ID: SRIB-6(3)

Date Collected: 07/20/16 07:50

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-37

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRIB-6(3)

Date Collected: 07/20/16 07:50

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-37

Matrix: Solid

Percent Solids: 95.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.192 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:52	CMK	TAL DEN
Total/NA	Prep	3050B			1.192 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		5			336090	08/01/16 19:18	SJS	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: DUPE-2

Date Collected: 07/20/16 00:00

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-38

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: DUPE-2

Date Collected: 07/20/16 00:00

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-38

Matrix: Solid

Percent Solids: 97.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.285 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:55	CMK	TAL DEN

Client Sample ID: DUPE-3

Date Collected: 07/20/16 00:00

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-39

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: DUPE-3

Date Collected: 07/20/16 00:00

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-39

Matrix: Solid

Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.322 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 20:57	CMK	TAL DEN

Client Sample ID: RINSE-3

Date Collected: 07/20/16 15:30

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-40

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	334814	07/25/16 14:30	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			335822	07/30/16 06:15	CRR	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	334814	07/25/16 14:30	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			335917	07/30/16 20:08	CRR	TAL DEN

Client Sample ID: RINSE-4

Date Collected: 07/20/16 15:30

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-41

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	334814	07/25/16 14:30	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			335822	07/30/16 06:17	CRR	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Client Sample ID: RINSE-4

Date Collected: 07/20/16 15:30

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-41

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	334814	07/25/16 14:30	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			335917	07/30/16 20:10	CRR	TAL DEN

Client Sample ID: SRRF-2(3)

Date Collected: 07/20/16 11:05

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-42

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335276	07/26/16 19:40	SVC	TAL DEN

Client Sample ID: SRRF-2(3)

Date Collected: 07/20/16 11:05

Date Received: 07/20/16 15:43

Lab Sample ID: 280-85876-42

Matrix: Solid

Percent Solids: 95.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.172 g	100 mL	334890	07/26/16 14:20	MLS	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 21:00	CMK	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85876-1

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	4025	01-09-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture

TestAmerica Denver
4955 Yarrow Street
Arvada CO 80002

Chain of Custody Record



280-85876 Chain of Custody

estAmerica

Client Information		Sample:	72B/JAL		Lab File:	280-858/6 Chain of Custody	
Client Contact:		Phone:	720-524-4294		Tester:	Stephanie K. Kupper, Stephanie K	
Company:		Quantum Water & Environment		E-Mail:	stephanie.kupper@testamericainc.com		
Address:		1746 Cole Boulevard, Suite 340		Analysis Requested			
City:		Lakewood		Job #:			
State, Zip:		CO, 80401		Job #:			
Phone:		720-524-4294(Tel)		Job #:			
Email:		john@quantumwaterco.com		Job #:			
Project Name:		Adams County Shooting Range		Job #:			
Site:		SSOW#:		Job #:			
Due Date Requested:		TAT Requested (days):		Job #:			
Purchase Order Requested		WO #:		Job #:			
Project #:		28014702		Job #:			
Sample Identification		Sample Date		Job #:			
Sample Type		Sample Time		Job #:			
Sample Type (G=comp, G=grab)		Matrix (M=water, S=solid, O=other)		Job #:			
SRIB-3T(0)		7/20/16 0910		Job #:			
SRRE-2(0)		1050		Job #:			
SRRE-2(0)		1055		Job #:			
SRRE-3(3)		1705		Job #:			
SRRE-4(0)		1325		Job #:			
SRRE-4(3)		1215		Job #:			
SRRE-5(0)		1225		Job #:			
SRIB-1(0)		0855		Job #:			
SRIB-2(0)		0845		Job #:			
SRIB-3(0)		0830		Job #:			
SRIB-3(6)		0835		Job #:			
Possible Hazard Identification		Skin Irritant		Job #:			
Non-Hazard		Flammable		Job #:			
Deliverable Requested: I, II, III, IV, Other (specify)		Poison B		Job #:			
Empty Kit Relinquished by:		Date:		Job #:			
Relinquished by:		Date/Time:		Job #:			
Relinquished by:		Date/Time:		Job #:			
Custody Seals Intact:		Custody Seal No.:		Job #:			
A Yes A No		A Yes A No		Job #:			
Field Filtered Sample (Yes or No)		EPA 6010-Shooting Rug COCs		Job #:			
Performance (Yes or No)		EPA 6010-TCLP		Job #:			
Total Number of Containers		Special Instructions/Notes:		Job #:			
Preservation Codes:		A - HCL		Job #:			
B - NaOH		M - Hexane		Job #:			
C - Zn Acetate		N - None		Job #:			
D - Nitric Acid		O - AsNaO2		Job #:			
E - NaHSO4		P - Na2O4S		Job #:			
F - MeOH		Q - Na2SO3		Job #:			
G - Amchlor		R - Na2S2O3		Job #:			
H - Ascorbic Acid		S - H2SO4		Job #:			
I - Ice		T - TSP Dodecylhydrate		Job #:			
J - DI Water		U - Acetone		Job #:			
K - EDTA		V - MCAA		Job #:			
L - EDTA		W - pH 4.5		Job #:			
Other:		Z - other (specify)		Job #:			
Cooler Temperature		Card Check Remarks:		Job #:			
7-20-16 1543		7-20-16 1543		Job #:			
Received by:		Received by:		Job #:			
Date/Time:		Date/Time:		Job #:			
Company:		Company:		Job #:			
Method of Shipment:		Archive For		Job #:			
Months		Months		Job #:			
Special Instructions/OC Requirements:		Special Instructions/OC Requirements:		Job #:			
Return To Client		Dispose By Lab		Job #:			
Archive For		Archive For		Job #:			
Months		Months		Job #:			
Cooler Temperature		Card Check Remarks:		Job #:			
7-20-16 1543		7-20-16 1543		Job #:			
Received by:		Received by:		Job #:			
Date/Time:		Date/Time:		Job #:			
Company:		Company:		Job #:			
Method of Shipment:		Archive For		Job #:			
Months		Months		Job #:			
Special Instructions/OC Requirements:		Special Instructions/OC Requirements:		Job #:			
Return To Client		Dispose By Lab		Job #:			
Archive For		Archive For		Job #:			
Months		Months		Job #:			
Cooler Temperature		Card Check Remarks:		Job #:			
7-20-16 1543		7-20-16 1543		Job #:			
Received by:		Received by:		Job #:			
Date/Time:		Date/Time:		Job #:			
Company:		Company:		Job #:			
Method of Shipment:		Archive For		Job #:			
Months		Months		Job #:			
Special Instructions/OC Requirements:		Special Instructions/OC Requirements:		Job #:			
Return To Client		Dispose By Lab		Job #:			
Archive For		Archive For		Job #:			
Months		Months		Job #:			
Cooler Temperature		Card Check Remarks:		Job #:			
7-20-16 1543		7-20-16 1543		Job #:			
Received by:		Received by:		Job #:			
Date/Time:		Date/Time:		Job #:			
Company:		Company:		Job #:			
Method of Shipment:		Archive For		Job #:			
Months		Months		Job #:			
Special Instructions/OC Requirements:		Special Instructions/OC Requirements:		Job #:			
Return To Client		Dispose By Lab		Job #:			
Archive For		Archive For		Job #:			
Months		Months		Job #:			
Cooler Temperature		Card Check Remarks:		Job #:			
7-20-16 1543		7-20-16 1543		Job #:			
Received by:		Received by:		Job #:			
Date/Time:		Date/Time:		Job #:			
Company:		Company:		Job #:			
Method of Shipment:		Archive For		Job #:			
Months		Months		Job #:			
Special Instructions/OC Requirements:		Special Instructions/OC Requirements:		Job #:			
Return To Client		Dispose By Lab		Job #:			
Archive For		Archive For		Job #:			

TestAmerica Denver
4935 Yarrow Street
Aurora, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampler: <u>TCB/ JAL</u>		Lab Pkt. Kupper, Stephanie K		Carrier Tracking No(s):		COC No: <u>280-56183-19671.1</u>	
Client Contact: Mr. John Delaport		Phone: <u>720-524-4294</u>		E-Mail: <u>stephanie.kupper@testamerica.com</u>				Page: <u>1</u>	
Company: Quantum Water & Environment		Due Date Requested:						Job #:	
Address: 1746 Cole Boulevard, Suite 340		TAT Requested (days):							
City: Lakewood									
State, Zip: CO, 80401									
Phone: 720-524-4294 (Tel)		PO #:							
Email: <u>John@quantumwaterco.com</u>		Purchase Order Requested							
Project Name: Adams County Shooting Range		Project #:							
Site: S50W#									
Sample Identification		Sample Date		Sample Time		Sample Type (G-comp, G-grab)		Matrix (Mineral, Sp-aid, Other/Noil)	
<u>SRBB-1(0)</u>		<u>7/26/16</u>		<u>0735</u>		<u>G</u>		<u>S</u>	
<u>SRBB-2(0)</u>				<u>0740</u>					
<u>SRBB-3(0)</u>				<u>0755</u>					
<u>SRBB-4(0)</u>				<u>0805</u>					
<u>SRBB-5(0)</u>				<u>0858</u>					
<u>SRBB-6(0)</u>				<u>1830</u>					
<u>SRBB-6(3)</u>				<u>0905</u>					
<u>SRLB-1(0)</u>				<u>0917</u>					
<u>SRLB-2(0)</u>				<u>0925</u>					
<u>SRLB-3(0)</u>				<u>0935</u>					
<u>SRLB-4(0)</u>				<u>1045</u>					
Possible Hazard Identification									
☐ Non-Hazard		☐ Flammable		☐ Skin Irritant		☐ Poison B		☐ Unknown	
☐ Radiological									
Deliverable Requested: I, II, III, IV, Other (specify)									
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by: <u>[Signature]</u>		Date/Time: <u>7/20/16 1543</u>		Company: <u>THO</u>		Received by: <u>[Signature]</u>		Date/Time: <u>7-20-16 1543</u>	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: <u>Yes</u>		Custody Seal No.:				Cooler Temperature(s) °C and Other Remarks:			

Chain of Custody Record

Client Information		Sampler: <u>TCR/SAL</u>		Lab POC: <u>Kupper, Stephanie K</u>		Carter Tracking No(s):		COC No: <u>280-55183-19671.1</u>	
Client Contact: <u>Mr. John Delaport</u>		Phone: <u>720-524-4294</u>		E-Mail: <u>stephanie.kupper@testamerica.com</u>				Page: <u>280-55183-19671.1</u>	
Company: <u>Quantum Water & Environment</u>		Due Date Requested:		Analysis Requested				Job #:	
Address: <u>1746 Cole Boulevard, Suite 340</u>		City: <u>Lakewood</u>		State, Zip: <u>CO, 80401</u>		PO #:		Purchase Order Requested	
Phone: <u>720-524-4294(Tel)</u>		Email: <u>John@quantumwaterco.com</u>		Project #:		SSOW#:		Preservation Codes:	
Project Name: <u>Adams County Shooting Range</u>		Site:		Sample Identification		Sample Date		Sample Type (C-comp, G-grad)	
								Matrix (Preservative, Swill, Overkill, Other)	
								Retention Codes	
								Field/Retained Sample (Yes or No)	
								Random MS/MSD (No/Yes)	
								EPA 6010 - Shooting Rug COCs	
								EPA 6010 - TCLP	
								Total Number of Containers	
								Special Instructions/Note:	
								Preservation Codes:	
								A - HCL	
								B - NaOH	
								C - Zn Acetate	
								D - Nitric Acid	
								E - NaHSO4	
								F - MeOH	
								G - Ammonia	
								H - Ascorbic Acid	
								I - Ice	
								J - DI Water	
								K - EDTA	
								L - EDA	
								M - Hexane	
								N - Nitro	
								O - AsnB02	
								P - Na2O4S	
								Q - Na2SO3	
								R - Na2S2O3	
								S - H2SO4	
								T - TSP Dodecylhydrate	
								U - Acetone	
								V - MCAA	
								W - cit 4-5	
								Z - other (specify)	
								Other:	
								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:	
								Empty Kit Relinquished by:	
								Date:	
								Time:	
								Method of Shipment:	
								Relinquished by:	
								Date/Time:	
								Company:	
								Received by:	
								Date/Time:	
								Company:	
								Relinquished by:	
								Date/Time:	
								Company:	
								Custody Seals Intact:	
								Custody Seal No.:	
								Copier Temperature(s) °C and Other Remarks:	

8/3/2016

Login Sample Receipt Checklist

Client: Quantum Water & Environment

Job Number: 280-85876-1

Login Number: 85876

List Source: TestAmerica Denver

List Number: 1

Creator: True, Joshua A

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
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.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	False	Refer to Job Narrative for details.
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	Did not receive all required containers.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-85941-1

Client Project/Site: Adams County Shooting Range

For:

Quantum Water & Environment

1746 Cole Boulevard, Suite 340

Lakewood, Colorado 80401

Attn: Mr. John Dellaport



Authorized for release by:

8/1/2016 3:19:00 PM

Stephanie Kupper, Project Manager I

(303)736-0182

stephanie.kupper@testamericainc.com

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

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

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



Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	6
Method Summary	15
Sample Summary	16
Client Sample Results	17
QC Sample Results	32
QC Association	37
Chronicle	42
Certification Summary	58
Chain of Custody	59
Receipt Checklists	63

Definitions/Glossary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

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.
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
L	A negative instrument reading had an absolute value greater than the reporting limit
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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)

Case Narrative

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Job ID: 280-85941-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Quantum Water & Environment

Project: Adams County Shooting Range

Report Number: 280-85941-1

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

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

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

RECEIPT

The samples were received on 7/21/2016 at 2:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 19.1° C.

Sample NRRF-6(0) list a sample time of 925 on the container, but the COC lists 920; the sample was logged per the COC.

All containers received did not have standard labels; information was written directly on the bottle (for poly containers) or on the container lid (for glass containers).

TOTAL METALS - Aqueous

Samples RINSE-5 (280-85941-41) and RINSE-6 (280-85941-42) were analyzed for total metals in accordance with EPA SW-846 Method 6010B. The samples were prepared on 07/26/2016 and analyzed on 07/29/2016 and 07/30/2016.

The instrument blank for analytical batch 280-335845 contained Sb greater than one-half the reporting limit (RL), and was not re-analyzed because samples are ND for this element.

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

TCLP METALS

Samples SRRF-9(6-9) (280-85941-13) and SRRF-6(0) (280-85941-17) were analyzed for TCLP Metals in accordance with EPA SW-846 Method 1311/6010C. The samples were leached on 07/26/2016, and prepared and analyzed on 07/28/2016.

Copper and Lead were detected in method blank LB 280-335267/1-D 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. Refer to the QC report for details.

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

TOTAL METALS (ICP) - Solid

Samples NRLB-7O(0) (280-85941-1), NRLB-6O(0) (280-85941-2), NRLB-5O(0) (280-85941-3), NRLB-5O(3) (280-85941-4), NRIB-4(0) (280-85941-5), NRIB-5(0) (280-85941-6), NRLB-9I(0) (280-85941-7), NRLB-9O(0) (280-85941-8), NRLB-8I(0) (280-85941-9), NRLB-8O(0) (280-85941-10), NRLB-10O(0) (280-85941-11), NRLB-11O(0) (280-85941-12), SRRF-9(6-9) (280-85941-13), SRRF-7(6-9) (280-85941-14), SRLB-5I(0) (280-85941-15), SRLB-6I(0) (280-85941-16), SRRF-6(0) (280-85941-17), SRRF-6(6) (280-85941-18), SRRF-10(0) (280-85941-19), SRRF-8(0) (280-85941-20), SRRF-7(0) (280-85941-21), SRRF-9(0) (280-85941-22), SRRF-3(0)

Case Narrative

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Job ID: 280-85941-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

(280-85941-23), STRF-1(0) (280-85941-24), STRF-2(0) (280-85941-25), NRRF-5(0) (280-85941-26), NRRF-6(0) (280-85941-27), NRRF-7(0) (280-85941-28), NRRF-3(0) (280-85941-29), NRRF-9(0) (280-85941-30), NRLB-14I(0) (280-85941-31), NRLB-13I(0) (280-85941-32), NRLB-12I(0) (280-85941-33), NRLB-11I(0) (280-85941-34), NRLB-10I(0) (280-85941-35), NRLB-14O(0) (280-85941-36), NRLB-13O(0) (280-85941-37), NRLB-12O(0) (280-85941-38), DUPE-4 (280-85941-39) and DUPE-5 (280-85941-40) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 07/26/2016 and analyzed on 07/29/2016 and 07/30/2016.

Copper, Tin and Zinc were detected in method blank MB 280-334895/1-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.

Copper and Tin were detected in method blank MB 280-334896/1-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. Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS of sample SRRF-7(0) (280-85941-21) in batch 280-335813. For the MSD of sample SRRF-7(0) (280-85941-21) in batch 280-335813, Antimony, Tin, Arsenic and Lead failed the recovery criteria low. Copper failed the recovery criteria high. Also, Several analytes exceeded the RPD limit. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

Samples NRLB-9I(0) (280-85941-7)[5X], SRRF-7(0) (280-85941-21)[2X] and SRRF-7(0) (280-85941-21)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The following samples were diluted due to the presence of As over the linear range which interferes with Cd: SRRF-7(0) (280-85941-21), (280-85941-A-21-B MS), (280-85941-A-21-C MSD), (280-85941-A-21-A PDS) and (280-85941-A-21-A SD). Elevated reporting limits (RLs) are provided.

The instrument blank for analytical batch 280-335650 contained Pb greater than one-half the reporting limit (RL), and was not re-analyzed because samples were greater than 10x the blank concentration. The data have been qualified and reported.

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

PERCENT SOLIDS

Samples NRLB-7O(0) (280-85941-1), NRLB-6O(0) (280-85941-2), NRLB-5O(0) (280-85941-3), NRLB-5O(3) (280-85941-4), NRIB-4(0) (280-85941-5), NRIB-5(0) (280-85941-6), NRLB-9I(0) (280-85941-7), NRLB-9O(0) (280-85941-8), NRLB-8I(0) (280-85941-9), NRLB-8O(0) (280-85941-10), NRLB-10O(0) (280-85941-11), NRLB-11O(0) (280-85941-12), SRRF-9(6-9) (280-85941-13), SRRF-7(6-9) (280-85941-14), SRLB-5I(0) (280-85941-15), SRLB-6I(0) (280-85941-16), SRRF-6(0) (280-85941-17), SRRF-6(6) (280-85941-18), SRRF-10(0) (280-85941-19), SRRF-8(0) (280-85941-20), SRRF-7(0) (280-85941-21), SRRF-9(0) (280-85941-22), SRRF-3(0) (280-85941-23), STRF-1(0) (280-85941-24), STRF-2(0) (280-85941-25), NRRF-5(0) (280-85941-26), NRRF-6(0) (280-85941-27), NRRF-7(0) (280-85941-28), NRRF-3(0) (280-85941-29), NRRF-9(0) (280-85941-30), NRLB-14I(0) (280-85941-31), NRLB-13I(0) (280-85941-32), NRLB-12I(0) (280-85941-33), NRLB-11I(0) (280-85941-34), NRLB-10I(0) (280-85941-35), NRLB-14O(0) (280-85941-36), NRLB-13O(0) (280-85941-37), NRLB-12O(0) (280-85941-38), DUPE-4 (280-85941-39) and DUPE-5 (280-85941-40) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 07/27/2016.

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

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRLB-70(0)

Lab Sample ID: 280-85941-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	2.8		1.9	0.64	mg/Kg	1		✱	6010C	Total/NA
Copper	9.2	B	1.9	0.21	mg/Kg	1		✱	6010C	Total/NA
Lead	7.6		0.87	0.26	mg/Kg	1		✱	6010C	Total/NA
Tin	1.3	J B	9.7	0.88	mg/Kg	1		✱	6010C	Total/NA
Zinc	31	B	2.9	0.39	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.17	J	0.48	0.040	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRLB-60(0)

Lab Sample ID: 280-85941-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	2.7		1.9	0.62	mg/Kg	1		✱	6010C	Total/NA
Copper	12	B	1.9	0.20	mg/Kg	1		✱	6010C	Total/NA
Lead	12		0.84	0.25	mg/Kg	1		✱	6010C	Total/NA
Tin	1.4	J B	9.3	0.85	mg/Kg	1		✱	6010C	Total/NA
Zinc	35	B	2.8	0.37	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.16	J	0.47	0.038	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRLB-50(0)

Lab Sample ID: 280-85941-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	1.4		1.3	0.33	mg/Kg	1		✱	6010C	Total/NA
Arsenic	3.2		1.7	0.58	mg/Kg	1		✱	6010C	Total/NA
Copper	66	B	1.7	0.19	mg/Kg	1		✱	6010C	Total/NA
Lead	290		0.79	0.24	mg/Kg	1		✱	6010C	Total/NA
Tin	4.3	J B	8.7	0.80	mg/Kg	1		✱	6010C	Total/NA
Zinc	38	B	2.6	0.35	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.27	J	0.44	0.036	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRLB-50(3)

Lab Sample ID: 280-85941-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	2.8		1.9	0.64	mg/Kg	1		✱	6010C	Total/NA
Copper	15	B	1.9	0.21	mg/Kg	1		✱	6010C	Total/NA
Lead	35		0.87	0.26	mg/Kg	1		✱	6010C	Total/NA
Tin	1.6	J B	9.6	0.88	mg/Kg	1		✱	6010C	Total/NA
Zinc	41	B	2.9	0.38	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.17	J	0.48	0.040	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRIB-4(0)

Lab Sample ID: 280-85941-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	2.4		2.0	0.68	mg/Kg	1		✱	6010C	Total/NA
Copper	21	B	2.0	0.22	mg/Kg	1		✱	6010C	Total/NA
Lead	42		0.92	0.28	mg/Kg	1		✱	6010C	Total/NA
Tin	2.4	J B	10	0.93	mg/Kg	1		✱	6010C	Total/NA
Zinc	54	B	3.1	0.41	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.32	J	0.51	0.042	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRIB-5(0)

Lab Sample ID: 280-85941-6

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRIB-5(0) (Continued)

Lab Sample ID: 280-85941-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.8		1.9	0.64	mg/Kg	1		✖	6010C	Total/NA
Copper	43	B	1.9	0.21	mg/Kg	1		✖	6010C	Total/NA
Lead	57		0.87	0.26	mg/Kg	1		✖	6010C	Total/NA
Tin	3.6	J B	9.6	0.88	mg/Kg	1		✖	6010C	Total/NA
Zinc	48	B	2.9	0.38	mg/Kg	1		✖	6010C	Total/NA
Cadmium	0.25	J	0.48	0.039	mg/Kg	1		✖	6010C	Total/NA

Client Sample ID: NRLB-9I(0)

Lab Sample ID: 280-85941-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	0.37	J	1.3	0.34	mg/Kg	1		✖	6010C	Total/NA
Arsenic	4.2		1.8	0.59	mg/Kg	1		✖	6010C	Total/NA
Copper	3400	B	8.9	0.97	mg/Kg	5		✖	6010C	Total/NA
Lead	45		0.80	0.24	mg/Kg	1		✖	6010C	Total/NA
Tin	260	B	8.9	0.81	mg/Kg	1		✖	6010C	Total/NA
Zinc	69	B	2.7	0.35	mg/Kg	1		✖	6010C	Total/NA
Cadmium	0.37	J	0.45	0.037	mg/Kg	1		✖	6010C	Total/NA

Client Sample ID: NRLB-9O(0)

Lab Sample ID: 280-85941-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.7		1.8	0.60	mg/Kg	1		✖	6010C	Total/NA
Copper	36	B	1.8	0.20	mg/Kg	1		✖	6010C	Total/NA
Lead	36		0.82	0.24	mg/Kg	1		✖	6010C	Total/NA
Tin	2.1	J B	9.1	0.83	mg/Kg	1		✖	6010C	Total/NA
Zinc	100	B	2.7	0.36	mg/Kg	1		✖	6010C	Total/NA
Cadmium	0.57		0.45	0.037	mg/Kg	1		✖	6010C	Total/NA

Client Sample ID: NRLB-8I(0)

Lab Sample ID: 280-85941-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.8		1.9	0.63	mg/Kg	1		✖	6010C	Total/NA
Copper	17	B	1.9	0.21	mg/Kg	1		✖	6010C	Total/NA
Lead	14		0.86	0.26	mg/Kg	1		✖	6010C	Total/NA
Tin	1.8	J B	9.5	0.87	mg/Kg	1		✖	6010C	Total/NA
Zinc	51	B	2.9	0.38	mg/Kg	1		✖	6010C	Total/NA
Cadmium	0.23	J	0.48	0.039	mg/Kg	1		✖	6010C	Total/NA

Client Sample ID: NRLB-8O(0)

Lab Sample ID: 280-85941-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.1		2.0	0.66	mg/Kg	1		✖	6010C	Total/NA
Copper	19	B	2.0	0.22	mg/Kg	1		✖	6010C	Total/NA
Lead	33		0.90	0.27	mg/Kg	1		✖	6010C	Total/NA
Tin	1.8	J B	10	0.91	mg/Kg	1		✖	6010C	Total/NA
Zinc	46	B	3.0	0.40	mg/Kg	1		✖	6010C	Total/NA
Cadmium	0.27	J	0.50	0.041	mg/Kg	1		✖	6010C	Total/NA

Client Sample ID: NRLB-10O(0)

Lab Sample ID: 280-85941-11

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRLB-10O(0) (Continued)

Lab Sample ID: 280-85941-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.8		1.9	0.63	mg/Kg	1	☼	6010C	Total/NA
Copper	14	B	1.9	0.21	mg/Kg	1	☼	6010C	Total/NA
Lead	13		0.86	0.26	mg/Kg	1	☼	6010C	Total/NA
Tin	1.4	J B	9.6	0.87	mg/Kg	1	☼	6010C	Total/NA
Zinc	47	B	2.9	0.38	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.25	J	0.48	0.039	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: NRLB-11O(0)

Lab Sample ID: 280-85941-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.9		1.8	0.60	mg/Kg	1	☼	6010C	Total/NA
Copper	18	B	1.8	0.20	mg/Kg	1	☼	6010C	Total/NA
Lead	13		0.82	0.25	mg/Kg	1	☼	6010C	Total/NA
Tin	1.5	J B	9.1	0.83	mg/Kg	1	☼	6010C	Total/NA
Zinc	51	B	2.7	0.36	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.25	J	0.46	0.037	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRRF-9(6-9)

Lab Sample ID: 280-85941-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.89	J	1.4	0.35	mg/Kg	1	☼	6010C	Total/NA
Arsenic	14		1.9	0.61	mg/Kg	1	☼	6010C	Total/NA
Copper	19	B	1.9	0.20	mg/Kg	1	☼	6010C	Total/NA
Lead	150		0.83	0.25	mg/Kg	1	☼	6010C	Total/NA
Tin	1.8	J B	9.3	0.85	mg/Kg	1	☼	6010C	Total/NA
Zinc	46	B	2.8	0.37	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.23	J	0.46	0.038	mg/Kg	1	☼	6010C	Total/NA
Copper	0.060	J B	2.0	0.021	mg/L	1		6010C	TCLP
Lead	0.31	J B	0.50	0.013	mg/L	1		6010C	TCLP

Client Sample ID: SRRF-7(6-9)

Lab Sample ID: 280-85941-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	24		1.5	0.39	mg/Kg	1	☼	6010C	Total/NA
Arsenic	8.9		2.1	0.68	mg/Kg	1	☼	6010C	Total/NA
Copper	34	B	2.1	0.22	mg/Kg	1	☼	6010C	Total/NA
Lead	5800		0.93	0.28	mg/Kg	1	☼	6010C	Total/NA
Tin	8.6	J B	10	0.94	mg/Kg	1	☼	6010C	Total/NA
Zinc	41	B	3.1	0.41	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.14	J	0.52	0.042	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRLB-5I(0)

Lab Sample ID: 280-85941-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.40	J	1.4	0.36	mg/Kg	1	☼	6010C	Total/NA
Arsenic	2.8		1.9	0.63	mg/Kg	1	☼	6010C	Total/NA
Copper	31	B	1.9	0.21	mg/Kg	1	☼	6010C	Total/NA
Lead	110		0.86	0.26	mg/Kg	1	☼	6010C	Total/NA
Tin	1.6	J B	9.5	0.87	mg/Kg	1	☼	6010C	Total/NA
Zinc	47	B	2.9	0.38	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: SRLB-5I(0) (Continued)

Lab Sample ID: 280-85941-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.36	J	0.48	0.039	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRLB-6I(0)

Lab Sample ID: 280-85941-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.5		2.0	0.68	mg/Kg	1	☼	6010C	Total/NA
Copper	19	B	2.0	0.22	mg/Kg	1	☼	6010C	Total/NA
Lead	37		0.92	0.28	mg/Kg	1	☼	6010C	Total/NA
Tin	1.6	J B	10	0.93	mg/Kg	1	☼	6010C	Total/NA
Zinc	42	B	3.1	0.41	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.32	J	0.51	0.042	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRRF-6(0)

Lab Sample ID: 280-85941-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	9.2		1.4	0.35	mg/Kg	1	☼	6010C	Total/NA
Arsenic	5.2		1.8	0.61	mg/Kg	1	☼	6010C	Total/NA
Copper	160	B	1.8	0.20	mg/Kg	1	☼	6010C	Total/NA
Lead	2200		0.83	0.25	mg/Kg	1	☼	6010C	Total/NA
Tin	4.7	J B	9.2	0.84	mg/Kg	1	☼	6010C	Total/NA
Zinc	55	B	2.8	0.37	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.43	J	0.46	0.038	mg/Kg	1	☼	6010C	Total/NA
Antimony	0.27		0.20	0.016	mg/L	1		6010C	TCLP
Copper	0.84	J B	2.0	0.021	mg/L	1		6010C	TCLP
Lead	13	B	0.50	0.013	mg/L	1		6010C	TCLP
Zinc	0.25	J	2.0	0.022	mg/L	1		6010C	TCLP
Cadmium	0.0076	J	0.10	0.0020	mg/L	1		6010C	TCLP

Client Sample ID: SRRF-6(6)

Lab Sample ID: 280-85941-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.55	J	1.4	0.35	mg/Kg	1	☼	6010C	Total/NA
Arsenic	1.9		1.8	0.60	mg/Kg	1	☼	6010C	Total/NA
Copper	18	B	1.8	0.20	mg/Kg	1	☼	6010C	Total/NA
Lead	58		0.82	0.25	mg/Kg	1	☼	6010C	Total/NA
Tin	2.2	J B	9.1	0.83	mg/Kg	1	☼	6010C	Total/NA
Zinc	16	B	2.7	0.36	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.053	J	0.46	0.037	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRRF-10(0)

Lab Sample ID: 280-85941-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	3.1		1.5	0.37	mg/Kg	1	☼	6010C	Total/NA
Arsenic	15		1.9	0.64	mg/Kg	1	☼	6010C	Total/NA
Copper	21	B	1.9	0.21	mg/Kg	1	☼	6010C	Total/NA
Lead	350		0.88	0.26	mg/Kg	1	☼	6010C	Total/NA
Tin	3.0	J B	9.7	0.89	mg/Kg	1	☼	6010C	Total/NA
Zinc	64	B	2.9	0.39	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.28	J	0.49	0.040	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: SRRF-8(0)

Lab Sample ID: 280-85941-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	26		1.4	0.37	mg/Kg	1	☒	6010C	Total/NA
Arsenic	8.0		1.9	0.64	mg/Kg	1	☒	6010C	Total/NA
Copper	47	B	1.9	0.21	mg/Kg	1	☒	6010C	Total/NA
Lead	1800		0.87	0.26	mg/Kg	1	☒	6010C	Total/NA
Tin	14	B	9.6	0.88	mg/Kg	1	☒	6010C	Total/NA
Zinc	43	B	2.9	0.38	mg/Kg	1	☒	6010C	Total/NA
Cadmium	0.15	J	0.48	0.040	mg/Kg	1	☒	6010C	Total/NA

Client Sample ID: SRRF-7(0)

Lab Sample ID: 280-85941-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	1800	F2	1.5	0.39	mg/Kg	1	☒	6010C	Total/NA
Arsenic	670	F2	4.1	1.3	mg/Kg	2	☒	6010C	Total/NA
Copper	95	B F2 F1	2.0	0.22	mg/Kg	1	☒	6010C	Total/NA
Lead	55000	F2	4.6	1.4	mg/Kg	5	☒	6010C	Total/NA
Tin	78	B F1 F2	10	0.93	mg/Kg	1	☒	6010C	Total/NA
Zinc	55	F1 F2	3.1	0.41	mg/Kg	1	☒	6010C	Total/NA

Client Sample ID: SRRF-9(0)

Lab Sample ID: 280-85941-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	7.4		1.9	0.47	mg/Kg	1	☒	6010C	Total/NA
Arsenic	12		2.5	0.82	mg/Kg	1	☒	6010C	Total/NA
Copper	46	B	2.5	0.27	mg/Kg	1	☒	6010C	Total/NA
Lead	690		1.1	0.34	mg/Kg	1	☒	6010C	Total/NA
Tin	4.2	J B	12	1.1	mg/Kg	1	☒	6010C	Total/NA
Zinc	83		3.7	0.50	mg/Kg	1	☒	6010C	Total/NA
Cadmium	0.26	J	0.62	0.051	mg/Kg	1	☒	6010C	Total/NA

Client Sample ID: SRRF-3(0)

Lab Sample ID: 280-85941-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	13		1.8	0.46	mg/Kg	1	☒	6010C	Total/NA
Arsenic	3.8		2.4	0.80	mg/Kg	1	☒	6010C	Total/NA
Copper	100	B	2.4	0.26	mg/Kg	1	☒	6010C	Total/NA
Lead	2400		1.1	0.33	mg/Kg	1	☒	6010C	Total/NA
Tin	6.4	J B	12	1.1	mg/Kg	1	☒	6010C	Total/NA
Zinc	48		3.6	0.48	mg/Kg	1	☒	6010C	Total/NA
Cadmium	0.31	J	0.60	0.050	mg/Kg	1	☒	6010C	Total/NA

Client Sample ID: STRF-1(0)

Lab Sample ID: 280-85941-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	1.3	J	1.7	0.42	mg/Kg	1	☒	6010C	Total/NA
Arsenic	4.8		2.2	0.73	mg/Kg	1	☒	6010C	Total/NA
Copper	14	B	2.2	0.24	mg/Kg	1	☒	6010C	Total/NA
Lead	43		1.0	0.30	mg/Kg	1	☒	6010C	Total/NA
Tin	1.4	J B	11	1.0	mg/Kg	1	☒	6010C	Total/NA
Zinc	54		3.3	0.44	mg/Kg	1	☒	6010C	Total/NA
Cadmium	0.57		0.55	0.045	mg/Kg	1	☒	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: STRF-2(0)

Lab Sample ID: 280-85941-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	5.4		1.9	0.61	mg/Kg	1		✖	6010C	Total/NA
Copper	16	B	1.9	0.20	mg/Kg	1		✖	6010C	Total/NA
Lead	52		0.84	0.25	mg/Kg	1		✖	6010C	Total/NA
Tin	1.3	J B	9.3	0.85	mg/Kg	1		✖	6010C	Total/NA
Zinc	88		2.8	0.37	mg/Kg	1		✖	6010C	Total/NA
Cadmium	0.71		0.47	0.038	mg/Kg	1		✖	6010C	Total/NA

Client Sample ID: NRRF-5(0)

Lab Sample ID: 280-85941-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	0.44	J	1.4	0.36	mg/Kg	1		✖	6010C	Total/NA
Arsenic	6.0		1.9	0.63	mg/Kg	1		✖	6010C	Total/NA
Copper	24	B	1.9	0.21	mg/Kg	1		✖	6010C	Total/NA
Lead	29		0.86	0.26	mg/Kg	1		✖	6010C	Total/NA
Tin	1.8	J B	9.6	0.87	mg/Kg	1		✖	6010C	Total/NA
Zinc	65		2.9	0.38	mg/Kg	1		✖	6010C	Total/NA
Cadmium	0.36	J	0.48	0.039	mg/Kg	1		✖	6010C	Total/NA

Client Sample ID: NRRF-6(0)

Lab Sample ID: 280-85941-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.8		1.8	0.58	mg/Kg	1		✖	6010C	Total/NA
Copper	100	B	1.8	0.19	mg/Kg	1		✖	6010C	Total/NA
Lead	24		0.79	0.24	mg/Kg	1		✖	6010C	Total/NA
Tin	9.9	B	8.8	0.80	mg/Kg	1		✖	6010C	Total/NA
Zinc	59		2.6	0.35	mg/Kg	1		✖	6010C	Total/NA
Cadmium	0.25	J	0.44	0.036	mg/Kg	1		✖	6010C	Total/NA

Client Sample ID: NRRF-7(0)

Lab Sample ID: 280-85941-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	5.1		1.8	0.59	mg/Kg	1		✖	6010C	Total/NA
Copper	26	B	1.8	0.20	mg/Kg	1		✖	6010C	Total/NA
Lead	68		0.81	0.24	mg/Kg	1		✖	6010C	Total/NA
Tin	1.7	J B	9.0	0.82	mg/Kg	1		✖	6010C	Total/NA
Zinc	76		2.7	0.36	mg/Kg	1		✖	6010C	Total/NA
Cadmium	0.40	J	0.45	0.037	mg/Kg	1		✖	6010C	Total/NA

Client Sample ID: NRRF-3(0)

Lab Sample ID: 280-85941-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	1.0	J	1.4	0.37	mg/Kg	1		✖	6010C	Total/NA
Arsenic	1.4	J	1.9	0.63	mg/Kg	1		✖	6010C	Total/NA
Copper	11	B	1.9	0.21	mg/Kg	1		✖	6010C	Total/NA
Lead	170		0.87	0.26	mg/Kg	1		✖	6010C	Total/NA
Tin	1.4	J B	9.6	0.88	mg/Kg	1		✖	6010C	Total/NA
Zinc	15		2.9	0.38	mg/Kg	1		✖	6010C	Total/NA
Cadmium	0.074	J	0.48	0.039	mg/Kg	1		✖	6010C	Total/NA

Client Sample ID: NRRF-9(0)

Lab Sample ID: 280-85941-30

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRRF-9(0) (Continued)

Lab Sample ID: 280-85941-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.9		1.9	0.64	mg/Kg	1		✱	6010C	Total/NA
Copper	16	B	1.9	0.21	mg/Kg	1		✱	6010C	Total/NA
Lead	18		0.87	0.26	mg/Kg	1		✱	6010C	Total/NA
Tin	1.6	J B	9.7	0.88	mg/Kg	1		✱	6010C	Total/NA
Zinc	54		2.9	0.39	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.28	J	0.48	0.040	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRLB-14I(0)

Lab Sample ID: 280-85941-31

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	5.2		1.9	0.62	mg/Kg	1		✱	6010C	Total/NA
Copper	19	B	1.9	0.20	mg/Kg	1		✱	6010C	Total/NA
Lead	17		0.84	0.25	mg/Kg	1		✱	6010C	Total/NA
Tin	1.3	J B	9.4	0.86	mg/Kg	1		✱	6010C	Total/NA
Zinc	59		2.8	0.37	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.33	J	0.47	0.038	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRLB-13I(0)

Lab Sample ID: 280-85941-32

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	5.3		1.8	0.61	mg/Kg	1		✱	6010C	Total/NA
Copper	19	B	1.8	0.20	mg/Kg	1		✱	6010C	Total/NA
Lead	17		0.83	0.25	mg/Kg	1		✱	6010C	Total/NA
Tin	1.5	J B	9.2	0.84	mg/Kg	1		✱	6010C	Total/NA
Zinc	59		2.8	0.37	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.35	J	0.46	0.038	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRLB-12I(0)

Lab Sample ID: 280-85941-33

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	5.2		2.1	0.68	mg/Kg	1		✱	6010C	Total/NA
Copper	20	B	2.1	0.22	mg/Kg	1		✱	6010C	Total/NA
Lead	33		0.92	0.28	mg/Kg	1		✱	6010C	Total/NA
Tin	1.9	J B	10	0.94	mg/Kg	1		✱	6010C	Total/NA
Zinc	63		3.1	0.41	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.31	J	0.51	0.042	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRLB-11I(0)

Lab Sample ID: 280-85941-34

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	2.5		1.7	0.56	mg/Kg	1		✱	6010C	Total/NA
Copper	17	B	1.7	0.18	mg/Kg	1		✱	6010C	Total/NA
Lead	11		0.76	0.23	mg/Kg	1		✱	6010C	Total/NA
Tin	1.5	J B	8.5	0.77	mg/Kg	1		✱	6010C	Total/NA
Zinc	51		2.5	0.34	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.22	J	0.42	0.035	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRLB-10I(0)

Lab Sample ID: 280-85941-35

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRLB-10I(0) (Continued)

Lab Sample ID: 280-85941-35

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.1		1.8	0.58	mg/Kg	1		✱	6010C	Total/NA
Copper	19	B	1.8	0.19	mg/Kg	1		✱	6010C	Total/NA
Lead	24		0.79	0.24	mg/Kg	1		✱	6010C	Total/NA
Tin	1.5	J B	8.8	0.80	mg/Kg	1		✱	6010C	Total/NA
Zinc	55		2.6	0.35	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.32	J	0.44	0.036	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRLB-14O(0)

Lab Sample ID: 280-85941-36

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.2		1.7	0.55	mg/Kg	1		✱	6010C	Total/NA
Copper	17	B	1.7	0.18	mg/Kg	1		✱	6010C	Total/NA
Lead	11		0.75	0.23	mg/Kg	1		✱	6010C	Total/NA
Tin	1.3	J B	8.4	0.76	mg/Kg	1		✱	6010C	Total/NA
Zinc	50		2.5	0.33	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.29	J	0.42	0.034	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRLB-13O(0)

Lab Sample ID: 280-85941-37

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.3		1.8	0.60	mg/Kg	1		✱	6010C	Total/NA
Copper	17	B	1.8	0.20	mg/Kg	1		✱	6010C	Total/NA
Lead	12		0.81	0.24	mg/Kg	1		✱	6010C	Total/NA
Tin	1.6	J B	9.0	0.82	mg/Kg	1		✱	6010C	Total/NA
Zinc	52		2.7	0.36	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.27	J	0.45	0.037	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRLB-12O(0)

Lab Sample ID: 280-85941-38

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	6.2		1.8	0.58	mg/Kg	1		✱	6010C	Total/NA
Copper	21	B	1.8	0.19	mg/Kg	1		✱	6010C	Total/NA
Lead	20		0.80	0.24	mg/Kg	1		✱	6010C	Total/NA
Tin	1.7	J B	8.9	0.81	mg/Kg	1		✱	6010C	Total/NA
Zinc	66		2.7	0.35	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.35	J	0.44	0.036	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: DUPE-4

Lab Sample ID: 280-85941-39

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.1		1.9	0.61	mg/Kg	1		✱	6010C	Total/NA
Copper	22	B	1.9	0.20	mg/Kg	1		✱	6010C	Total/NA
Lead	28		0.84	0.25	mg/Kg	1		✱	6010C	Total/NA
Tin	2.0	J B	9.3	0.85	mg/Kg	1		✱	6010C	Total/NA
Zinc	59		2.8	0.37	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.26	J	0.46	0.038	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: DUPE-5

Lab Sample ID: 280-85941-40

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: DUPE-5 (Continued)

Lab Sample ID: 280-85941-40

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	7.2		1.5	0.37	mg/Kg	1		☼	6010C	Total/NA
Arsenic	5.0		2.0	0.65	mg/Kg	1		☼	6010C	Total/NA
Copper	36	B	2.0	0.21	mg/Kg	1		☼	6010C	Total/NA
Lead	1000		0.88	0.27	mg/Kg	1		☼	6010C	Total/NA
Tin	6.5	J B	9.8	0.90	mg/Kg	1		☼	6010C	Total/NA
Zinc	39		2.9	0.39	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.11	J	0.49	0.040	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: RINSE-5

Lab Sample ID: 280-85941-41

No Detections.

Client Sample ID: RINSE-6

Lab Sample ID: 280-85941-42

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Method Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-85941-1	NRLB-7O(0)	Solid	07/21/16 09:20	07/21/16 14:50
280-85941-2	NRLB-6O(0)	Solid	07/21/16 09:25	07/21/16 14:50
280-85941-3	NRLB-5O(0)	Solid	07/21/16 09:30	07/21/16 14:50
280-85941-4	NRLB-5O(3)	Solid	07/21/16 09:40	07/21/16 14:50
280-85941-5	NRIB-4(0)	Solid	07/21/16 09:45	07/21/16 14:50
280-85941-6	NRIB-5(0)	Solid	07/21/16 10:15	07/21/16 14:50
280-85941-7	NRLB-9I(0)	Solid	07/21/16 10:20	07/21/16 14:50
280-85941-8	NRLB-9O(0)	Solid	07/21/16 10:25	07/21/16 14:50
280-85941-9	NRLB-8I(0)	Solid	07/21/16 10:35	07/21/16 14:50
280-85941-10	NRLB-8O(0)	Solid	07/21/16 10:40	07/21/16 14:50
280-85941-11	NRLB-10O(0)	Solid	07/21/16 11:10	07/21/16 14:50
280-85941-12	NRLB-11O(0)	Solid	07/21/16 11:15	07/21/16 14:50
280-85941-13	SRRF-9(6-9)	Solid	07/21/16 13:00	07/21/16 14:50
280-85941-14	SRRF-7(6-9)	Solid	07/21/16 13:05	07/21/16 14:50
280-85941-15	SRLB-5I(0)	Solid	07/21/16 07:35	07/21/16 14:50
280-85941-16	SRLB-6I(0)	Solid	07/21/16 07:30	07/21/16 14:50
280-85941-17	SRRF-6(0)	Solid	07/21/16 07:40	07/21/16 14:50
280-85941-18	SRRF-6(6)	Solid	07/21/16 07:45	07/21/16 14:50
280-85941-19	SRRF-10(0)	Solid	07/21/16 07:40	07/21/16 14:50
280-85941-20	SRRF-8(0)	Solid	07/21/16 07:45	07/21/16 14:50
280-85941-21	SRRF-7(0)	Solid	07/21/16 07:50	07/21/16 14:50
280-85941-22	SRRF-9(0)	Solid	07/21/16 07:50	07/21/16 14:50
280-85941-23	SRRF-3(0)	Solid	07/21/16 07:55	07/21/16 14:50
280-85941-24	STRF-1(0)	Solid	07/21/16 08:15	07/21/16 14:50
280-85941-25	STRF-2(0)	Solid	07/21/16 08:30	07/21/16 14:50
280-85941-26	NRRF-5(0)	Solid	07/21/16 09:15	07/21/16 14:50
280-85941-27	NRRF-6(0)	Solid	07/21/16 09:20	07/21/16 14:50
280-85941-28	NRRF-7(0)	Solid	07/21/16 09:30	07/21/16 14:50
280-85941-29	NRRF-3(0)	Solid	07/21/16 09:35	07/21/16 14:50
280-85941-30	NRRF-9(0)	Solid	07/21/16 09:40	07/21/16 14:50
280-85941-31	NRLB-14I(0)	Solid	07/21/16 09:55	07/21/16 14:50
280-85941-32	NRLB-13I(0)	Solid	07/21/16 10:00	07/21/16 14:50
280-85941-33	NRLB-12I(0)	Solid	07/21/16 10:10	07/21/16 14:50
280-85941-34	NRLB-11I(0)	Solid	07/21/16 10:20	07/21/16 14:50
280-85941-35	NRLB-10I(0)	Solid	07/21/16 10:30	07/21/16 14:50
280-85941-36	NRLB-14O(0)	Solid	07/21/16 11:10	07/21/16 14:50
280-85941-37	NRLB-13O(0)	Solid	07/21/16 11:15	07/21/16 14:50
280-85941-38	NRLB-12O(0)	Solid	07/21/16 11:25	07/21/16 14:50
280-85941-39	DUPE-4	Solid	07/21/16 00:00	07/21/16 14:50
280-85941-40	DUPE-5	Solid	07/21/16 00:00	07/21/16 14:50
280-85941-41	RINSE-5	Water	07/21/16 14:00	07/21/16 14:50
280-85941-42	RINSE-6	Water	07/21/16 14:00	07/21/16 14:50

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010B - Metals (ICP)

Client Sample ID: RINSE-5
Date Collected: 07/21/16 14:00
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-41
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		5.0	0.45	ug/L		07/26/16 08:10	07/29/16 03:30	1
Antimony	ND		20	3.1	ug/L		07/26/16 08:10	07/30/16 12:51	1
Arsenic	ND		15	4.4	ug/L		07/26/16 08:10	07/29/16 03:30	1
Copper	ND		15	4.2	ug/L		07/26/16 08:10	07/29/16 03:30	1
Lead	ND		9.0	2.6	ug/L		07/26/16 08:10	07/29/16 03:30	1
Zinc	ND		20	4.5	ug/L		07/26/16 08:10	07/29/16 03:30	1
Tin	ND		100	5.8	ug/L		07/26/16 08:10	07/29/16 03:30	1

Client Sample ID: RINSE-6
Date Collected: 07/21/16 14:00
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-42
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		5.0	0.45	ug/L		07/26/16 08:10	07/29/16 03:42	1
Antimony	ND		20	3.1	ug/L		07/26/16 08:10	07/30/16 12:53	1
Arsenic	ND		15	4.4	ug/L		07/26/16 08:10	07/29/16 03:42	1
Copper	ND		15	4.2	ug/L		07/26/16 08:10	07/29/16 03:42	1
Lead	ND		9.0	2.6	ug/L		07/26/16 08:10	07/29/16 03:42	1
Zinc	ND		20	4.5	ug/L		07/26/16 08:10	07/30/16 12:53	1
Tin	ND		100	5.8	ug/L		07/26/16 08:10	07/29/16 03:42	1

Method: 6010C - Metals (ICP)

Client Sample ID: NRLB-70(0)
Date Collected: 07/21/16 09:20
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-1
Matrix: Solid
Percent Solids: 98.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 02:24	1
Arsenic	2.8		1.9	0.64	mg/Kg	☼	07/26/16 08:10	07/29/16 14:58	1
Copper	9.2	B	1.9	0.21	mg/Kg	☼	07/26/16 08:10	07/29/16 02:24	1
Lead	7.6		0.87	0.26	mg/Kg	☼	07/26/16 08:10	07/29/16 02:24	1
Tin	1.3	J B	9.7	0.88	mg/Kg	☼	07/26/16 08:10	07/29/16 02:24	1
Zinc	31	B	2.9	0.39	mg/Kg	☼	07/26/16 08:10	07/29/16 02:24	1
Cadmium	0.17	J	0.48	0.040	mg/Kg	☼	07/26/16 08:10	07/29/16 02:24	1

Client Sample ID: NRLB-60(0)
Date Collected: 07/21/16 09:25
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-2
Matrix: Solid
Percent Solids: 97.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.35	mg/Kg	☼	07/26/16 08:10	07/29/16 02:36	1
Arsenic	2.7		1.9	0.62	mg/Kg	☼	07/26/16 08:10	07/29/16 15:11	1
Copper	12	B	1.9	0.20	mg/Kg	☼	07/26/16 08:10	07/29/16 02:36	1
Lead	12		0.84	0.25	mg/Kg	☼	07/26/16 08:10	07/29/16 02:36	1
Tin	1.4	J B	9.3	0.85	mg/Kg	☼	07/26/16 08:10	07/29/16 02:36	1
Zinc	35	B	2.8	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 02:36	1
Cadmium	0.16	J	0.47	0.038	mg/Kg	☼	07/26/16 08:10	07/29/16 02:36	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010C - Metals (ICP)

Client Sample ID: NRLB-50(0)
Date Collected: 07/21/16 09:30
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-3
Matrix: Solid
Percent Solids: 98.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.4		1.3	0.33	mg/Kg	☼	07/26/16 08:10	07/29/16 02:39	1
Arsenic	3.2		1.7	0.58	mg/Kg	☼	07/26/16 08:10	07/29/16 15:13	1
Copper	66	B	1.7	0.19	mg/Kg	☼	07/26/16 08:10	07/29/16 02:39	1
Lead	290		0.79	0.24	mg/Kg	☼	07/26/16 08:10	07/29/16 02:39	1
Tin	4.3	J B	8.7	0.80	mg/Kg	☼	07/26/16 08:10	07/29/16 02:39	1
Zinc	38	B	2.6	0.35	mg/Kg	☼	07/26/16 08:10	07/29/16 02:39	1
Cadmium	0.27	J	0.44	0.036	mg/Kg	☼	07/26/16 08:10	07/29/16 02:39	1

Client Sample ID: NRLB-50(3)
Date Collected: 07/21/16 09:40
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-4
Matrix: Solid
Percent Solids: 97.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 02:42	1
Arsenic	2.8		1.9	0.64	mg/Kg	☼	07/26/16 08:10	07/29/16 15:16	1
Copper	15	B	1.9	0.21	mg/Kg	☼	07/26/16 08:10	07/29/16 02:42	1
Lead	35		0.87	0.26	mg/Kg	☼	07/26/16 08:10	07/29/16 02:42	1
Tin	1.6	J B	9.6	0.88	mg/Kg	☼	07/26/16 08:10	07/29/16 02:42	1
Zinc	41	B	2.9	0.38	mg/Kg	☼	07/26/16 08:10	07/29/16 02:42	1
Cadmium	0.17	J	0.48	0.040	mg/Kg	☼	07/26/16 08:10	07/29/16 02:42	1

Client Sample ID: NRIB-4(0)
Date Collected: 07/21/16 09:45
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-5
Matrix: Solid
Percent Solids: 93.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.39	mg/Kg	☼	07/26/16 08:10	07/29/16 02:55	1
Arsenic	2.4		2.0	0.68	mg/Kg	☼	07/26/16 08:10	07/29/16 15:28	1
Copper	21	B	2.0	0.22	mg/Kg	☼	07/26/16 08:10	07/29/16 02:55	1
Lead	42		0.92	0.28	mg/Kg	☼	07/26/16 08:10	07/29/16 02:55	1
Tin	2.4	J B	10	0.93	mg/Kg	☼	07/26/16 08:10	07/29/16 02:55	1
Zinc	54	B	3.1	0.41	mg/Kg	☼	07/26/16 08:10	07/29/16 02:55	1
Cadmium	0.32	J	0.51	0.042	mg/Kg	☼	07/26/16 08:10	07/29/16 02:55	1

Client Sample ID: NRIB-5(0)
Date Collected: 07/21/16 10:15
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-6
Matrix: Solid
Percent Solids: 98.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 02:58	1
Arsenic	3.8		1.9	0.64	mg/Kg	☼	07/26/16 08:10	07/29/16 15:31	1
Copper	43	B	1.9	0.21	mg/Kg	☼	07/26/16 08:10	07/29/16 02:58	1
Lead	57		0.87	0.26	mg/Kg	☼	07/26/16 08:10	07/29/16 02:58	1
Tin	3.6	J B	9.6	0.88	mg/Kg	☼	07/26/16 08:10	07/29/16 02:58	1
Zinc	48	B	2.9	0.38	mg/Kg	☼	07/26/16 08:10	07/29/16 02:58	1
Cadmium	0.25	J	0.48	0.039	mg/Kg	☼	07/26/16 08:10	07/29/16 02:58	1

Client Sample ID: NRLB-9I(0)
Date Collected: 07/21/16 10:20
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-7
Matrix: Solid
Percent Solids: 97.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.37	J	1.3	0.34	mg/Kg	☼	07/26/16 08:10	07/29/16 03:01	1
Arsenic	4.2		1.8	0.59	mg/Kg	☼	07/26/16 08:10	07/29/16 15:34	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: NRLB-9I(0)
Date Collected: 07/21/16 10:20
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-7
Matrix: Solid
Percent Solids: 97.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	3400	B	8.9	0.97	mg/Kg	☼	07/26/16 08:10	07/30/16 10:56	5
Lead	45		0.80	0.24	mg/Kg	☼	07/26/16 08:10	07/29/16 03:01	1
Tin	260	B	8.9	0.81	mg/Kg	☼	07/26/16 08:10	07/29/16 03:01	1
Zinc	69	B	2.7	0.35	mg/Kg	☼	07/26/16 08:10	07/29/16 03:01	1
Cadmium	0.37	J	0.45	0.037	mg/Kg	☼	07/26/16 08:10	07/29/16 03:01	1

Client Sample ID: NRLB-9O(0)
Date Collected: 07/21/16 10:25
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-8
Matrix: Solid
Percent Solids: 96.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.34	mg/Kg	☼	07/26/16 08:10	07/29/16 03:03	1
Arsenic	4.7		1.8	0.60	mg/Kg	☼	07/26/16 08:10	07/29/16 15:36	1
Copper	36	B	1.8	0.20	mg/Kg	☼	07/26/16 08:10	07/29/16 03:03	1
Lead	36		0.82	0.24	mg/Kg	☼	07/26/16 08:10	07/29/16 03:03	1
Tin	2.1	J B	9.1	0.83	mg/Kg	☼	07/26/16 08:10	07/29/16 03:03	1
Zinc	100	B	2.7	0.36	mg/Kg	☼	07/26/16 08:10	07/29/16 03:03	1
Cadmium	0.57		0.45	0.037	mg/Kg	☼	07/26/16 08:10	07/29/16 03:03	1

Client Sample ID: NRLB-8I(0)
Date Collected: 07/21/16 10:35
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-9
Matrix: Solid
Percent Solids: 97.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.36	mg/Kg	☼	07/26/16 08:10	07/29/16 03:06	1
Arsenic	3.8		1.9	0.63	mg/Kg	☼	07/26/16 08:10	07/29/16 15:39	1
Copper	17	B	1.9	0.21	mg/Kg	☼	07/26/16 08:10	07/29/16 03:06	1
Lead	14		0.86	0.26	mg/Kg	☼	07/26/16 08:10	07/29/16 03:06	1
Tin	1.8	J B	9.5	0.87	mg/Kg	☼	07/26/16 08:10	07/29/16 03:06	1
Zinc	51	B	2.9	0.38	mg/Kg	☼	07/26/16 08:10	07/29/16 03:06	1
Cadmium	0.23	J	0.48	0.039	mg/Kg	☼	07/26/16 08:10	07/29/16 03:06	1

Client Sample ID: NRLB-8O(0)
Date Collected: 07/21/16 10:40
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-10
Matrix: Solid
Percent Solids: 95.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg	☼	07/26/16 08:10	07/29/16 03:09	1
Arsenic	3.1		2.0	0.66	mg/Kg	☼	07/26/16 08:10	07/29/16 15:42	1
Copper	19	B	2.0	0.22	mg/Kg	☼	07/26/16 08:10	07/29/16 03:09	1
Lead	33		0.90	0.27	mg/Kg	☼	07/26/16 08:10	07/29/16 03:09	1
Tin	1.8	J B	10	0.91	mg/Kg	☼	07/26/16 08:10	07/29/16 03:09	1
Zinc	46	B	3.0	0.40	mg/Kg	☼	07/26/16 08:10	07/29/16 03:09	1
Cadmium	0.27	J	0.50	0.041	mg/Kg	☼	07/26/16 08:10	07/29/16 03:09	1

Client Sample ID: NRLB-10O(0)
Date Collected: 07/21/16 11:10
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-11
Matrix: Solid
Percent Solids: 99.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.36	mg/Kg	☼	07/26/16 08:10	07/29/16 03:11	1
Arsenic	3.8		1.9	0.63	mg/Kg	☼	07/26/16 08:10	07/29/16 15:44	1
Copper	14	B	1.9	0.21	mg/Kg	☼	07/26/16 08:10	07/29/16 03:11	1
Lead	13		0.86	0.26	mg/Kg	☼	07/26/16 08:10	07/29/16 03:11	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: NRLB-100(0)
Date Collected: 07/21/16 11:10
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-11
Matrix: Solid
Percent Solids: 99.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tin	1.4	J B	9.6	0.87	mg/Kg	☼	07/26/16 08:10	07/29/16 03:11	1
Zinc	47	B	2.9	0.38	mg/Kg	☼	07/26/16 08:10	07/29/16 03:11	1
Cadmium	0.25	J	0.48	0.039	mg/Kg	☼	07/26/16 08:10	07/29/16 03:11	1

Client Sample ID: NRLB-110(0)
Date Collected: 07/21/16 11:15
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-12
Matrix: Solid
Percent Solids: 97.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.35	mg/Kg	☼	07/26/16 08:10	07/29/16 03:14	1
Arsenic	2.9		1.8	0.60	mg/Kg	☼	07/26/16 08:10	07/29/16 15:47	1
Copper	18	B	1.8	0.20	mg/Kg	☼	07/26/16 08:10	07/29/16 03:14	1
Lead	13		0.82	0.25	mg/Kg	☼	07/26/16 08:10	07/29/16 03:14	1
Tin	1.5	J B	9.1	0.83	mg/Kg	☼	07/26/16 08:10	07/29/16 03:14	1
Zinc	51	B	2.7	0.36	mg/Kg	☼	07/26/16 08:10	07/29/16 03:14	1
Cadmium	0.25	J	0.46	0.037	mg/Kg	☼	07/26/16 08:10	07/29/16 03:14	1

Client Sample ID: SRRF-9(6-9)
Date Collected: 07/21/16 13:00
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-13
Matrix: Solid
Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.89	J	1.4	0.35	mg/Kg	☼	07/26/16 08:10	07/29/16 03:16	1
Arsenic	14		1.9	0.61	mg/Kg	☼	07/26/16 08:10	07/29/16 15:49	1
Copper	19	B	1.9	0.20	mg/Kg	☼	07/26/16 08:10	07/29/16 03:16	1
Lead	150		0.83	0.25	mg/Kg	☼	07/26/16 08:10	07/29/16 03:16	1
Tin	1.8	J B	9.3	0.85	mg/Kg	☼	07/26/16 08:10	07/29/16 03:16	1
Zinc	46	B	2.8	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 03:16	1
Cadmium	0.23	J	0.46	0.038	mg/Kg	☼	07/26/16 08:10	07/29/16 03:16	1

Client Sample ID: SRRF-7(6-9)
Date Collected: 07/21/16 13:05
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-14
Matrix: Solid
Percent Solids: 87.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	24		1.5	0.39	mg/Kg	☼	07/26/16 08:10	07/29/16 03:19	1
Arsenic	8.9		2.1	0.68	mg/Kg	☼	07/26/16 08:10	07/29/16 15:52	1
Copper	34	B	2.1	0.22	mg/Kg	☼	07/26/16 08:10	07/29/16 03:19	1
Lead	5800		0.93	0.28	mg/Kg	☼	07/26/16 08:10	07/29/16 03:19	1
Tin	8.6	J B	10	0.94	mg/Kg	☼	07/26/16 08:10	07/29/16 03:19	1
Zinc	41	B	3.1	0.41	mg/Kg	☼	07/26/16 08:10	07/29/16 03:19	1
Cadmium	0.14	J	0.52	0.042	mg/Kg	☼	07/26/16 08:10	07/29/16 03:19	1

Client Sample ID: SRLB-5I(0)
Date Collected: 07/21/16 07:35
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-15
Matrix: Solid
Percent Solids: 94.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.40	J	1.4	0.36	mg/Kg	☼	07/26/16 08:10	07/29/16 03:32	1
Arsenic	2.8		1.9	0.63	mg/Kg	☼	07/26/16 08:10	07/29/16 21:13	1
Copper	31	B	1.9	0.21	mg/Kg	☼	07/26/16 08:10	07/29/16 03:32	1
Lead	110		0.86	0.26	mg/Kg	☼	07/26/16 08:10	07/29/16 03:32	1
Tin	1.6	J B	9.5	0.87	mg/Kg	☼	07/26/16 08:10	07/29/16 03:32	1
Zinc	47	B	2.9	0.38	mg/Kg	☼	07/26/16 08:10	07/29/16 03:32	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: SRLB-5I(0)
Date Collected: 07/21/16 07:35
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-15
Matrix: Solid
Percent Solids: 94.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.36	J	0.48	0.039	mg/Kg	☼	07/26/16 08:10	07/29/16 03:32	1

Client Sample ID: SRLB-6I(0)
Date Collected: 07/21/16 07:30
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-16
Matrix: Solid
Percent Solids: 95.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.39	mg/Kg	☼	07/26/16 08:10	07/29/16 03:35	1
Arsenic	3.5		2.0	0.68	mg/Kg	☼	07/26/16 08:10	07/29/16 21:15	1
Copper	19	B	2.0	0.22	mg/Kg	☼	07/26/16 08:10	07/29/16 03:35	1
Lead	37		0.92	0.28	mg/Kg	☼	07/26/16 08:10	07/29/16 03:35	1
Tin	1.6	J B	10	0.93	mg/Kg	☼	07/26/16 08:10	07/29/16 03:35	1
Zinc	42	B	3.1	0.41	mg/Kg	☼	07/26/16 08:10	07/29/16 03:35	1
Cadmium	0.32	J	0.51	0.042	mg/Kg	☼	07/26/16 08:10	07/29/16 03:35	1

Client Sample ID: SRRF-6(0)
Date Collected: 07/21/16 07:40
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-17
Matrix: Solid
Percent Solids: 97.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	9.2		1.4	0.35	mg/Kg	☼	07/26/16 08:10	07/29/16 03:37	1
Arsenic	5.2		1.8	0.61	mg/Kg	☼	07/26/16 08:10	07/29/16 21:18	1
Copper	160	B	1.8	0.20	mg/Kg	☼	07/26/16 08:10	07/29/16 03:37	1
Lead	2200		0.83	0.25	mg/Kg	☼	07/26/16 08:10	07/29/16 03:37	1
Tin	4.7	J B	9.2	0.84	mg/Kg	☼	07/26/16 08:10	07/29/16 03:37	1
Zinc	55	B	2.8	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 03:37	1
Cadmium	0.43	J	0.46	0.038	mg/Kg	☼	07/26/16 08:10	07/29/16 03:37	1

Client Sample ID: SRRF-6(6)
Date Collected: 07/21/16 07:45
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-18
Matrix: Solid
Percent Solids: 98.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.55	J	1.4	0.35	mg/Kg	☼	07/26/16 08:10	07/29/16 03:40	1
Arsenic	1.9		1.8	0.60	mg/Kg	☼	07/26/16 08:10	07/29/16 21:20	1
Copper	18	B	1.8	0.20	mg/Kg	☼	07/26/16 08:10	07/29/16 03:40	1
Lead	58		0.82	0.25	mg/Kg	☼	07/26/16 08:10	07/29/16 03:40	1
Tin	2.2	J B	9.1	0.83	mg/Kg	☼	07/26/16 08:10	07/29/16 03:40	1
Zinc	16	B	2.7	0.36	mg/Kg	☼	07/26/16 08:10	07/29/16 03:40	1
Cadmium	0.053	J	0.46	0.037	mg/Kg	☼	07/26/16 08:10	07/29/16 03:40	1

Client Sample ID: SRRF-10(0)
Date Collected: 07/21/16 07:40
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-19
Matrix: Solid
Percent Solids: 93.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.1		1.5	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 03:42	1
Arsenic	15		1.9	0.64	mg/Kg	☼	07/26/16 08:10	07/29/16 21:23	1
Copper	21	B	1.9	0.21	mg/Kg	☼	07/26/16 08:10	07/29/16 03:42	1
Lead	350		0.88	0.26	mg/Kg	☼	07/26/16 08:10	07/29/16 03:42	1
Tin	3.0	J B	9.7	0.89	mg/Kg	☼	07/26/16 08:10	07/29/16 03:42	1
Zinc	64	B	2.9	0.39	mg/Kg	☼	07/26/16 08:10	07/29/16 03:42	1
Cadmium	0.28	J	0.49	0.040	mg/Kg	☼	07/26/16 08:10	07/29/16 03:42	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010C - Metals (ICP)

Client Sample ID: SRRF-8(0)
Date Collected: 07/21/16 07:45
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-20
Matrix: Solid
Percent Solids: 97.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	26		1.4	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 03:45	1
Arsenic	8.0		1.9	0.64	mg/Kg	☼	07/26/16 08:10	07/29/16 21:25	1
Copper	47	B	1.9	0.21	mg/Kg	☼	07/26/16 08:10	07/29/16 03:45	1
Lead	1800		0.87	0.26	mg/Kg	☼	07/26/16 08:10	07/29/16 03:45	1
Tin	14	B	9.6	0.88	mg/Kg	☼	07/26/16 08:10	07/29/16 03:45	1
Zinc	43	B	2.9	0.38	mg/Kg	☼	07/26/16 08:10	07/29/16 03:45	1
Cadmium	0.15	J	0.48	0.040	mg/Kg	☼	07/26/16 08:10	07/29/16 03:45	1

Client Sample ID: SRRF-7(0)
Date Collected: 07/21/16 07:50
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-21
Matrix: Solid
Percent Solids: 92.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1800	F2	1.5	0.39	mg/Kg	☼	07/26/16 08:10	07/29/16 04:03	1
Arsenic	670	F2	4.1	1.3	mg/Kg	☼	07/26/16 08:10	07/29/16 12:08	2
Copper	95	B F2 F1	2.0	0.22	mg/Kg	☼	07/26/16 08:10	07/29/16 04:03	1
Lead	55000	F2	4.6	1.4	mg/Kg	☼	07/26/16 08:10	07/29/16 12:20	5
Tin	78	B F1 F2	10	0.93	mg/Kg	☼	07/26/16 08:10	07/29/16 04:03	1
Zinc	55	F1 F2	3.1	0.41	mg/Kg	☼	07/26/16 08:10	07/29/16 04:03	1
Cadmium	ND	L F2	1.0	0.084	mg/Kg	☼	07/26/16 08:10	07/29/16 12:08	2

Client Sample ID: SRRF-9(0)
Date Collected: 07/21/16 07:50
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-22
Matrix: Solid
Percent Solids: 75.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	7.4		1.9	0.47	mg/Kg	☼	07/26/16 08:10	07/29/16 04:15	1
Arsenic	12		2.5	0.82	mg/Kg	☼	07/26/16 08:10	07/29/16 04:15	1
Copper	46	B	2.5	0.27	mg/Kg	☼	07/26/16 08:10	07/29/16 04:15	1
Lead	690		1.1	0.34	mg/Kg	☼	07/26/16 08:10	07/29/16 04:15	1
Tin	4.2	J B	12	1.1	mg/Kg	☼	07/26/16 08:10	07/29/16 04:15	1
Zinc	83		3.7	0.50	mg/Kg	☼	07/26/16 08:10	07/29/16 04:15	1
Cadmium	0.26	J	0.62	0.051	mg/Kg	☼	07/26/16 08:10	07/29/16 04:15	1

Client Sample ID: SRRF-3(0)
Date Collected: 07/21/16 07:55
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-23
Matrix: Solid
Percent Solids: 71.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	13		1.8	0.46	mg/Kg	☼	07/26/16 08:10	07/29/16 04:18	1
Arsenic	3.8		2.4	0.80	mg/Kg	☼	07/26/16 08:10	07/29/16 04:18	1
Copper	100	B	2.4	0.26	mg/Kg	☼	07/26/16 08:10	07/29/16 04:18	1
Lead	2400		1.1	0.33	mg/Kg	☼	07/26/16 08:10	07/29/16 04:18	1
Tin	6.4	J B	12	1.1	mg/Kg	☼	07/26/16 08:10	07/29/16 04:18	1
Zinc	48		3.6	0.48	mg/Kg	☼	07/26/16 08:10	07/29/16 04:18	1
Cadmium	0.31	J	0.60	0.050	mg/Kg	☼	07/26/16 08:10	07/29/16 04:18	1

Client Sample ID: STRF-1(0)
Date Collected: 07/21/16 08:15
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-24
Matrix: Solid
Percent Solids: 85.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.3	J	1.7	0.42	mg/Kg	☼	07/26/16 08:10	07/29/16 04:20	1
Arsenic	4.8		2.2	0.73	mg/Kg	☼	07/26/16 08:10	07/29/16 04:20	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: STRF-1(0)
Date Collected: 07/21/16 08:15
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-24
Matrix: Solid
Percent Solids: 85.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	14	B	2.2	0.24	mg/Kg	☼	07/26/16 08:10	07/29/16 04:20	1
Lead	43		1.0	0.30	mg/Kg	☼	07/26/16 08:10	07/29/16 04:20	1
Tin	1.4	J B	11	1.0	mg/Kg	☼	07/26/16 08:10	07/29/16 04:20	1
Zinc	54		3.3	0.44	mg/Kg	☼	07/26/16 08:10	07/29/16 04:20	1
Cadmium	0.57		0.55	0.045	mg/Kg	☼	07/26/16 08:10	07/29/16 04:20	1

Client Sample ID: STRF-2(0)
Date Collected: 07/21/16 08:30
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-25
Matrix: Solid
Percent Solids: 96.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.35	mg/Kg	☼	07/26/16 08:10	07/29/16 04:34	1
Arsenic	5.4		1.9	0.61	mg/Kg	☼	07/26/16 08:10	07/29/16 04:34	1
Copper	16	B	1.9	0.20	mg/Kg	☼	07/26/16 08:10	07/29/16 04:34	1
Lead	52		0.84	0.25	mg/Kg	☼	07/26/16 08:10	07/29/16 04:34	1
Tin	1.3	J B	9.3	0.85	mg/Kg	☼	07/26/16 08:10	07/29/16 04:34	1
Zinc	88		2.8	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 04:34	1
Cadmium	0.71		0.47	0.038	mg/Kg	☼	07/26/16 08:10	07/29/16 04:34	1

Client Sample ID: NRRF-5(0)
Date Collected: 07/21/16 09:15
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-26
Matrix: Solid
Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.44	J	1.4	0.36	mg/Kg	☼	07/26/16 08:10	07/29/16 04:36	1
Arsenic	6.0		1.9	0.63	mg/Kg	☼	07/26/16 08:10	07/29/16 04:36	1
Copper	24	B	1.9	0.21	mg/Kg	☼	07/26/16 08:10	07/29/16 04:36	1
Lead	29		0.86	0.26	mg/Kg	☼	07/26/16 08:10	07/29/16 04:36	1
Tin	1.8	J B	9.6	0.87	mg/Kg	☼	07/26/16 08:10	07/29/16 04:36	1
Zinc	65		2.9	0.38	mg/Kg	☼	07/26/16 08:10	07/29/16 04:36	1
Cadmium	0.36	J	0.48	0.039	mg/Kg	☼	07/26/16 08:10	07/29/16 04:36	1

Client Sample ID: NRRF-6(0)
Date Collected: 07/21/16 09:20
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-27
Matrix: Solid
Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.33	mg/Kg	☼	07/26/16 08:10	07/29/16 04:39	1
Arsenic	3.8		1.8	0.58	mg/Kg	☼	07/26/16 08:10	07/29/16 04:39	1
Copper	100	B	1.8	0.19	mg/Kg	☼	07/26/16 08:10	07/29/16 04:39	1
Lead	24		0.79	0.24	mg/Kg	☼	07/26/16 08:10	07/29/16 04:39	1
Tin	9.9	B	8.8	0.80	mg/Kg	☼	07/26/16 08:10	07/29/16 04:39	1
Zinc	59		2.6	0.35	mg/Kg	☼	07/26/16 08:10	07/29/16 04:39	1
Cadmium	0.25	J	0.44	0.036	mg/Kg	☼	07/26/16 08:10	07/29/16 04:39	1

Client Sample ID: NRRF-7(0)
Date Collected: 07/21/16 09:30
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-28
Matrix: Solid
Percent Solids: 95.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.34	mg/Kg	☼	07/26/16 08:10	07/29/16 04:42	1
Arsenic	5.1		1.8	0.59	mg/Kg	☼	07/26/16 08:10	07/29/16 04:42	1
Copper	26	B	1.8	0.20	mg/Kg	☼	07/26/16 08:10	07/29/16 04:42	1
Lead	68		0.81	0.24	mg/Kg	☼	07/26/16 08:10	07/29/16 04:42	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: NRRF-7(0)
Date Collected: 07/21/16 09:30
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-28
Matrix: Solid
Percent Solids: 95.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tin	1.7	J B	9.0	0.82	mg/Kg	☼	07/26/16 08:10	07/29/16 04:42	1
Zinc	76		2.7	0.36	mg/Kg	☼	07/26/16 08:10	07/29/16 04:42	1
Cadmium	0.40	J	0.45	0.037	mg/Kg	☼	07/26/16 08:10	07/29/16 04:42	1

Client Sample ID: NRRF-3(0)
Date Collected: 07/21/16 09:35
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-29
Matrix: Solid
Percent Solids: 98.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.0	J	1.4	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 04:45	1
Arsenic	1.4	J	1.9	0.63	mg/Kg	☼	07/26/16 08:10	07/29/16 04:45	1
Copper	11	B	1.9	0.21	mg/Kg	☼	07/26/16 08:10	07/29/16 04:45	1
Lead	170		0.87	0.26	mg/Kg	☼	07/26/16 08:10	07/29/16 04:45	1
Tin	1.4	J B	9.6	0.88	mg/Kg	☼	07/26/16 08:10	07/29/16 04:45	1
Zinc	15		2.9	0.38	mg/Kg	☼	07/26/16 08:10	07/29/16 04:45	1
Cadmium	0.074	J	0.48	0.039	mg/Kg	☼	07/26/16 08:10	07/29/16 04:45	1

Client Sample ID: NRRF-9(0)
Date Collected: 07/21/16 09:40
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-30
Matrix: Solid
Percent Solids: 93.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 04:48	1
Arsenic	4.9		1.9	0.64	mg/Kg	☼	07/26/16 08:10	07/29/16 04:48	1
Copper	16	B	1.9	0.21	mg/Kg	☼	07/26/16 08:10	07/29/16 04:48	1
Lead	18		0.87	0.26	mg/Kg	☼	07/26/16 08:10	07/29/16 04:48	1
Tin	1.6	J B	9.7	0.88	mg/Kg	☼	07/26/16 08:10	07/29/16 04:48	1
Zinc	54		2.9	0.39	mg/Kg	☼	07/26/16 08:10	07/29/16 04:48	1
Cadmium	0.28	J	0.48	0.040	mg/Kg	☼	07/26/16 08:10	07/29/16 04:48	1

Client Sample ID: NRLB-14I(0)
Date Collected: 07/21/16 09:55
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-31
Matrix: Solid
Percent Solids: 97.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.36	mg/Kg	☼	07/26/16 08:10	07/29/16 04:50	1
Arsenic	5.2		1.9	0.62	mg/Kg	☼	07/26/16 08:10	07/29/16 04:50	1
Copper	19	B	1.9	0.20	mg/Kg	☼	07/26/16 08:10	07/29/16 04:50	1
Lead	17		0.84	0.25	mg/Kg	☼	07/26/16 08:10	07/29/16 04:50	1
Tin	1.3	J B	9.4	0.86	mg/Kg	☼	07/26/16 08:10	07/29/16 04:50	1
Zinc	59		2.8	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 04:50	1
Cadmium	0.33	J	0.47	0.038	mg/Kg	☼	07/26/16 08:10	07/29/16 04:50	1

Client Sample ID: NRLB-13I(0)
Date Collected: 07/21/16 10:00
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-32
Matrix: Solid
Percent Solids: 99.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.35	mg/Kg	☼	07/26/16 08:10	07/29/16 04:54	1
Arsenic	5.3		1.8	0.61	mg/Kg	☼	07/26/16 08:10	07/29/16 04:54	1
Copper	19	B	1.8	0.20	mg/Kg	☼	07/26/16 08:10	07/29/16 04:54	1
Lead	17		0.83	0.25	mg/Kg	☼	07/26/16 08:10	07/29/16 04:54	1
Tin	1.5	J B	9.2	0.84	mg/Kg	☼	07/26/16 08:10	07/29/16 04:54	1
Zinc	59		2.8	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 04:54	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: NRLB-13I(0)
Date Collected: 07/21/16 10:00
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-32
Matrix: Solid
Percent Solids: 99.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.35	J	0.46	0.038	mg/Kg	☼	07/26/16 08:10	07/29/16 04:54	1

Client Sample ID: NRLB-12I(0)
Date Collected: 07/21/16 10:10
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-33
Matrix: Solid
Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.39	mg/Kg	☼	07/26/16 08:10	07/29/16 04:57	1
Arsenic	5.2		2.1	0.68	mg/Kg	☼	07/26/16 08:10	07/29/16 04:57	1
Copper	20	B	2.1	0.22	mg/Kg	☼	07/26/16 08:10	07/29/16 04:57	1
Lead	33		0.92	0.28	mg/Kg	☼	07/26/16 08:10	07/29/16 04:57	1
Tin	1.9	J B	10	0.94	mg/Kg	☼	07/26/16 08:10	07/29/16 04:57	1
Zinc	63		3.1	0.41	mg/Kg	☼	07/26/16 08:10	07/29/16 04:57	1
Cadmium	0.31	J	0.51	0.042	mg/Kg	☼	07/26/16 08:10	07/29/16 04:57	1

Client Sample ID: NRLB-11I(0)
Date Collected: 07/21/16 10:20
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-34
Matrix: Solid
Percent Solids: 97.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.32	mg/Kg	☼	07/26/16 08:10	07/29/16 04:59	1
Arsenic	2.5		1.7	0.56	mg/Kg	☼	07/26/16 08:10	07/29/16 04:59	1
Copper	17	B	1.7	0.18	mg/Kg	☼	07/26/16 08:10	07/29/16 04:59	1
Lead	11		0.76	0.23	mg/Kg	☼	07/26/16 08:10	07/29/16 04:59	1
Tin	1.5	J B	8.5	0.77	mg/Kg	☼	07/26/16 08:10	07/29/16 04:59	1
Zinc	51		2.5	0.34	mg/Kg	☼	07/26/16 08:10	07/29/16 04:59	1
Cadmium	0.22	J	0.42	0.035	mg/Kg	☼	07/26/16 08:10	07/29/16 04:59	1

Client Sample ID: NRLB-10I(0)
Date Collected: 07/21/16 10:30
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-35
Matrix: Solid
Percent Solids: 95.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.33	mg/Kg	☼	07/26/16 08:10	07/29/16 05:13	1
Arsenic	4.1		1.8	0.58	mg/Kg	☼	07/26/16 08:10	07/29/16 05:13	1
Copper	19	B	1.8	0.19	mg/Kg	☼	07/26/16 08:10	07/29/16 05:13	1
Lead	24		0.79	0.24	mg/Kg	☼	07/26/16 08:10	07/29/16 05:13	1
Tin	1.5	J B	8.8	0.80	mg/Kg	☼	07/26/16 08:10	07/29/16 05:13	1
Zinc	55		2.6	0.35	mg/Kg	☼	07/26/16 08:10	07/29/16 05:13	1
Cadmium	0.32	J	0.44	0.036	mg/Kg	☼	07/26/16 08:10	07/29/16 05:13	1

Client Sample ID: NRLB-14O(0)
Date Collected: 07/21/16 11:10
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-36
Matrix: Solid
Percent Solids: 97.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.32	mg/Kg	☼	07/26/16 08:10	07/29/16 05:15	1
Arsenic	3.2		1.7	0.55	mg/Kg	☼	07/26/16 08:10	07/29/16 05:15	1
Copper	17	B	1.7	0.18	mg/Kg	☼	07/26/16 08:10	07/29/16 05:15	1
Lead	11		0.75	0.23	mg/Kg	☼	07/26/16 08:10	07/29/16 05:15	1
Tin	1.3	J B	8.4	0.76	mg/Kg	☼	07/26/16 08:10	07/29/16 05:15	1
Zinc	50		2.5	0.33	mg/Kg	☼	07/26/16 08:10	07/29/16 05:15	1
Cadmium	0.29	J	0.42	0.034	mg/Kg	☼	07/26/16 08:10	07/29/16 05:15	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010C - Metals (ICP)

Client Sample ID: NRLB-130(0)

Date Collected: 07/21/16 11:15

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-37

Matrix: Solid

Percent Solids: 95.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.34	mg/Kg	☼	07/26/16 08:10	07/29/16 05:19	1
Arsenic	3.3		1.8	0.60	mg/Kg	☼	07/26/16 08:10	07/29/16 05:19	1
Copper	17	B	1.8	0.20	mg/Kg	☼	07/26/16 08:10	07/29/16 05:19	1
Lead	12		0.81	0.24	mg/Kg	☼	07/26/16 08:10	07/29/16 05:19	1
Tin	1.6	J B	9.0	0.82	mg/Kg	☼	07/26/16 08:10	07/29/16 05:19	1
Zinc	52		2.7	0.36	mg/Kg	☼	07/26/16 08:10	07/29/16 05:19	1
Cadmium	0.27	J	0.45	0.037	mg/Kg	☼	07/26/16 08:10	07/29/16 05:19	1

Client Sample ID: NRLB-120(0)

Date Collected: 07/21/16 11:25

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-38

Matrix: Solid

Percent Solids: 98.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.34	mg/Kg	☼	07/26/16 08:10	07/29/16 05:21	1
Arsenic	6.2		1.8	0.58	mg/Kg	☼	07/26/16 08:10	07/29/16 05:21	1
Copper	21	B	1.8	0.19	mg/Kg	☼	07/26/16 08:10	07/29/16 05:21	1
Lead	20		0.80	0.24	mg/Kg	☼	07/26/16 08:10	07/29/16 05:21	1
Tin	1.7	J B	8.9	0.81	mg/Kg	☼	07/26/16 08:10	07/29/16 05:21	1
Zinc	66		2.7	0.35	mg/Kg	☼	07/26/16 08:10	07/29/16 05:21	1
Cadmium	0.35	J	0.44	0.036	mg/Kg	☼	07/26/16 08:10	07/29/16 05:21	1

Client Sample ID: DUPE-4

Date Collected: 07/21/16 00:00

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-39

Matrix: Solid

Percent Solids: 96.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.35	mg/Kg	☼	07/26/16 08:10	07/29/16 05:24	1
Arsenic	4.1		1.9	0.61	mg/Kg	☼	07/26/16 08:10	07/29/16 05:24	1
Copper	22	B	1.9	0.20	mg/Kg	☼	07/26/16 08:10	07/29/16 05:24	1
Lead	28		0.84	0.25	mg/Kg	☼	07/26/16 08:10	07/29/16 05:24	1
Tin	2.0	J B	9.3	0.85	mg/Kg	☼	07/26/16 08:10	07/29/16 05:24	1
Zinc	59		2.8	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 05:24	1
Cadmium	0.26	J	0.46	0.038	mg/Kg	☼	07/26/16 08:10	07/29/16 05:24	1

Client Sample ID: DUPE-5

Date Collected: 07/21/16 00:00

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-40

Matrix: Solid

Percent Solids: 87.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	7.2		1.5	0.37	mg/Kg	☼	07/26/16 08:10	07/29/16 05:27	1
Arsenic	5.0		2.0	0.65	mg/Kg	☼	07/26/16 08:10	07/29/16 05:27	1
Copper	36	B	2.0	0.21	mg/Kg	☼	07/26/16 08:10	07/29/16 05:27	1
Lead	1000		0.88	0.27	mg/Kg	☼	07/26/16 08:10	07/29/16 05:27	1
Tin	6.5	J B	9.8	0.90	mg/Kg	☼	07/26/16 08:10	07/29/16 05:27	1
Zinc	39		2.9	0.39	mg/Kg	☼	07/26/16 08:10	07/29/16 05:27	1
Cadmium	0.11	J	0.49	0.040	mg/Kg	☼	07/26/16 08:10	07/29/16 05:27	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010C - Metals (ICP) - TCLP

Client Sample ID: SRRF-9(6-9)
Date Collected: 07/21/16 13:00
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-13
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.20	0.016	mg/L		07/28/16 08:40	07/28/16 23:21	1
Arsenic	ND		0.50	0.022	mg/L		07/28/16 08:40	07/28/16 23:21	1
Copper	0.060	J B	2.0	0.021	mg/L		07/28/16 08:40	07/28/16 23:21	1
Lead	0.31	J B	0.50	0.013	mg/L		07/28/16 08:40	07/28/16 23:21	1
Tin	ND		0.20	0.029	mg/L		07/28/16 08:40	07/28/16 23:21	1
Zinc	ND		2.0	0.022	mg/L		07/28/16 08:40	07/28/16 23:21	1
Cadmium	ND		0.10	0.0020	mg/L		07/28/16 08:40	07/28/16 23:21	1

Client Sample ID: SRRF-6(0)
Date Collected: 07/21/16 07:40
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-17
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.27		0.20	0.016	mg/L		07/28/16 08:40	07/28/16 23:34	1
Arsenic	ND		0.50	0.022	mg/L		07/28/16 08:40	07/28/16 23:34	1
Copper	0.84	J B	2.0	0.021	mg/L		07/28/16 08:40	07/28/16 23:34	1
Lead	13	B	0.50	0.013	mg/L		07/28/16 08:40	07/28/16 23:34	1
Tin	ND		0.20	0.029	mg/L		07/28/16 08:40	07/28/16 23:34	1
Zinc	0.25	J	2.0	0.022	mg/L		07/28/16 08:40	07/28/16 23:34	1
Cadmium	0.0076	J	0.10	0.0020	mg/L		07/28/16 08:40	07/28/16 23:34	1

General Chemistry

Client Sample ID: NRLB-7O(0)
Date Collected: 07/21/16 09:20
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-1
Matrix: Solid
Percent Solids: 98.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.0		0.1	0.1	%			07/27/16 18:41	1

Client Sample ID: NRLB-6O(0)
Date Collected: 07/21/16 09:25
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-2
Matrix: Solid
Percent Solids: 97.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.4		0.1	0.1	%			07/27/16 18:41	1

Client Sample ID: NRLB-5O(0)
Date Collected: 07/21/16 09:30
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-3
Matrix: Solid
Percent Solids: 98.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.0		0.1	0.1	%			07/27/16 18:41	1

Client Sample ID: NRLB-5O(3)
Date Collected: 07/21/16 09:40
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-4
Matrix: Solid
Percent Solids: 97.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.0		0.1	0.1	%			07/27/16 18:41	1

Client Sample ID: NRIB-4(0)
Date Collected: 07/21/16 09:45
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-5
Matrix: Solid
Percent Solids: 93.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.3		0.1	0.1	%			07/27/16 18:41	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRIB-5(0)
Date Collected: 07/21/16 10:15
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-6
Matrix: Solid
Percent Solids: 98.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.7		0.1	0.1	%			07/27/16 18:41	1

Client Sample ID: NRLB-9I(0)
Date Collected: 07/21/16 10:20
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-7
Matrix: Solid
Percent Solids: 97.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.4		0.1	0.1	%			07/27/16 18:41	1

Client Sample ID: NRLB-9O(0)
Date Collected: 07/21/16 10:25
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-8
Matrix: Solid
Percent Solids: 96.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.2		0.1	0.1	%			07/27/16 18:41	1

Client Sample ID: NRLB-8I(0)
Date Collected: 07/21/16 10:35
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-9
Matrix: Solid
Percent Solids: 97.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.3		0.1	0.1	%			07/27/16 18:41	1

Client Sample ID: NRLB-8O(0)
Date Collected: 07/21/16 10:40
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-10
Matrix: Solid
Percent Solids: 95.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.2		0.1	0.1	%			07/27/16 18:41	1

Client Sample ID: NRLB-10O(0)
Date Collected: 07/21/16 11:10
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-11
Matrix: Solid
Percent Solids: 99.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.7		0.1	0.1	%			07/27/16 18:41	1

Client Sample ID: NRLB-11O(0)
Date Collected: 07/21/16 11:15
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-12
Matrix: Solid
Percent Solids: 97.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.7		0.1	0.1	%			07/27/16 18:41	1

Client Sample ID: SRRF-9(6-9)
Date Collected: 07/21/16 13:00
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-13
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.3		0.1	0.1	%			07/27/16 18:41	1

Client Sample ID: SRRF-7(6-9)
Date Collected: 07/21/16 13:05
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-14
Matrix: Solid
Percent Solids: 87.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12.6		0.1	0.1	%			07/27/16 18:41	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

General Chemistry

Client Sample ID: SRLB-5I(0)
Date Collected: 07/21/16 07:35
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-15
Matrix: Solid
Percent Solids: 94.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.7		0.1	0.1	%	-		07/27/16 18:41	1

Client Sample ID: SRLB-6I(0)
Date Collected: 07/21/16 07:30
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-16
Matrix: Solid
Percent Solids: 95.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.7		0.1	0.1	%	-		07/27/16 18:41	1

Client Sample ID: SRRF-6(0)
Date Collected: 07/21/16 07:40
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-17
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.2		0.1	0.1	%	-		07/27/16 18:41	1

Client Sample ID: SRRF-6(6)
Date Collected: 07/21/16 07:45
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-18
Matrix: Solid
Percent Solids: 98.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.6		0.1	0.1	%	-		07/27/16 18:41	1

Client Sample ID: SRRF-10(0)
Date Collected: 07/21/16 07:40
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-19
Matrix: Solid
Percent Solids: 93.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.5		0.1	0.1	%	-		07/27/16 18:41	1

Client Sample ID: SRRF-8(0)
Date Collected: 07/21/16 07:45
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-20
Matrix: Solid
Percent Solids: 97.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.5		0.1	0.1	%	-		07/27/16 18:41	1

Client Sample ID: SRRF-7(0)
Date Collected: 07/21/16 07:50
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-21
Matrix: Solid
Percent Solids: 92.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	7.8		0.1	0.1	%	-		07/27/16 11:50	1

Client Sample ID: SRRF-9(0)
Date Collected: 07/21/16 07:50
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-22
Matrix: Solid
Percent Solids: 75.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	24.5		0.1	0.1	%	-		07/27/16 11:50	1

Client Sample ID: SRRF-3(0)
Date Collected: 07/21/16 07:55
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-23
Matrix: Solid
Percent Solids: 71.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	28.7		0.1	0.1	%	-		07/27/16 11:50	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

General Chemistry

Client Sample ID: STRF-1(0)
Date Collected: 07/21/16 08:15
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-24
Matrix: Solid
Percent Solids: 85.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	14.4		0.1	0.1	%	-		07/27/16 11:50	1

Client Sample ID: STRF-2(0)
Date Collected: 07/21/16 08:30
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-25
Matrix: Solid
Percent Solids: 96.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.6		0.1	0.1	%	-		07/27/16 11:50	1

Client Sample ID: NRRF-5(0)
Date Collected: 07/21/16 09:15
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-26
Matrix: Solid
Percent Solids: 96.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.7		0.1	0.1	%	-		07/27/16 11:50	1

Client Sample ID: NRRF-6(0)
Date Collected: 07/21/16 09:20
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-27
Matrix: Solid
Percent Solids: 95.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.3		0.1	0.1	%	-		07/27/16 11:50	1

Client Sample ID: NRRF-7(0)
Date Collected: 07/21/16 09:30
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-28
Matrix: Solid
Percent Solids: 95.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.4		0.1	0.1	%	-		07/27/16 11:50	1

Client Sample ID: NRRF-3(0)
Date Collected: 07/21/16 09:35
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-29
Matrix: Solid
Percent Solids: 98.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.5		0.1	0.1	%	-		07/27/16 11:50	1

Client Sample ID: NRRF-9(0)
Date Collected: 07/21/16 09:40
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-30
Matrix: Solid
Percent Solids: 93.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	6.6		0.1	0.1	%	-		07/27/16 11:50	1

Client Sample ID: NRLB-14I(0)
Date Collected: 07/21/16 09:55
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-31
Matrix: Solid
Percent Solids: 97.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.8		0.1	0.1	%	-		07/27/16 11:50	1

Client Sample ID: NRLB-13I(0)
Date Collected: 07/21/16 10:00
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-32
Matrix: Solid
Percent Solids: 99.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.3		0.1	0.1	%	-		07/27/16 11:50	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

General Chemistry

Client Sample ID: NRLB-12I(0)
Date Collected: 07/21/16 10:10
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-33
Matrix: Solid
Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.3		0.1	0.1	%			07/27/16 11:50	1

Client Sample ID: NRLB-11I(0)
Date Collected: 07/21/16 10:20
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-34
Matrix: Solid
Percent Solids: 97.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.8		0.1	0.1	%			07/27/16 11:50	1

Client Sample ID: NRLB-10I(0)
Date Collected: 07/21/16 10:30
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-35
Matrix: Solid
Percent Solids: 95.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.7		0.1	0.1	%			07/27/16 11:50	1

Client Sample ID: NRLB-14O(0)
Date Collected: 07/21/16 11:10
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-36
Matrix: Solid
Percent Solids: 97.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.5		0.1	0.1	%			07/27/16 11:50	1

Client Sample ID: NRLB-13O(0)
Date Collected: 07/21/16 11:15
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-37
Matrix: Solid
Percent Solids: 95.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.4		0.1	0.1	%			07/27/16 11:50	1

Client Sample ID: NRLB-12O(0)
Date Collected: 07/21/16 11:25
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-38
Matrix: Solid
Percent Solids: 98.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.7		0.1	0.1	%			07/27/16 11:50	1

Client Sample ID: DUPE-4
Date Collected: 07/21/16 00:00
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-39
Matrix: Solid
Percent Solids: 96.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.6		0.1	0.1	%			07/27/16 11:50	1

Client Sample ID: DUPE-5
Date Collected: 07/21/16 00:00
Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-40
Matrix: Solid
Percent Solids: 87.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12.9		0.1	0.1	%			07/27/16 11:50	1

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 280-334886/1-A

Matrix: Water

Analysis Batch: 335635

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 334886

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		5.0	0.45	ug/L		07/26/16 08:10	07/29/16 03:11	1
Arsenic	ND		15	4.4	ug/L		07/26/16 08:10	07/29/16 03:11	1
Copper	ND		15	4.2	ug/L		07/26/16 08:10	07/29/16 03:11	1
Lead	ND		9.0	2.6	ug/L		07/26/16 08:10	07/29/16 03:11	1
Zinc	ND		20	4.5	ug/L		07/26/16 08:10	07/29/16 03:11	1
Tin	ND		100	5.8	ug/L		07/26/16 08:10	07/29/16 03:11	1

Lab Sample ID: MB 280-334886/1-A

Matrix: Water

Analysis Batch: 335845

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 334886

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		20	3.1	ug/L		07/26/16 08:10	07/30/16 12:37	1
Zinc	ND		20	4.5	ug/L		07/26/16 08:10	07/30/16 12:37	1

Lab Sample ID: LCS 280-334886/2-A

Matrix: Water

Analysis Batch: 335635

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 334886

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Cadmium	100	95.3		ug/L		95	88 - 111
Arsenic	1000	975		ug/L		98	88 - 110
Copper	250	238		ug/L		95	86 - 112
Lead	500	476		ug/L		95	89 - 110
Zinc	500	461		ug/L		92	85 - 111
Tin	2000	1890		ug/L		95	85 - 113

Lab Sample ID: LCS 280-334886/2-A

Matrix: Water

Analysis Batch: 335845

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 334886

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	500	506		ug/L		101	88 - 110
Zinc	500	480		ug/L		96	85 - 111

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-334895/1-A

Matrix: Solid

Analysis Batch: 335648

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 334895

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg		07/26/16 08:10	07/29/16 02:19	1
Copper	0.475	J	2.0	0.22	mg/Kg		07/26/16 08:10	07/29/16 02:19	1
Lead	ND		0.90	0.27	mg/Kg		07/26/16 08:10	07/29/16 02:19	1
Tin	1.15	J	10	0.91	mg/Kg		07/26/16 08:10	07/29/16 02:19	1
Zinc	0.575	J	3.0	0.40	mg/Kg		07/26/16 08:10	07/29/16 02:19	1
Cadmium	ND		0.50	0.041	mg/Kg		07/26/16 08:10	07/29/16 02:19	1

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 280-334895/1-A

Matrix: Solid

Analysis Batch: 335813

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 334895

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.66	mg/Kg		07/26/16 08:10	07/29/16 14:53	1

Lab Sample ID: LCS 280-334895/2-A

Matrix: Solid

Analysis Batch: 335648

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 334895

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	51.0		mg/Kg		102	82 - 110
Copper	25.0	26.6		mg/Kg		106	88 - 110
Lead	50.0	50.1		mg/Kg		100	86 - 110
Tin	200	201		mg/Kg		100	84 - 110
Zinc	50.0	50.1		mg/Kg		100	76 - 114
Cadmium	10.0	10.4		mg/Kg		104	87 - 110

Lab Sample ID: LCS 280-334895/2-A

Matrix: Solid

Analysis Batch: 335813

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 334895

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	103		mg/Kg		103	85 - 110

Lab Sample ID: 280-85941-1 MS

Matrix: Solid

Analysis Batch: 335648

Client Sample ID: NRLB-70(0)

Prep Type: Total/NA

Prep Batch: 334895

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		46.0	21.0		mg/Kg	✱	46	20 - 200
Copper	9.2	B	23.0	33.2		mg/Kg	✱	104	37 - 187
Lead	7.6		46.0	46.7		mg/Kg	✱	85	70 - 200
Tin	1.3	J B	184	153		mg/Kg	✱	82	77 - 126
Zinc	31	B	46.0	74.6		mg/Kg	✱	94	70 - 200
Cadmium	0.17	J	9.20	8.62		mg/Kg	✱	92	40 - 130

Lab Sample ID: 280-85941-1 MS

Matrix: Solid

Analysis Batch: 335813

Client Sample ID: NRLB-70(0)

Prep Type: Total/NA

Prep Batch: 334895

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	2.8		92.0	87.5		mg/Kg	✱	92	76 - 111

Lab Sample ID: 280-85941-1 MSD

Matrix: Solid

Analysis Batch: 335648

Client Sample ID: NRLB-70(0)

Prep Type: Total/NA

Prep Batch: 334895

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		48.2	22.7		mg/Kg	✱	47	20 - 200	8	20
Copper	9.2	B	24.1	33.7		mg/Kg	✱	101	37 - 187	1	20
Lead	7.6		48.2	49.5		mg/Kg	✱	87	70 - 200	6	20
Tin	1.3	J B	193	164		mg/Kg	✱	84	77 - 126	7	20

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-85941-1 MSD

Matrix: Solid

Analysis Batch: 335648

Client Sample ID: NRLB-70(0)

Prep Type: Total/NA

Prep Batch: 334895

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Zinc	31	B	48.2	76.7		mg/Kg	☼	94	70 - 200	3	20
Cadmium	0.17	J	9.65	9.18		mg/Kg	☼	93	40 - 130	6	20

Lab Sample ID: 280-85941-1 MSD

Matrix: Solid

Analysis Batch: 335813

Client Sample ID: NRLB-70(0)

Prep Type: Total/NA

Prep Batch: 334895

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	2.8		96.5	91.9		mg/Kg	☼	92	76 - 111	5	20

Lab Sample ID: MB 280-334896/1-A

Matrix: Solid

Analysis Batch: 335650

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 334896

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg		07/26/16 08:10	07/29/16 03:58	1
Arsenic	ND		2.0	0.66	mg/Kg		07/26/16 08:10	07/29/16 03:58	1
Copper	0.465	J	2.0	0.22	mg/Kg		07/26/16 08:10	07/29/16 03:58	1
Lead	ND		0.90	0.27	mg/Kg		07/26/16 08:10	07/29/16 03:58	1
Tin	1.16	J	10	0.91	mg/Kg		07/26/16 08:10	07/29/16 03:58	1
Zinc	ND		3.0	0.40	mg/Kg		07/26/16 08:10	07/29/16 03:58	1
Cadmium	ND		0.50	0.041	mg/Kg		07/26/16 08:10	07/29/16 03:58	1

Lab Sample ID: LCS 280-334896/2-A

Matrix: Solid

Analysis Batch: 335650

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 334896

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	52.3		mg/Kg		105	82 - 110
Arsenic	100	103		mg/Kg		103	85 - 110
Copper	25.0	26.5		mg/Kg		106	88 - 110
Lead	50.0	50.5		mg/Kg		101	86 - 110
Tin	200	201		mg/Kg		101	84 - 110
Zinc	50.0	49.4		mg/Kg		99	76 - 114
Cadmium	10.0	10.4		mg/Kg		104	87 - 110

Lab Sample ID: 280-85941-21 MS

Matrix: Solid

Analysis Batch: 335650

Client Sample ID: SRRF-7(0)

Prep Type: Total/NA

Prep Batch: 334896

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	1800	F2	45.8	91.6	4	mg/Kg	☼	-3641	20 - 200
Copper	95	B F2 F1	22.9	57.9	4	mg/Kg	☼	-163	37 - 187
Tin	78	B F1 F2	183	147	F1	mg/Kg	☼	38	77 - 126
Zinc	55	F1 F2	45.8	78.1	F1	mg/Kg	☼	51	70 - 200

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-85941-21 MS

Matrix: Solid

Analysis Batch: 335813

Client Sample ID: SRRF-7(0)

Prep Type: Total/NA

Prep Batch: 334896

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	670	F2	91.7	97.0	4	mg/Kg	☼	-627	76 - 111
Cadmium	ND	L F2	9.17	7.87		mg/Kg	☼	86	40 - 130

Lab Sample ID: 280-85941-21 MS

Matrix: Solid

Analysis Batch: 335813

Client Sample ID: SRRF-7(0)

Prep Type: Total/NA

Prep Batch: 334896

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	55000	F2	45.8	13000	4	mg/Kg	☼	-9275 2	70 - 200

Lab Sample ID: 280-85941-21 MSD

Matrix: Solid

Analysis Batch: 335650

Client Sample ID: SRRF-7(0)

Prep Type: Total/NA

Prep Batch: 334896

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	1800	F2	53.5	146	4 F2	mg/Kg	☼	-3017	20 - 200	46	20
Copper	95	B F2 F1	26.8	179	F1 F2	mg/Kg	☼	314	37 - 187	102	20
Tin	78	B F1 F2	214	218	F1 F2	mg/Kg	☼	66	77 - 126	39	20
Zinc	55	F1 F2	53.5	114	F2	mg/Kg	☼	110	70 - 200	37	20

Lab Sample ID: 280-85941-21 MSD

Matrix: Solid

Analysis Batch: 335813

Client Sample ID: SRRF-7(0)

Prep Type: Total/NA

Prep Batch: 334896

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	670	F2	107	138	4 F2	mg/Kg	☼	-499	76 - 111	35	20
Cadmium	ND	L F2	10.7	9.99	F2	mg/Kg	☼	93	40 - 130	24	20

Lab Sample ID: 280-85941-21 MSD

Matrix: Solid

Analysis Batch: 335813

Client Sample ID: SRRF-7(0)

Prep Type: Total/NA

Prep Batch: 334896

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	55000	F2	53.5	7280	4 F2	mg/Kg	☼	-9005 1	70 - 200	56	20

Lab Sample ID: LB 280-335267/1-D

Matrix: Solid

Analysis Batch: 335636

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 335441

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.20	0.016	mg/L		07/28/16 08:40	07/28/16 23:15	1
Arsenic	ND		0.50	0.022	mg/L		07/28/16 08:40	07/28/16 23:15	1
Copper	0.0631	J	2.0	0.021	mg/L		07/28/16 08:40	07/28/16 23:15	1
Lead	0.0344	J	0.50	0.013	mg/L		07/28/16 08:40	07/28/16 23:15	1
Tin	ND		0.20	0.029	mg/L		07/28/16 08:40	07/28/16 23:15	1
Zinc	ND		2.0	0.022	mg/L		07/28/16 08:40	07/28/16 23:15	1
Cadmium	ND		0.10	0.0020	mg/L		07/28/16 08:40	07/28/16 23:15	1

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 280-335267/2-D

Matrix: Solid

Analysis Batch: 335636

Client Sample ID: Lab Control Sample

Prep Type: TCLP

Prep Batch: 335441

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.524		mg/L		105	80 - 120
Arsenic	4.00	4.26		mg/L		107	80 - 120
Copper	2.25	2.58		mg/L		115	80 - 120
Lead	5.50	5.72		mg/L		104	80 - 120
Tin	2.00	2.02		mg/L		101	80 - 120
Zinc	2.50	2.73		mg/L		109	80 - 120
Cadmium	1.10	1.17		mg/L		107	80 - 120

Lab Sample ID: 280-85941-13 MS

Matrix: Solid

Analysis Batch: 335636

Client Sample ID: SRRF-9(6-9)

Prep Type: TCLP

Prep Batch: 335441

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		0.500	0.516		mg/L		103	80 - 120
Arsenic	ND		4.00	4.20		mg/L		105	80 - 120
Copper	0.060	J B	2.25	2.55		mg/L		111	80 - 120
Lead	0.31	J B	5.50	5.89		mg/L		101	80 - 120
Tin	ND		2.00	1.98		mg/L		99	80 - 120
Zinc	ND		2.50	2.66		mg/L		107	80 - 120
Cadmium	ND		1.10	1.16		mg/L		105	80 - 120

Lab Sample ID: 280-85941-13 MSD

Matrix: Solid

Analysis Batch: 335636

Client Sample ID: SRRF-9(6-9)

Prep Type: TCLP

Prep Batch: 335441

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		0.500	0.530		mg/L		106	80 - 120	3	20
Arsenic	ND		4.00	4.23		mg/L		106	80 - 120	1	20
Copper	0.060	J B	2.25	2.56		mg/L		111	80 - 120	0	20
Lead	0.31	J B	5.50	5.96		mg/L		103	80 - 120	1	20
Tin	ND		2.00	2.02		mg/L		101	80 - 120	2	20
Zinc	ND		2.50	2.71		mg/L		108	80 - 120	2	20
Cadmium	ND		1.10	1.18		mg/L		107	80 - 120	2	20

Method: Moisture - Percent Moisture

Lab Sample ID: 280-85941-36 DU

Matrix: Solid

Analysis Batch: 335388

Client Sample ID: NRLB-14O(0)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	2.5		2.8		%		15	20

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Metals

Prep Batch: 334886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-41	RINSE-5	Total/NA	Water	3010A	
280-85941-42	RINSE-6	Total/NA	Water	3010A	
MB 280-334886/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-334886/2-A	Lab Control Sample	Total/NA	Water	3010A	

Prep Batch: 334895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-1	NRLB-7O(0)	Total/NA	Solid	3050B	
280-85941-2	NRLB-6O(0)	Total/NA	Solid	3050B	
280-85941-3	NRLB-5O(0)	Total/NA	Solid	3050B	
280-85941-4	NRLB-5O(3)	Total/NA	Solid	3050B	
280-85941-5	NRIB-4(0)	Total/NA	Solid	3050B	
280-85941-6	NRIB-5(0)	Total/NA	Solid	3050B	
280-85941-7	NRLB-9I(0)	Total/NA	Solid	3050B	
280-85941-8	NRLB-9O(0)	Total/NA	Solid	3050B	
280-85941-9	NRLB-8I(0)	Total/NA	Solid	3050B	
280-85941-10	NRLB-8O(0)	Total/NA	Solid	3050B	
280-85941-11	NRLB-10O(0)	Total/NA	Solid	3050B	
280-85941-12	NRLB-11O(0)	Total/NA	Solid	3050B	
280-85941-13	SRRF-9(6-9)	Total/NA	Solid	3050B	
280-85941-14	SRRF-7(6-9)	Total/NA	Solid	3050B	
280-85941-15	SRLB-5I(0)	Total/NA	Solid	3050B	
280-85941-16	SRLB-6I(0)	Total/NA	Solid	3050B	
280-85941-17	SRRF-6(0)	Total/NA	Solid	3050B	
280-85941-18	SRRF-6(6)	Total/NA	Solid	3050B	
280-85941-19	SRRF-10(0)	Total/NA	Solid	3050B	
280-85941-20	SRRF-8(0)	Total/NA	Solid	3050B	
MB 280-334895/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-334895/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-85941-1 MS	NRLB-7O(0)	Total/NA	Solid	3050B	
280-85941-1 MSD	NRLB-7O(0)	Total/NA	Solid	3050B	

Prep Batch: 334896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-21	SRRF-7(0)	Total/NA	Solid	3050B	
280-85941-22	SRRF-9(0)	Total/NA	Solid	3050B	
280-85941-23	SRRF-3(0)	Total/NA	Solid	3050B	
280-85941-24	STRF-1(0)	Total/NA	Solid	3050B	
280-85941-25	STRF-2(0)	Total/NA	Solid	3050B	
280-85941-26	NRRF-5(0)	Total/NA	Solid	3050B	
280-85941-27	NRRF-6(0)	Total/NA	Solid	3050B	
280-85941-28	NRRF-7(0)	Total/NA	Solid	3050B	
280-85941-29	NRRF-3(0)	Total/NA	Solid	3050B	
280-85941-30	NRRF-9(0)	Total/NA	Solid	3050B	
280-85941-31	NRLB-14I(0)	Total/NA	Solid	3050B	
280-85941-32	NRLB-13I(0)	Total/NA	Solid	3050B	
280-85941-33	NRLB-12I(0)	Total/NA	Solid	3050B	
280-85941-34	NRLB-11I(0)	Total/NA	Solid	3050B	
280-85941-35	NRLB-10I(0)	Total/NA	Solid	3050B	
280-85941-36	NRLB-14O(0)	Total/NA	Solid	3050B	
280-85941-37	NRLB-13O(0)	Total/NA	Solid	3050B	

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Metals (Continued)

Prep Batch: 334896 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-38	NRLB-12O(0)	Total/NA	Solid	3050B	
280-85941-39	DUPE-4	Total/NA	Solid	3050B	
280-85941-40	DUPE-5	Total/NA	Solid	3050B	
MB 280-334896/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-334896/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-85941-21 MS	SRRF-7(0)	Total/NA	Solid	3050B	
280-85941-21 MSD	SRRF-7(0)	Total/NA	Solid	3050B	

Leach Batch: 335267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-13	SRRF-9(6-9)	TCLP	Solid	1311	
280-85941-17	SRRF-6(0)	TCLP	Solid	1311	
LB 280-335267/1-D	Method Blank	TCLP	Solid	1311	
LCS 280-335267/2-D	Lab Control Sample	TCLP	Solid	1311	
280-85941-13 MS	SRRF-9(6-9)	TCLP	Solid	1311	
280-85941-13 MSD	SRRF-9(6-9)	TCLP	Solid	1311	

Prep Batch: 335441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-13	SRRF-9(6-9)	TCLP	Solid	3010A	335267
280-85941-17	SRRF-6(0)	TCLP	Solid	3010A	335267
LB 280-335267/1-D	Method Blank	TCLP	Solid	3010A	335267
LCS 280-335267/2-D	Lab Control Sample	TCLP	Solid	3010A	335267
280-85941-13 MS	SRRF-9(6-9)	TCLP	Solid	3010A	335267
280-85941-13 MSD	SRRF-9(6-9)	TCLP	Solid	3010A	335267

Analysis Batch: 335635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-41	RINSE-5	Total/NA	Water	6010B	334886
280-85941-42	RINSE-6	Total/NA	Water	6010B	334886
MB 280-334886/1-A	Method Blank	Total/NA	Water	6010B	334886
LCS 280-334886/2-A	Lab Control Sample	Total/NA	Water	6010B	334886

Analysis Batch: 335636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-13	SRRF-9(6-9)	TCLP	Solid	6010C	335441
280-85941-17	SRRF-6(0)	TCLP	Solid	6010C	335441
LB 280-335267/1-D	Method Blank	TCLP	Solid	6010C	335441
LCS 280-335267/2-D	Lab Control Sample	TCLP	Solid	6010C	335441
280-85941-13 MS	SRRF-9(6-9)	TCLP	Solid	6010C	335441
280-85941-13 MSD	SRRF-9(6-9)	TCLP	Solid	6010C	335441

Analysis Batch: 335648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-1	NRLB-7O(0)	Total/NA	Solid	6010C	334895
280-85941-2	NRLB-6O(0)	Total/NA	Solid	6010C	334895
280-85941-3	NRLB-5O(0)	Total/NA	Solid	6010C	334895
280-85941-4	NRLB-5O(3)	Total/NA	Solid	6010C	334895
280-85941-5	NRIB-4(0)	Total/NA	Solid	6010C	334895
280-85941-6	NRIB-5(0)	Total/NA	Solid	6010C	334895
280-85941-7	NRLB-9I(0)	Total/NA	Solid	6010C	334895

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Metals (Continued)

Analysis Batch: 335648 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-8	NRLB-9O(0)	Total/NA	Solid	6010C	334895
280-85941-9	NRLB-8I(0)	Total/NA	Solid	6010C	334895
280-85941-10	NRLB-8O(0)	Total/NA	Solid	6010C	334895
280-85941-11	NRLB-10O(0)	Total/NA	Solid	6010C	334895
280-85941-12	NRLB-11O(0)	Total/NA	Solid	6010C	334895
280-85941-13	SRRF-9(6-9)	Total/NA	Solid	6010C	334895
280-85941-14	SRRF-7(6-9)	Total/NA	Solid	6010C	334895
280-85941-15	SRLB-5I(0)	Total/NA	Solid	6010C	334895
280-85941-16	SRLB-6I(0)	Total/NA	Solid	6010C	334895
280-85941-17	SRRF-6(0)	Total/NA	Solid	6010C	334895
280-85941-18	SRRF-6(6)	Total/NA	Solid	6010C	334895
280-85941-19	SRRF-10(0)	Total/NA	Solid	6010C	334895
280-85941-20	SRRF-8(0)	Total/NA	Solid	6010C	334895
MB 280-334895/1-A	Method Blank	Total/NA	Solid	6010C	334895
LCS 280-334895/2-A	Lab Control Sample	Total/NA	Solid	6010C	334895
280-85941-1 MS	NRLB-7O(0)	Total/NA	Solid	6010C	334895
280-85941-1 MSD	NRLB-7O(0)	Total/NA	Solid	6010C	334895

Analysis Batch: 335650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-21	SRRF-7(0)	Total/NA	Solid	6010C	334896
280-85941-22	SRRF-9(0)	Total/NA	Solid	6010C	334896
280-85941-23	SRRF-3(0)	Total/NA	Solid	6010C	334896
280-85941-24	STRF-1(0)	Total/NA	Solid	6010C	334896
280-85941-25	STRF-2(0)	Total/NA	Solid	6010C	334896
280-85941-26	NRRF-5(0)	Total/NA	Solid	6010C	334896
280-85941-27	NRRF-6(0)	Total/NA	Solid	6010C	334896
280-85941-28	NRRF-7(0)	Total/NA	Solid	6010C	334896
280-85941-29	NRRF-3(0)	Total/NA	Solid	6010C	334896
280-85941-30	NRRF-9(0)	Total/NA	Solid	6010C	334896
280-85941-31	NRLB-14I(0)	Total/NA	Solid	6010C	334896
280-85941-32	NRLB-13I(0)	Total/NA	Solid	6010C	334896
280-85941-33	NRLB-12I(0)	Total/NA	Solid	6010C	334896
280-85941-34	NRLB-11I(0)	Total/NA	Solid	6010C	334896
280-85941-35	NRLB-10I(0)	Total/NA	Solid	6010C	334896
280-85941-36	NRLB-14O(0)	Total/NA	Solid	6010C	334896
280-85941-37	NRLB-13O(0)	Total/NA	Solid	6010C	334896
280-85941-38	NRLB-12O(0)	Total/NA	Solid	6010C	334896
280-85941-39	DUPE-4	Total/NA	Solid	6010C	334896
280-85941-40	DUPE-5	Total/NA	Solid	6010C	334896
MB 280-334896/1-A	Method Blank	Total/NA	Solid	6010C	334896
LCS 280-334896/2-A	Lab Control Sample	Total/NA	Solid	6010C	334896
280-85941-21 MS	SRRF-7(0)	Total/NA	Solid	6010C	334896
280-85941-21 MSD	SRRF-7(0)	Total/NA	Solid	6010C	334896

Analysis Batch: 335813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-1	NRLB-7O(0)	Total/NA	Solid	6010C	334895
280-85941-2	NRLB-6O(0)	Total/NA	Solid	6010C	334895
280-85941-3	NRLB-5O(0)	Total/NA	Solid	6010C	334895
280-85941-4	NRLB-5O(3)	Total/NA	Solid	6010C	334895

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Metals (Continued)

Analysis Batch: 335813 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-5	NRIB-4(0)	Total/NA	Solid	6010C	334895
280-85941-6	NRIB-5(0)	Total/NA	Solid	6010C	334895
280-85941-7	NRLB-9I(0)	Total/NA	Solid	6010C	334895
280-85941-8	NRLB-9O(0)	Total/NA	Solid	6010C	334895
280-85941-9	NRLB-8I(0)	Total/NA	Solid	6010C	334895
280-85941-10	NRLB-8O(0)	Total/NA	Solid	6010C	334895
280-85941-11	NRLB-10O(0)	Total/NA	Solid	6010C	334895
280-85941-12	NRLB-11O(0)	Total/NA	Solid	6010C	334895
280-85941-13	SRRF-9(6-9)	Total/NA	Solid	6010C	334895
280-85941-14	SRRF-7(6-9)	Total/NA	Solid	6010C	334895
280-85941-21	SRRF-7(0)	Total/NA	Solid	6010C	334896
280-85941-21	SRRF-7(0)	Total/NA	Solid	6010C	334896
MB 280-334895/1-A	Method Blank	Total/NA	Solid	6010C	334895
LCS 280-334895/2-A	Lab Control Sample	Total/NA	Solid	6010C	334895
280-85941-1 MS	NRLB-7O(0)	Total/NA	Solid	6010C	334895
280-85941-1 MSD	NRLB-7O(0)	Total/NA	Solid	6010C	334895
280-85941-21 MS	SRRF-7(0)	Total/NA	Solid	6010C	334896
280-85941-21 MS	SRRF-7(0)	Total/NA	Solid	6010C	334896
280-85941-21 MSD	SRRF-7(0)	Total/NA	Solid	6010C	334896
280-85941-21 MSD	SRRF-7(0)	Total/NA	Solid	6010C	334896

Analysis Batch: 335814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-15	SRLB-5I(0)	Total/NA	Solid	6010C	334895
280-85941-16	SRLB-6I(0)	Total/NA	Solid	6010C	334895
280-85941-17	SRRF-6(0)	Total/NA	Solid	6010C	334895
280-85941-18	SRRF-6(6)	Total/NA	Solid	6010C	334895
280-85941-19	SRRF-10(0)	Total/NA	Solid	6010C	334895
280-85941-20	SRRF-8(0)	Total/NA	Solid	6010C	334895

Analysis Batch: 335839

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-7	NRLB-9I(0)	Total/NA	Solid	6010C	334895

Analysis Batch: 335845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-41	RINSE-5	Total/NA	Water	6010B	334886
280-85941-42	RINSE-6	Total/NA	Water	6010B	334886
MB 280-334886/1-A	Method Blank	Total/NA	Water	6010B	334886
LCS 280-334886/2-A	Lab Control Sample	Total/NA	Water	6010B	334886

General Chemistry

Analysis Batch: 335388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-21	SRRF-7(0)	Total/NA	Solid	Moisture	
280-85941-22	SRRF-9(0)	Total/NA	Solid	Moisture	
280-85941-23	SRRF-3(0)	Total/NA	Solid	Moisture	
280-85941-24	STRF-1(0)	Total/NA	Solid	Moisture	
280-85941-25	STRF-2(0)	Total/NA	Solid	Moisture	

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

General Chemistry (Continued)

Analysis Batch: 335388 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-26	NRRF-5(0)	Total/NA	Solid	Moisture	
280-85941-27	NRRF-6(0)	Total/NA	Solid	Moisture	
280-85941-28	NRRF-7(0)	Total/NA	Solid	Moisture	
280-85941-29	NRRF-3(0)	Total/NA	Solid	Moisture	
280-85941-30	NRRF-9(0)	Total/NA	Solid	Moisture	
280-85941-31	NRLB-14I(0)	Total/NA	Solid	Moisture	
280-85941-32	NRLB-13I(0)	Total/NA	Solid	Moisture	
280-85941-33	NRLB-12I(0)	Total/NA	Solid	Moisture	
280-85941-34	NRLB-11I(0)	Total/NA	Solid	Moisture	
280-85941-35	NRLB-10I(0)	Total/NA	Solid	Moisture	
280-85941-36	NRLB-14O(0)	Total/NA	Solid	Moisture	
280-85941-37	NRLB-13O(0)	Total/NA	Solid	Moisture	
280-85941-38	NRLB-12O(0)	Total/NA	Solid	Moisture	
280-85941-39	DUPE-4	Total/NA	Solid	Moisture	
280-85941-40	DUPE-5	Total/NA	Solid	Moisture	
280-85941-36 DU	NRLB-14O(0)	Total/NA	Solid	Moisture	

Analysis Batch: 335446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85941-1	NRLB-7O(0)	Total/NA	Solid	Moisture	
280-85941-2	NRLB-6O(0)	Total/NA	Solid	Moisture	
280-85941-3	NRLB-5O(0)	Total/NA	Solid	Moisture	
280-85941-4	NRLB-5O(3)	Total/NA	Solid	Moisture	
280-85941-5	NRIB-4(0)	Total/NA	Solid	Moisture	
280-85941-6	NRIB-5(0)	Total/NA	Solid	Moisture	
280-85941-7	NRLB-9I(0)	Total/NA	Solid	Moisture	
280-85941-8	NRLB-9O(0)	Total/NA	Solid	Moisture	
280-85941-9	NRLB-8I(0)	Total/NA	Solid	Moisture	
280-85941-10	NRLB-8O(0)	Total/NA	Solid	Moisture	
280-85941-11	NRLB-10O(0)	Total/NA	Solid	Moisture	
280-85941-12	NRLB-11O(0)	Total/NA	Solid	Moisture	
280-85941-13	SRRF-9(6-9)	Total/NA	Solid	Moisture	
280-85941-14	SRRF-7(6-9)	Total/NA	Solid	Moisture	
280-85941-15	SRLB-5I(0)	Total/NA	Solid	Moisture	
280-85941-16	SRLB-6I(0)	Total/NA	Solid	Moisture	
280-85941-17	SRRF-6(0)	Total/NA	Solid	Moisture	
280-85941-18	SRRF-6(6)	Total/NA	Solid	Moisture	
280-85941-19	SRRF-10(0)	Total/NA	Solid	Moisture	
280-85941-20	SRRF-8(0)	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRLB-7O(0)

Date Collected: 07/21/16 09:20

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: NRLB-7O(0)

Date Collected: 07/21/16 09:20

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-1

Matrix: Solid

Percent Solids: 98.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.052 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 02:24	LLB	TAL DEN
Total/NA	Prep	3050B			1.052 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335813	07/29/16 14:58	CMK	TAL DEN

Client Sample ID: NRLB-6O(0)

Date Collected: 07/21/16 09:25

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: NRLB-6O(0)

Date Collected: 07/21/16 09:25

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-2

Matrix: Solid

Percent Solids: 97.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.097 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 02:36	LLB	TAL DEN
Total/NA	Prep	3050B			1.097 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335813	07/29/16 15:11	CMK	TAL DEN

Client Sample ID: NRLB-5O(0)

Date Collected: 07/21/16 09:30

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: NRLB-5O(0)

Date Collected: 07/21/16 09:30

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-3

Matrix: Solid

Percent Solids: 98.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.168 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRLB-5O(0)

Date Collected: 07/21/16 09:30

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-3

Matrix: Solid

Percent Solids: 98.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010C		1			335648	07/29/16 02:39	LLB	TAL DEN
Total/NA	Prep	3050B			1.168 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335813	07/29/16 15:13	CMK	TAL DEN

Client Sample ID: NRLB-5O(3)

Date Collected: 07/21/16 09:40

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: NRLB-5O(3)

Date Collected: 07/21/16 09:40

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-4

Matrix: Solid

Percent Solids: 97.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.069 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 02:42	LLB	TAL DEN
Total/NA	Prep	3050B			1.069 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335813	07/29/16 15:16	CMK	TAL DEN

Client Sample ID: NRIB-4(0)

Date Collected: 07/21/16 09:45

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: NRIB-4(0)

Date Collected: 07/21/16 09:45

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-5

Matrix: Solid

Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.042 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 02:55	LLB	TAL DEN
Total/NA	Prep	3050B			1.042 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335813	07/29/16 15:28	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRIB-5(0)

Date Collected: 07/21/16 10:15

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: NRIB-5(0)

Date Collected: 07/21/16 10:15

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-6

Matrix: Solid

Percent Solids: 98.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.057 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 02:58	LLB	TAL DEN
Total/NA	Prep	3050B			1.057 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335813	07/29/16 15:31	CMK	TAL DEN

Client Sample ID: NRLB-9I(0)

Date Collected: 07/21/16 10:20

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: NRLB-9I(0)

Date Collected: 07/21/16 10:20

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-7

Matrix: Solid

Percent Solids: 97.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.149 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 03:01	LLB	TAL DEN
Total/NA	Prep	3050B			1.149 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335813	07/29/16 15:34	CMK	TAL DEN
Total/NA	Prep	3050B			1.149 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		5			335839	07/30/16 10:56	CMK	TAL DEN

Client Sample ID: NRLB-9O(0)

Date Collected: 07/21/16 10:25

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRLB-9O(0)

Date Collected: 07/21/16 10:25

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-8

Matrix: Solid

Percent Solids: 96.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.140 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 03:03	LLB	TAL DEN
Total/NA	Prep	3050B			1.140 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335813	07/29/16 15:36	CMK	TAL DEN

Client Sample ID: NRLB-8I(0)

Date Collected: 07/21/16 10:35

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: NRLB-8I(0)

Date Collected: 07/21/16 10:35

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-9

Matrix: Solid

Percent Solids: 97.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.075 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 03:06	LLB	TAL DEN
Total/NA	Prep	3050B			1.075 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335813	07/29/16 15:39	CMK	TAL DEN

Client Sample ID: NRLB-8O(0)

Date Collected: 07/21/16 10:40

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: NRLB-8O(0)

Date Collected: 07/21/16 10:40

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-10

Matrix: Solid

Percent Solids: 95.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.041 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 03:09	LLB	TAL DEN
Total/NA	Prep	3050B			1.041 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335813	07/29/16 15:42	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRLB-100(0)

Date Collected: 07/21/16 11:10

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: NRLB-100(0)

Date Collected: 07/21/16 11:10

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-11

Matrix: Solid

Percent Solids: 99.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.052 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 03:11	LLB	TAL DEN
Total/NA	Prep	3050B			1.052 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335813	07/29/16 15:44	CMK	TAL DEN

Client Sample ID: NRLB-110(0)

Date Collected: 07/21/16 11:15

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: NRLB-110(0)

Date Collected: 07/21/16 11:15

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-12

Matrix: Solid

Percent Solids: 97.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.125 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 03:14	LLB	TAL DEN
Total/NA	Prep	3050B			1.125 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335813	07/29/16 15:47	CMK	TAL DEN

Client Sample ID: SRRF-9(6-9)

Date Collected: 07/21/16 13:00

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	335267	07/26/16 18:28	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	335441	07/28/16 08:40	MLS	TAL DEN
TCLP	Analysis	6010C		1			335636	07/28/16 23:21	LLB	TAL DEN
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: SRRF-9(6-9)

Date Collected: 07/21/16 13:00

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-13

Matrix: Solid

Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.189 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 03:16	LLB	TAL DEN
Total/NA	Prep	3050B			1.189 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335813	07/29/16 15:49	CMK	TAL DEN

Client Sample ID: SRRF-7(6-9)

Date Collected: 07/21/16 13:05

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-14

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: SRRF-7(6-9)

Date Collected: 07/21/16 13:05

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-14

Matrix: Solid

Percent Solids: 87.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.107 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 03:19	LLB	TAL DEN
Total/NA	Prep	3050B			1.107 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335813	07/29/16 15:52	CMK	TAL DEN

Client Sample ID: SRLB-5I(0)

Date Collected: 07/21/16 07:35

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-15

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: SRLB-5I(0)

Date Collected: 07/21/16 07:35

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-15

Matrix: Solid

Percent Solids: 94.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.111 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 03:32	LLB	TAL DEN
Total/NA	Prep	3050B			1.111 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 21:13	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: SRLB-6I(0)

Date Collected: 07/21/16 07:30

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-16

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: SRLB-6I(0)

Date Collected: 07/21/16 07:30

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-16

Matrix: Solid

Percent Solids: 95.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.025 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 03:35	LLB	TAL DEN
Total/NA	Prep	3050B			1.025 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 21:15	CMK	TAL DEN

Client Sample ID: SRRF-6(0)

Date Collected: 07/21/16 07:40

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-17

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	335267	07/26/16 18:28	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	335441	07/28/16 08:40	MLS	TAL DEN
TCLP	Analysis	6010C		1			335636	07/28/16 23:34	LLB	TAL DEN
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: SRRF-6(0)

Date Collected: 07/21/16 07:40

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-17

Matrix: Solid

Percent Solids: 97.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.105 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 03:37	LLB	TAL DEN
Total/NA	Prep	3050B			1.105 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 21:18	CMK	TAL DEN

Client Sample ID: SRRF-6(6)

Date Collected: 07/21/16 07:45

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-18

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: SRRF-6(6)

Date Collected: 07/21/16 07:45

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-18

Matrix: Solid

Percent Solids: 98.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.117 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 03:40	LLB	TAL DEN
Total/NA	Prep	3050B			1.117 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 21:20	CMK	TAL DEN

Client Sample ID: SRRF-10(0)

Date Collected: 07/21/16 07:40

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-19

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: SRRF-10(0)

Date Collected: 07/21/16 07:40

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-19

Matrix: Solid

Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.099 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 03:42	LLB	TAL DEN
Total/NA	Prep	3050B			1.099 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 21:23	CMK	TAL DEN

Client Sample ID: SRRF-8(0)

Date Collected: 07/21/16 07:45

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-20

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335446	07/27/16 18:41	SVC	TAL DEN

Client Sample ID: SRRF-8(0)

Date Collected: 07/21/16 07:45

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-20

Matrix: Solid

Percent Solids: 97.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.064 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335648	07/29/16 03:45	LLB	TAL DEN
Total/NA	Prep	3050B			1.064 g	100 mL	334895	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335814	07/29/16 21:25	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: SRRF-7(0)

Date Collected: 07/21/16 07:50

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-21

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: SRRF-7(0)

Date Collected: 07/21/16 07:50

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-21

Matrix: Solid

Percent Solids: 92.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.063 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 04:03	LLB	TAL DEN
Total/NA	Prep	3050B			1.063 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		2			335813	07/29/16 12:08	CMK	TAL DEN
Total/NA	Prep	3050B			1.063 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		5			335813	07/29/16 12:20	CMK	TAL DEN

Client Sample ID: SRRF-9(0)

Date Collected: 07/21/16 07:50

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-22

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: SRRF-9(0)

Date Collected: 07/21/16 07:50

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-22

Matrix: Solid

Percent Solids: 75.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.060 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 04:15	LLB	TAL DEN

Client Sample ID: SRRF-3(0)

Date Collected: 07/21/16 07:55

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-23

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: SRRF-3(0)

Date Collected: 07/21/16 07:55

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-23

Matrix: Solid

Percent Solids: 71.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.161 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: SRRF-3(0)

Date Collected: 07/21/16 07:55

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-23

Matrix: Solid

Percent Solids: 71.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010C		1			335650	07/29/16 04:18	LLB	TAL DEN

Client Sample ID: STRF-1(0)

Date Collected: 07/21/16 08:15

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-24

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: STRF-1(0)

Date Collected: 07/21/16 08:15

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-24

Matrix: Solid

Percent Solids: 85.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.055 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 04:20	LLB	TAL DEN

Client Sample ID: STRF-2(0)

Date Collected: 07/21/16 08:30

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-25

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: STRF-2(0)

Date Collected: 07/21/16 08:30

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-25

Matrix: Solid

Percent Solids: 96.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.115 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 04:34	LLB	TAL DEN

Client Sample ID: NRRF-5(0)

Date Collected: 07/21/16 09:15

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-26

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRRF-5(0)

Date Collected: 07/21/16 09:15

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-26

Matrix: Solid

Percent Solids: 96.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.084 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 04:36	LLB	TAL DEN

Client Sample ID: NRRF-6(0)

Date Collected: 07/21/16 09:20

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-27

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: NRRF-6(0)

Date Collected: 07/21/16 09:20

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-27

Matrix: Solid

Percent Solids: 95.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.185 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 04:39	LLB	TAL DEN

Client Sample ID: NRRF-7(0)

Date Collected: 07/21/16 09:30

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-28

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: NRRF-7(0)

Date Collected: 07/21/16 09:30

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-28

Matrix: Solid

Percent Solids: 95.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.163 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 04:42	LLB	TAL DEN

Client Sample ID: NRRF-3(0)

Date Collected: 07/21/16 09:35

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-29

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRRF-3(0)

Date Collected: 07/21/16 09:35

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-29

Matrix: Solid

Percent Solids: 98.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.056 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 04:45	LLB	TAL DEN

Client Sample ID: NRRF-9(0)

Date Collected: 07/21/16 09:40

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-30

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: NRRF-9(0)

Date Collected: 07/21/16 09:40

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-30

Matrix: Solid

Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.107 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 04:48	LLB	TAL DEN

Client Sample ID: NRLB-14I(0)

Date Collected: 07/21/16 09:55

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-31

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: NRLB-14I(0)

Date Collected: 07/21/16 09:55

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-31

Matrix: Solid

Percent Solids: 97.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.097 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 04:50	LLB	TAL DEN

Client Sample ID: NRLB-13I(0)

Date Collected: 07/21/16 10:00

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-32

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRLB-13I(0)

Date Collected: 07/21/16 10:00

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-32

Matrix: Solid

Percent Solids: 99.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.085 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 04:54	LLB	TAL DEN

Client Sample ID: NRLB-12I(0)

Date Collected: 07/21/16 10:10

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-33

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: NRLB-12I(0)

Date Collected: 07/21/16 10:10

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-33

Matrix: Solid

Percent Solids: 96.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.008 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 04:57	LLB	TAL DEN

Client Sample ID: NRLB-11I(0)

Date Collected: 07/21/16 10:20

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-34

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: NRLB-11I(0)

Date Collected: 07/21/16 10:20

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-34

Matrix: Solid

Percent Solids: 97.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.211 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 04:59	LLB	TAL DEN

Client Sample ID: NRLB-10I(0)

Date Collected: 07/21/16 10:30

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-35

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRLB-10I(0)

Date Collected: 07/21/16 10:30

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-35

Matrix: Solid

Percent Solids: 95.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.191 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 05:13	LLB	TAL DEN

Client Sample ID: NRLB-14O(0)

Date Collected: 07/21/16 11:10

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-36

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: NRLB-14O(0)

Date Collected: 07/21/16 11:10

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-36

Matrix: Solid

Percent Solids: 97.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.224 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 05:15	LLB	TAL DEN

Client Sample ID: NRLB-13O(0)

Date Collected: 07/21/16 11:15

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-37

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: NRLB-13O(0)

Date Collected: 07/21/16 11:15

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-37

Matrix: Solid

Percent Solids: 95.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.158 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 05:19	LLB	TAL DEN

Client Sample ID: NRLB-12O(0)

Date Collected: 07/21/16 11:25

Date Received: 07/21/16 14:50

Lab Sample ID: 280-85941-38

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: NRLB-120(0)

Lab Sample ID: 280-85941-38

Date Collected: 07/21/16 11:25

Matrix: Solid

Date Received: 07/21/16 14:50

Percent Solids: 98.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.149 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 05:21	LLB	TAL DEN

Client Sample ID: DUPE-4

Lab Sample ID: 280-85941-39

Date Collected: 07/21/16 00:00

Matrix: Solid

Date Received: 07/21/16 14:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: DUPE-4

Lab Sample ID: 280-85941-39

Date Collected: 07/21/16 00:00

Matrix: Solid

Date Received: 07/21/16 14:50

Percent Solids: 96.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.117 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 05:24	LLB	TAL DEN

Client Sample ID: DUPE-5

Lab Sample ID: 280-85941-40

Date Collected: 07/21/16 00:00

Matrix: Solid

Date Received: 07/21/16 14:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335388	07/27/16 11:50	IEU	TAL DEN

Client Sample ID: DUPE-5

Lab Sample ID: 280-85941-40

Date Collected: 07/21/16 00:00

Matrix: Solid

Date Received: 07/21/16 14:50

Percent Solids: 87.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.170 g	100 mL	334896	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010C		1			335650	07/29/16 05:27	LLB	TAL DEN

Client Sample ID: RINSE-5

Lab Sample ID: 280-85941-41

Date Collected: 07/21/16 14:00

Matrix: Water

Date Received: 07/21/16 14:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	334886	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010B		1			335635	07/29/16 03:30	CRR	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	334886	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010B		1			335845	07/30/16 12:51	SJS	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Client Sample ID: RINSE-6

Lab Sample ID: 280-85941-42

Date Collected: 07/21/16 14:00

Matrix: Water

Date Received: 07/21/16 14:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	334886	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010B		1			335635	07/29/16 03:42	CRR	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	334886	07/26/16 08:10	SUR	TAL DEN
Total/NA	Analysis	6010B		1			335845	07/30/16 12:53	SJS	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-85941-1

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	4025	01-09-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture

Chain of Custody Record



Client Information Client Contact: Mr. John Dellaport Company: Quantum Water & Environment Address: 1746 Cole Boulevard, Suite 340 City: Lakewood State: CO, Zip: 80401 Phone: 720-524-4294 (Tel) Email: John@quantumwaterco.com Project Name: Adams County Shooting Range Site:		Sampler: TCB/JAL Lab PM: Kupper, Stephanie K Phone: 720-524-4294 E-Mail: stephanie.kupper@estamericainc.com		Job #: 280-85941 Chain of Custody Date: 7-21-16	
Due Date Requested: TAT Requested (days): PO #: 720-524-4294 (Tel) Purchase Order Requested WO #: Project #: 28014702 SSOW#:		Analysis Requested			
Sample Identification		Sample Date 7/21/16	Sample Time 0920	Sample Type (C=Comp, G=grab) G	Matrix (Weater, Solid, O-waste, A-Mat) S
NRLB-70(0) NRLB-60(0) NRLB-50(0) NRLB-50(3) NRLB-4(0) NRLB-5(0) NRLB-91(0) NRLB-90(0) NRLB-81(0) NRLB-80(0) NRLB-100(0)		7/21/16 0925 0930 0940 0945 1015 1020 1025 1035 1040 1110	X X X X X X X X X X X	X X X X X X X X X X X	1 1 1 1 1 1 1 1 1 1 1 1
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Method of Shipment:			
Relinquished by: <i>John Dellaport</i> Relinquished by:		Date: 7/21/16 1450		Received by: <i>SC</i> Date/Time: 7-21-16 1750 Company: TAD	
Relinquished by:		Date/Time:		Received by:	
Relinquished by:		Date/Time:		Received by:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 19.1 to 20.0 °C transferred by JT 7/21/16	

Chain of Custody Record

Client Information Client Contact: Mr. John Dellaport Company: Quantum Water & Environment Address: 1746 Cole Boulevard, Suite 340 City: Lakewood State, Zip: CO, 80401 Phone: 720-524-4294 (Tel) Email: John@quantumwaterco.com Project Name: Adams County Shooting Range Site:		Sampler: TCB/JAL Lab PM: Kupper, Stephanie K Phone: 720-524-4294 E-Mail: stephanie.kupper@testamericainc.com		Carrier Tracking No(s): COC No: 280-55183-19671.1 Page:	
Due Date Requested: TAT Requested (days): PO #: Purchase Order Requested WO #: Project #: 28014702 SSOW#:		Analysis Requested Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anichlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)			
Sample Identification Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, O=other) Preservation Code		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) EPA 6010 - Screening By GCs EPA 6010 - TCLP Total Number of containers			
NRLB-110(0) SRRF-9(6-9) SRRF-7(6-9) SALB-5F(0) SRLB-6I(0) SRRF-6(0) SRRF-6(6) SRRF-10(0) SRRF-8(0) SRRF-7(0) SRRF-9(0)		7/21/16 1115 1300 1305 0735 0730 0740 0745 0740 0745 0750 0750		G S G S S S S S S S S S	
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/OC Requirements:			
Empty Kit Relinquished by:		Method of Shipment:			
Relinquished by: [Signature] Relinquished by:		Date/Time: 7/21/16 1450 Date/Time:			
Relinquished by:		Date/Time:			
Relinquished by:		Date/Time:			
Custody Seals Intact:		Cooler Temperature(s) °C and Other Remarks:			

Chain of Custody Record

Client Information Client Contact: Mr. John Dellaport Company: Quantum Water & Environment Address: 1746 Cole Boulevard, Suite 340 City: Lakewood State: CO, Zip: 80401 Phone: 720-524-4294 (Tel) Email: John@quantumwaterco.com Project Name: Adams County Shooting Range Site:		Sampler: JTB/JAL Lab PM: Kupper, Stephanie K Phone: 720-524-4294 E-Mail: stephanie.kupper@testamericainc.com		Carrier Tracking No(s): COC No: 280-55183-19671.1 Page:		Job #:				
Due Date Requested: TAT Requested (days): PO #: Purchase Order Requested WO #: Project #: 28014702 SSOW#:		Analysis Requested								
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Weaver, Standard, Onwash/oli)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	EPA 6010 - Shooting Range	Total Number of containers	Special Instructions/Note:
NRLB-11I(0)	7/21/16	1020	G	S						
NRLB-10I(0)	7/21/16	1030								
NRLB-140(0)		1110								
NRLB-130(0)		1115								
NRLB-120(0)		1125								
DUPE-4										
DUPE-5										
RINSE-5		1400	G	W						
RINSE-6		1400	G	W						
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months								
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:								
Empty Kit Relinquished by:		Date:		Method of Shipment:		Relinquished by:				
Relinquished by:		Date/Time: 7/21/16 1450		Received by:		Date/Time: 7-21-16 1930				
Relinquished by:		Date/Time:		Received by:		Date/Time:				
Relinquished by:		Date/Time:		Received by:		Date/Time:				
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Company:				

Login Sample Receipt Checklist

Client: Quantum Water & Environment

Job Number: 280-85941-1

Login Number: 85941

List Number: 1

Creator: True, Joshua A

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
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.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	False	Refer to Job Narrative for details.
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-86004-1

Client Project/Site: Adams County Shooting Range

For:

Quantum Water & Environment

1746 Cole Boulevard, Suite 340

Lakewood, Colorado 80401

Attn: Mr. John Dellaport



Authorized for release by:

8/10/2016 4:43:15 PM

Stephanie Kupper, Project Manager I

(303)736-0182

stephanie.kupper@testamericainc.com

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

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

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



Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	6
Method Summary	13
Sample Summary	14
Client Sample Results	15
QC Sample Results	28
QC Association	33
Chronicle	39
Certification Summary	53
Chain of Custody	54
Receipt Checklists	58

Definitions/Glossary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
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.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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)

Case Narrative

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Job ID: 280-86004-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Quantum Water & Environment

Project: Adams County Shooting Range

Report Number: 280-86004-1

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

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

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

RECEIPT

The samples were received on 7/22/2016 at 3:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 37.1° C.

There were no labels, times, dates, or ID's written on the caps of the received containers. Also, the laboratory did not receive sample SRSF-3A(0), but did receive SRSF-2A(0) with the time and date that matched sample SRSF-3A(0).

The container label for sample SRSF-3(0) did not match the time listed on the Chain-of-Custody (COC). The container label listed the date for sample SRSF-3(0) as 1532 while the COC listed it as 1350.

All samples were received at the laboratory outside the required temperature criteria at an elevated temperature of 37.1 degrees Celsius. The samples are considered acceptable since they were collected and submitted to the laboratory on the same day on ice and there is evidence that the chilling process has begun.

TOTAL METALS

Samples RINSE-7 (280-86004-33) and RINSE-8 (280-86004-34) were analyzed for total metals in accordance with EPA SW-846 Method 6010B. The samples were prepared on 07/29/2016 and analyzed on 08/01/2016.

Antimony was detected in method blank MB 280-335594/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

TCLP METALS

Samples SRSF-3(0) (280-86004-12) and SRSF-4(0) (280-86004-13) were analyzed for TCLP Metals in accordance with EPA SW-846 Method 1311/6010C. The samples were leached on 07/26/2016, prepared on 07/29/2016 and analyzed on 08/04/2016 and 08/05/2016.

Lead and Copper were detected in method blank LB 280-335267/1-E 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. Refer to the QC report for details.

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

TOTAL METALS (ICP)

Case Narrative

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Job ID: 280-86004-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

Samples SRSF-3C(0) (280-86004-1), SRSF-3D(0) (280-86004-2), SRSF-3E(0) (280-86004-3), SRSF-3C(3) (280-86004-4), SRSF-3E(3) (280-86004-5), SRSF-4NW(0) (280-86004-6), SRSF-4C(0) (280-86004-7), SRSF-4NE(0) (280-86004-8), SRSF-4SE(0) (280-86004-9), SRSF-4E(0) (280-86004-10), NRSF-24 (280-86004-11), SRSF-3(0) (280-86004-12), SRSF-4(0) (280-86004-13), SRSF-5(0) (280-86004-14), SRSF-6(0) (280-86004-15), SRSF-7(0) (280-86004-16), SRSF-8(0) (280-86004-17), SRSF-9(0) (280-86004-18), SRSF-2(0) (280-86004-19), SRSF-1(0) (280-86004-20), SRSF-3A(0) (280-86004-21), SRSF-3B(0) (280-86004-22), NRSF-17 (280-86004-23), NRSF-16 (280-86004-24), NRSF-1 (280-86004-25), NRSF-15 (280-86004-26), NRSF-23 (280-86004-27), NRSF-14 (280-86004-28), NRSF-18 (280-86004-29), NRSF-20 (280-86004-30), NRSF-19 (280-86004-31) and DUPE-6 (280-86004-32) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 07/29/2016 and 08/05/2016 and analyzed on 08/02/2016, 08/03/2016 and 08/06/2016.

Lead was detected in method blank MB 280-335600/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Cadmium was detected in method blank MB 280-335600/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Cadmium, Zinc and Lead were detected in method blank MB 280-335601/1-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. Refer to the QC report for details.

Antimony exceeded the RPD limit for the MSD of sample SRSF-8(0) (280-86004-17) in batch 280-336112. Refer to the QC report for details.

Tin and Zinc failed the recovery criteria low for the MS of sample SRSF-3C(0) (280-86004-1) in batch 280-336231. Antimony and Lead failed the recovery criteria high. Lead failed the recovery criteria low for the MSD of sample SRSF-3C(0) (280-86004-1) in batch 280-336231. Antimony and Lead exceeded the RPD limit. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

Samples SRSF-4NW(0) (280-86004-6)[10X], SRSF-4NW(0) (280-86004-6)[500X] and NRSF-20 (280-86004-30)[5X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

The low level continuing calibration verification (CCVL) associated with batch 280-336231 recovered above the upper control limit for Pb. The samples associated with this CCVL had Pb results greater than 10x the RL and are thus controlled to the CCV; therefore, the data have been reported.

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

PERCENT SOLIDS

Samples SRSF-3C(0) (280-86004-1), SRSF-3D(0) (280-86004-2), SRSF-3E(0) (280-86004-3), SRSF-3C(3) (280-86004-4), SRSF-3E(3) (280-86004-5), SRSF-4NW(0) (280-86004-6), SRSF-4C(0) (280-86004-7), SRSF-4NE(0) (280-86004-8), SRSF-4SE(0) (280-86004-9), SRSF-4E(0) (280-86004-10), NRSF-24 (280-86004-11), SRSF-3(0) (280-86004-12), SRSF-4(0) (280-86004-13), SRSF-5(0) (280-86004-14), SRSF-6(0) (280-86004-15), SRSF-7(0) (280-86004-16), SRSF-8(0) (280-86004-17), SRSF-9(0) (280-86004-18), SRSF-2(0) (280-86004-19), SRSF-1(0) (280-86004-20), SRSF-3A(0) (280-86004-21), SRSF-3B(0) (280-86004-22), NRSF-17 (280-86004-23), NRSF-16 (280-86004-24), NRSF-1 (280-86004-25), NRSF-15 (280-86004-26), NRSF-23 (280-86004-27), NRSF-14 (280-86004-28), NRSF-18 (280-86004-29), NRSF-20 (280-86004-30), NRSF-19 (280-86004-31) and DUPE-6 (280-86004-32) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 08/01/2016.

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

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: SRSF-3C(0)

Lab Sample ID: 280-86004-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.58	J F1 F2	1.4	0.36	mg/Kg	1	☼	6010C	Total/NA
Arsenic	6.3		1.9	0.63	mg/Kg	1	☼	6010C	Total/NA
Copper	20		1.9	0.21	mg/Kg	1	☼	6010C	Total/NA
Lead	340	F2 B ^	0.86	0.26	mg/Kg	1	☼	6010C	Total/NA
Tin	2.0	J F1	9.6	0.87	mg/Kg	1	☼	6010C	Total/NA
Zinc	64	F1	2.9	0.38	mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.4	B	0.48	0.039	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRSF-3D(0)

Lab Sample ID: 280-86004-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	6.5		1.5	0.50	mg/Kg	1	☼	6010C	Total/NA
Copper	11		1.5	0.16	mg/Kg	1	☼	6010C	Total/NA
Lead	72	^ B	0.68	0.20	mg/Kg	1	☼	6010C	Total/NA
Tin	0.93	J	7.6	0.69	mg/Kg	1	☼	6010C	Total/NA
Zinc	33		2.3	0.30	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.43	B	0.38	0.031	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRSF-3E(0)

Lab Sample ID: 280-86004-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.7		1.7	0.55	mg/Kg	1	☼	6010C	Total/NA
Copper	19		1.7	0.18	mg/Kg	1	☼	6010C	Total/NA
Lead	260	B ^	0.76	0.23	mg/Kg	1	☼	6010C	Total/NA
Tin	1.4	J	8.4	0.77	mg/Kg	1	☼	6010C	Total/NA
Zinc	66		2.5	0.33	mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.6	B	0.42	0.034	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRSF-3C(3)

Lab Sample ID: 280-86004-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	9.3		2.0	0.66	mg/Kg	1	☼	6010C	Total/NA
Copper	13		2.0	0.22	mg/Kg	1	☼	6010C	Total/NA
Lead	38	B ^	0.90	0.27	mg/Kg	1	☼	6010C	Total/NA
Tin	1.2	J	10	0.92	mg/Kg	1	☼	6010C	Total/NA
Zinc	40		3.0	0.40	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.48	J B	0.50	0.041	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRSF-3E(3)

Lab Sample ID: 280-86004-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	8.5		2.0	0.66	mg/Kg	1	☼	6010C	Total/NA
Copper	15		2.0	0.22	mg/Kg	1	☼	6010C	Total/NA
Lead	74	B ^	0.91	0.27	mg/Kg	1	☼	6010C	Total/NA
Tin	1.1	J	10	0.92	mg/Kg	1	☼	6010C	Total/NA
Zinc	49		3.0	0.40	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.83	B	0.50	0.041	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRSF-4NW(0)

Lab Sample ID: 280-86004-6

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: SRSF-4NW(0) (Continued)

Lab Sample ID: 280-86004-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	2600		1.3	0.32	mg/Kg	1	☼	6010C	Total/NA
Arsenic	68		1.7	0.55	mg/Kg	1	☼	6010C	Total/NA
Copper	35		17	1.8	mg/Kg	10	☼	6010C	Total/NA
Lead	150000	B	380	110	mg/Kg	500	☼	6010C	Total/NA
Tin	200		8.4	0.76	mg/Kg	1	☼	6010C	Total/NA
Zinc	55		25	3.3	mg/Kg	10	☼	6010C	Total/NA
Cadmium	1.4	B	0.42	0.034	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRSF-4C(0)

Lab Sample ID: 280-86004-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	3.9		1.3	0.32	mg/Kg	1	☼	6010C	Total/NA
Arsenic	5.1		1.7	0.56	mg/Kg	1	☼	6010C	Total/NA
Copper	17		1.7	0.19	mg/Kg	1	☼	6010C	Total/NA
Lead	240	B ^	0.77	0.23	mg/Kg	1	☼	6010C	Total/NA
Tin	1.7	J	8.5	0.78	mg/Kg	1	☼	6010C	Total/NA
Zinc	67		2.6	0.34	mg/Kg	1	☼	6010C	Total/NA
Cadmium	2.1	B	0.43	0.035	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRSF-4NE(0)

Lab Sample ID: 280-86004-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.62	J	1.4	0.36	mg/Kg	1	☼	6010C	Total/NA
Arsenic	6.7		1.9	0.63	mg/Kg	1	☼	6010C	Total/NA
Copper	13		1.9	0.21	mg/Kg	1	☼	6010C	Total/NA
Lead	160	B ^	0.86	0.26	mg/Kg	1	☼	6010C	Total/NA
Tin	1.4	J	9.5	0.87	mg/Kg	1	☼	6010C	Total/NA
Zinc	44		2.9	0.38	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.88	B	0.48	0.039	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRSF-4SE(0)

Lab Sample ID: 280-86004-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.35	J	1.4	0.35	mg/Kg	1	☼	6010C	Total/NA
Arsenic	5.2		1.8	0.61	mg/Kg	1	☼	6010C	Total/NA
Copper	13		1.8	0.20	mg/Kg	1	☼	6010C	Total/NA
Lead	120	B ^	0.83	0.25	mg/Kg	1	☼	6010C	Total/NA
Tin	1.2	J	9.2	0.84	mg/Kg	1	☼	6010C	Total/NA
Zinc	38		2.8	0.37	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.38	J B	0.46	0.038	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRSF-4E(0)

Lab Sample ID: 280-86004-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0098		0.0016	0.00051	mg/Kg	1	☼	6010C	Total/NA
Copper	0.018		0.0016	0.00017	mg/Kg	1	☼	6010C	Total/NA
Lead	0.057	B ^	0.00070	0.00021	mg/Kg	1	☼	6010C	Total/NA
Tin	0.0013	J	0.0078	0.00071	mg/Kg	1	☼	6010C	Total/NA
Zinc	0.064		0.0023	0.00031	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.00071	B	0.00039	0.000032	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: NRSF-24

Lab Sample ID: 280-86004-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.3		1.7	0.57	mg/Kg	1		☼	6010C	Total/NA
Copper	12		1.7	0.19	mg/Kg	1		☼	6010C	Total/NA
Lead	37	B ^	0.78	0.23	mg/Kg	1		☼	6010C	Total/NA
Tin	1.1	J	8.6	0.79	mg/Kg	1		☼	6010C	Total/NA
Zinc	46		2.6	0.34	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.26	J B	0.43	0.035	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: SRSF-3(0)

Lab Sample ID: 280-86004-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	6.8		1.9	0.64	mg/Kg	1		☼	6010C	Total/NA
Copper	18		1.9	0.21	mg/Kg	1		☼	6010C	Total/NA
Lead	220	B ^	0.87	0.26	mg/Kg	1		☼	6010C	Total/NA
Tin	1.6	J	9.6	0.88	mg/Kg	1		☼	6010C	Total/NA
Zinc	66		2.9	0.38	mg/Kg	1		☼	6010C	Total/NA
Cadmium	1.4	B	0.48	0.039	mg/Kg	1		☼	6010C	Total/NA
Copper	0.10	J B	2.0	0.021	mg/L	1			6010C	TCLP
Lead	0.32	J B	0.50	0.013	mg/L	1			6010C	TCLP
Zinc	0.041	J	2.0	0.022	mg/L	1			6010C	TCLP
Cadmium	0.0061	J	0.10	0.0020	mg/L	1			6010C	TCLP

Client Sample ID: SRSF-4(0)

Lab Sample ID: 280-86004-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.8		2.0	0.66	mg/Kg	1		☼	6010C	Total/NA
Copper	14		2.0	0.22	mg/Kg	1		☼	6010C	Total/NA
Lead	200	B ^	0.90	0.27	mg/Kg	1		☼	6010C	Total/NA
Tin	1.4	J	10	0.91	mg/Kg	1		☼	6010C	Total/NA
Zinc	43		3.0	0.40	mg/Kg	1		☼	6010C	Total/NA
Cadmium	1.2	B	0.50	0.041	mg/Kg	1		☼	6010C	Total/NA
Antimony	2.0		0.20	0.016	mg/L	1			6010C	TCLP
Arsenic	0.14	J	0.50	0.022	mg/L	1			6010C	TCLP
Copper	0.055	J B	2.0	0.021	mg/L	1			6010C	TCLP
Lead	40	B	0.50	0.013	mg/L	1			6010C	TCLP
Zinc	0.12	J	2.0	0.022	mg/L	1			6010C	TCLP
Cadmium	0.024	J	0.10	0.0020	mg/L	1			6010C	TCLP

Client Sample ID: SRSF-5(0)

Lab Sample ID: 280-86004-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	5.6		1.5	0.48	mg/Kg	1		☼	6010C	Total/NA
Copper	14		1.5	0.16	mg/Kg	1		☼	6010C	Total/NA
Lead	140	B	0.66	0.20	mg/Kg	1		☼	6010C	Total/NA
Tin	1.1	J	7.3	0.67	mg/Kg	1		☼	6010C	Total/NA
Zinc	140		2.2	0.29	mg/Kg	1		☼	6010C	Total/NA
Cadmium	1.4	B	0.37	0.030	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: SRSF-6(0)

Lab Sample ID: 280-86004-15

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: SRSF-6(0) (Continued)

Lab Sample ID: 280-86004-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	6.7		1.6	0.53	mg/Kg	1	☼	6010C	Total/NA
Copper	14		1.6	0.17	mg/Kg	1	☼	6010C	Total/NA
Lead	74	B	0.72	0.22	mg/Kg	1	☼	6010C	Total/NA
Tin	1.0	J	8.0	0.73	mg/Kg	1	☼	6010C	Total/NA
Zinc	61		2.4	0.32	mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.5	B	0.40	0.033	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRSF-7(0)

Lab Sample ID: 280-86004-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.9		1.4	0.47	mg/Kg	1	☼	6010C	Total/NA
Copper	12		1.4	0.16	mg/Kg	1	☼	6010C	Total/NA
Lead	48	B	0.65	0.19	mg/Kg	1	☼	6010C	Total/NA
Tin	0.79	J	7.2	0.65	mg/Kg	1	☼	6010C	Total/NA
Zinc	49		2.2	0.29	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.99	B	0.36	0.029	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRSF-8(0)

Lab Sample ID: 280-86004-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.9		1.5	0.50	mg/Kg	1	☼	6010C	Total/NA
Copper	13		1.8	0.20	mg/Kg	1	☼	6010C	Total/NA
Lead	56	B	0.68	0.20	mg/Kg	1	☼	6010C	Total/NA
Tin	0.91	J	7.6	0.69	mg/Kg	1	☼	6010C	Total/NA
Zinc	52	B	2.3	0.30	mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.3	B	0.38	0.031	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRSF-9(0)

Lab Sample ID: 280-86004-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	8.5		1.8	0.59	mg/Kg	1	☼	6010C	Total/NA
Copper	11		1.6	0.18	mg/Kg	1	☼	6010C	Total/NA
Lead	88	B	0.81	0.24	mg/Kg	1	☼	6010C	Total/NA
Tin	1.1	J	9.0	0.82	mg/Kg	1	☼	6010C	Total/NA
Zinc	54	B	2.7	0.36	mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.3	B	0.45	0.037	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRSF-2(0)

Lab Sample ID: 280-86004-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	6.3		1.5	0.50	mg/Kg	1	☼	6010C	Total/NA
Copper	15		2.0	0.21	mg/Kg	1	☼	6010C	Total/NA
Lead	80	B	0.69	0.21	mg/Kg	1	☼	6010C	Total/NA
Tin	1.1	J	7.6	0.70	mg/Kg	1	☼	6010C	Total/NA
Zinc	51	B	2.3	0.30	mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.0	B	0.38	0.031	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRSF-1(0)

Lab Sample ID: 280-86004-20

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: SRSF-1(0) (Continued)

Lab Sample ID: 280-86004-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.9		1.9	0.63	mg/Kg	1		☼	6010C	Total/NA
Copper	10		1.4	0.16	mg/Kg	1		☼	6010C	Total/NA
Lead	17	B	0.85	0.26	mg/Kg	1		☼	6010C	Total/NA
Tin	0.97	J	9.5	0.87	mg/Kg	1		☼	6010C	Total/NA
Zinc	39	B	2.8	0.38	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.24	J B	0.47	0.039	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: SRSF-3A(0)

Lab Sample ID: 280-86004-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	7.0		2.0	0.66	mg/Kg	1		☼	6010C	Total/NA
Copper	18		1.8	0.20	mg/Kg	1		☼	6010C	Total/NA
Lead	160	B	0.91	0.27	mg/Kg	1		☼	6010C	Total/NA
Tin	1.4	J	10	0.92	mg/Kg	1		☼	6010C	Total/NA
Zinc	69	B	3.0	0.40	mg/Kg	1		☼	6010C	Total/NA
Cadmium	1.7	B	0.50	0.041	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: SRSF-3B(0)

Lab Sample ID: 280-86004-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	7.6		1.6	0.52	mg/Kg	1		☼	6010C	Total/NA
Copper	21		1.6	0.17	mg/Kg	1		☼	6010C	Total/NA
Lead	220	B	0.71	0.21	mg/Kg	1		☼	6010C	Total/NA
Tin	1.4	J	7.9	0.72	mg/Kg	1		☼	6010C	Total/NA
Zinc	61	B	2.4	0.31	mg/Kg	1		☼	6010C	Total/NA
Cadmium	1.4	B	0.39	0.032	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: NRSF-17

Lab Sample ID: 280-86004-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.0		2.0	0.66	mg/Kg	1		☼	6010C	Total/NA
Copper	15		2.1	0.23	mg/Kg	1		☼	6010C	Total/NA
Lead	26	B	0.90	0.27	mg/Kg	1		☼	6010C	Total/NA
Tin	1.2	J	10	0.92	mg/Kg	1		☼	6010C	Total/NA
Zinc	50	B	3.0	0.40	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.34	J B	0.50	0.041	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: NRSF-16

Lab Sample ID: 280-86004-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.2		1.8	0.59	mg/Kg	1		☼	6010C	Total/NA
Copper	18		2.0	0.21	mg/Kg	1		☼	6010C	Total/NA
Lead	42	B	0.80	0.24	mg/Kg	1		☼	6010C	Total/NA
Tin	1.1	J	8.9	0.82	mg/Kg	1		☼	6010C	Total/NA
Zinc	54	B	2.7	0.36	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.35	J B	0.45	0.037	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: NRSF-1

Lab Sample ID: 280-86004-25

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: NRSF-1 (Continued)

Lab Sample ID: 280-86004-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.9		2.0	0.65	mg/Kg	1		☼	6010C	Total/NA
Copper	15		1.4	0.15	mg/Kg	1		☼	6010C	Total/NA
Lead	20	B	0.89	0.27	mg/Kg	1		☼	6010C	Total/NA
Tin	1.1	J	9.9	0.90	mg/Kg	1		☼	6010C	Total/NA
Zinc	51	B	3.0	0.39	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.35	J B	0.49	0.041	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: NRSF-15

Lab Sample ID: 280-86004-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.6		1.4	0.48	mg/Kg	1		☼	6010C	Total/NA
Copper	14		1.4	0.16	mg/Kg	1		☼	6010C	Total/NA
Lead	21	B	0.65	0.20	mg/Kg	1		☼	6010C	Total/NA
Tin	0.99	J	7.2	0.66	mg/Kg	1		☼	6010C	Total/NA
Zinc	51	B	2.2	0.29	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.32	J B	0.36	0.030	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: NRSF-23

Lab Sample ID: 280-86004-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.2		1.5	0.49	mg/Kg	1		☼	6010C	Total/NA
Copper	13		1.8	0.19	mg/Kg	1		☼	6010C	Total/NA
Lead	29	B	0.66	0.20	mg/Kg	1		☼	6010C	Total/NA
Tin	0.88	J	7.4	0.67	mg/Kg	1		☼	6010C	Total/NA
Zinc	43	B	2.2	0.29	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.33	J B	0.37	0.030	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: NRSF-14

Lab Sample ID: 280-86004-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.2		2.0	0.67	mg/Kg	1		☼	6010C	Total/NA
Copper	16		1.4	0.16	mg/Kg	1		☼	6010C	Total/NA
Lead	27	B	0.92	0.27	mg/Kg	1		☼	6010C	Total/NA
Tin	1.4	J	10	0.93	mg/Kg	1		☼	6010C	Total/NA
Zinc	69	B	3.1	0.40	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.50	J B	0.51	0.042	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: NRSF-18

Lab Sample ID: 280-86004-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.4		1.5	0.51	mg/Kg	1		☼	6010C	Total/NA
Copper	17		1.5	0.16	mg/Kg	1		☼	6010C	Total/NA
Lead	18	B	0.69	0.21	mg/Kg	1		☼	6010C	Total/NA
Tin	1.4	J	7.7	0.70	mg/Kg	1		☼	6010C	Total/NA
Zinc	48	B	2.3	0.31	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.36	J B	0.39	0.032	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: NRSF-20

Lab Sample ID: 280-86004-30

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: NRSF-20 (Continued)

Lab Sample ID: 280-86004-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	6.8	J	8.6	2.8	mg/Kg	5		✱	6010C	Total/NA
Copper	17		1.7	0.18	mg/Kg	1		✱	6010C	Total/NA
Lead	30	B	3.9	1.2	mg/Kg	5		✱	6010C	Total/NA
Zinc	55	B	13	1.7	mg/Kg	5		✱	6010C	Total/NA
Cadmium	0.55	J	2.1	0.18	mg/Kg	5		✱	6010C	Total/NA

Client Sample ID: NRSF-19

Lab Sample ID: 280-86004-31

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.8		1.4	0.47	mg/Kg	1		✱	6010C	Total/NA
Copper	10		1.5	0.16	mg/Kg	1		✱	6010C	Total/NA
Lead	13	B	0.64	0.19	mg/Kg	1		✱	6010C	Total/NA
Tin	0.76	J	7.1	0.65	mg/Kg	1		✱	6010C	Total/NA
Zinc	32	B	2.1	0.28	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.26	J B	0.36	0.029	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: DUPE-6

Lab Sample ID: 280-86004-32

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	6.0		2.0	0.65	mg/Kg	1		✱	6010C	Total/NA
Copper	13		1.5	0.16	mg/Kg	1		✱	6010C	Total/NA
Lead	66	B	0.88	0.26	mg/Kg	1		✱	6010C	Total/NA
Tin	1.1	J	9.8	0.89	mg/Kg	1		✱	6010C	Total/NA
Zinc	55	B	2.9	0.39	mg/Kg	1		✱	6010C	Total/NA
Cadmium	1.3	B	0.49	0.040	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: RINSE-7

Lab Sample ID: 280-86004-33

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	3.5	J B	20	3.1	ug/L	1			6010B	Total/NA

Client Sample ID: RINSE-8

Lab Sample ID: 280-86004-34

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Method Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-86004-1	SRSF-3C(0)	Solid	07/22/16 09:50	07/22/16 15:25
280-86004-2	SRSF-3D(0)	Solid	07/22/16 10:00	07/22/16 15:25
280-86004-3	SRSF-3E(0)	Solid	07/22/16 10:15	07/22/16 15:25
280-86004-4	SRSF-3C(3)	Solid	07/22/16 09:55	07/22/16 15:25
280-86004-5	SRSF-3E(3)	Solid	07/22/16 10:20	07/22/16 15:25
280-86004-6	SRSF-4NW(0)	Solid	07/22/16 10:05	07/22/16 15:25
280-86004-7	SRSF-4C(0)	Solid	07/22/16 10:10	07/22/16 15:25
280-86004-8	SRSF-4NE(0)	Solid	07/22/16 10:20	07/22/16 15:25
280-86004-9	SRSF-4SE(0)	Solid	07/22/16 10:25	07/22/16 15:25
280-86004-10	SRSF-4E(0)	Solid	07/22/16 10:30	07/22/16 15:25
280-86004-11	NRSF-24	Solid	07/22/16 13:45	07/22/16 15:25
280-86004-12	SRSF-3(0)	Solid	07/22/16 13:50	07/22/16 15:25
280-86004-13	SRSF-4(0)	Solid	07/22/16 13:45	07/22/16 15:25
280-86004-14	SRSF-5(0)	Solid	07/22/16 13:51	07/22/16 15:25
280-86004-15	SRSF-6(0)	Solid	07/22/16 13:45	07/22/16 15:25
280-86004-16	SRSF-7(0)	Solid	07/22/16 13:50	07/22/16 15:25
280-86004-17	SRSF-8(0)	Solid	07/22/16 13:50	07/22/16 15:25
280-86004-18	SRSF-9(0)	Solid	07/22/16 13:50	07/22/16 15:25
280-86004-19	SRSF-2(0)	Solid	07/22/16 13:40	07/22/16 15:25
280-86004-20	SRSF-1(0)	Solid	07/22/16 13:51	07/22/16 15:25
280-86004-21	SRSF-3A(0)	Solid	07/22/16 09:35	07/22/16 15:25
280-86004-22	SRSF-3B(0)	Solid	07/22/16 09:45	07/22/16 15:25
280-86004-23	NRSF-17	Solid	07/22/16 13:45	07/22/16 15:25
280-86004-24	NRSF-16	Solid	07/22/16 13:50	07/22/16 15:25
280-86004-25	NRSF-1	Solid	07/22/16 13:50	07/22/16 15:25
280-86004-26	NRSF-15	Solid	07/22/16 13:55	07/22/16 15:25
280-86004-27	NRSF-23	Solid	07/22/16 13:55	07/22/16 15:25
280-86004-28	NRSF-14	Solid	07/22/16 13:55	07/22/16 15:25
280-86004-29	NRSF-18	Solid	07/22/16 13:55	07/22/16 15:25
280-86004-30	NRSF-20	Solid	07/22/16 13:55	07/22/16 15:25
280-86004-31	NRSF-19	Solid	07/22/16 13:55	07/22/16 15:25
280-86004-32	DUPE-6	Solid	07/22/16 00:00	07/22/16 15:25
280-86004-33	RINSE-7	Water	07/22/16 14:00	07/22/16 15:25
280-86004-34	RINSE-8	Water	07/22/16 14:00	07/22/16 15:25

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Method: 6010B - Metals (ICP)

Client Sample ID: RINSE-7
Date Collected: 07/22/16 14:00
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-33
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		5.0	0.45	ug/L		07/29/16 14:45	08/01/16 18:25	1
Antimony	3.5	J B	20	3.1	ug/L		07/29/16 14:45	08/01/16 18:25	1
Arsenic	ND		15	4.4	ug/L		07/29/16 14:45	08/01/16 18:25	1
Copper	ND		15	4.2	ug/L		07/29/16 14:45	08/01/16 18:25	1
Lead	ND		9.0	2.6	ug/L		07/29/16 14:45	08/01/16 18:25	1
Zinc	ND		20	4.5	ug/L		07/29/16 14:45	08/01/16 18:25	1
Tin	ND		100	5.8	ug/L		07/29/16 14:45	08/01/16 18:25	1

Client Sample ID: RINSE-8
Date Collected: 07/22/16 14:00
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-34
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		5.0	0.45	ug/L		07/29/16 14:45	08/01/16 18:28	1
Antimony	ND		20	3.1	ug/L		07/29/16 14:45	08/01/16 18:28	1
Arsenic	ND		15	4.4	ug/L		07/29/16 14:45	08/01/16 18:28	1
Copper	ND		15	4.2	ug/L		07/29/16 14:45	08/01/16 18:28	1
Lead	ND		9.0	2.6	ug/L		07/29/16 14:45	08/01/16 18:28	1
Zinc	ND		20	4.5	ug/L		07/29/16 14:45	08/01/16 18:28	1
Tin	ND		100	5.8	ug/L		07/29/16 14:45	08/01/16 18:28	1

Method: 6010C - Metals (ICP)

Client Sample ID: SRSF-3C(0)
Date Collected: 07/22/16 09:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-1
Matrix: Solid
Percent Solids: 96.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.58	J F1 F2	1.4	0.36	mg/Kg	☼	07/29/16 14:45	08/02/16 01:11	1
Arsenic	6.3		1.9	0.63	mg/Kg	☼	07/29/16 14:45	08/02/16 01:11	1
Copper	20		1.9	0.21	mg/Kg	☼	07/29/16 14:45	08/02/16 01:11	1
Lead	340	F2 B ^	0.86	0.26	mg/Kg	☼	07/29/16 14:45	08/03/16 04:07	1
Tin	2.0	J F1	9.6	0.87	mg/Kg	☼	07/29/16 14:45	08/02/16 01:11	1
Zinc	64	F1	2.9	0.38	mg/Kg	☼	07/29/16 14:45	08/03/16 04:07	1
Cadmium	1.4	B	0.48	0.039	mg/Kg	☼	07/29/16 14:45	08/02/16 01:11	1

Client Sample ID: SRSF-3D(0)
Date Collected: 07/22/16 10:00
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-2
Matrix: Solid
Percent Solids: 95.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.1	0.29	mg/Kg	☼	07/29/16 14:45	08/02/16 01:23	1
Arsenic	6.5		1.5	0.50	mg/Kg	☼	07/29/16 14:45	08/02/16 01:23	1
Copper	11		1.5	0.16	mg/Kg	☼	07/29/16 14:45	08/02/16 01:23	1
Lead	72	^ B	0.68	0.20	mg/Kg	☼	07/29/16 14:45	08/03/16 04:19	1
Tin	0.93	J	7.6	0.69	mg/Kg	☼	07/29/16 14:45	08/02/16 01:23	1
Zinc	33		2.3	0.30	mg/Kg	☼	07/29/16 14:45	08/03/16 04:19	1
Cadmium	0.43	B	0.38	0.031	mg/Kg	☼	07/29/16 14:45	08/02/16 01:23	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Method: 6010C - Metals (ICP)

Client Sample ID: SRSF-3E(0)
Date Collected: 07/22/16 10:15
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-3
Matrix: Solid
Percent Solids: 98.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.32	mg/Kg	☼	07/29/16 14:45	08/02/16 01:26	1
Arsenic	5.7		1.7	0.55	mg/Kg	☼	07/29/16 14:45	08/02/16 01:26	1
Copper	19		1.7	0.18	mg/Kg	☼	07/29/16 14:45	08/02/16 01:26	1
Lead	260	B ^	0.76	0.23	mg/Kg	☼	07/29/16 14:45	08/03/16 04:22	1
Tin	1.4	J	8.4	0.77	mg/Kg	☼	07/29/16 14:45	08/02/16 01:26	1
Zinc	66		2.5	0.33	mg/Kg	☼	07/29/16 14:45	08/03/16 04:22	1
Cadmium	1.6	B	0.42	0.034	mg/Kg	☼	07/29/16 14:45	08/02/16 01:26	1

Client Sample ID: SRSF-3C(3)
Date Collected: 07/22/16 09:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-4
Matrix: Solid
Percent Solids: 94.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg	☼	07/29/16 14:45	08/02/16 01:28	1
Arsenic	9.3		2.0	0.66	mg/Kg	☼	07/29/16 14:45	08/02/16 01:28	1
Copper	13		2.0	0.22	mg/Kg	☼	07/29/16 14:45	08/02/16 01:28	1
Lead	38	B ^	0.90	0.27	mg/Kg	☼	07/29/16 14:45	08/03/16 04:24	1
Tin	1.2	J	10	0.92	mg/Kg	☼	07/29/16 14:45	08/02/16 01:28	1
Zinc	40		3.0	0.40	mg/Kg	☼	07/29/16 14:45	08/03/16 04:24	1
Cadmium	0.48	J B	0.50	0.041	mg/Kg	☼	07/29/16 14:45	08/02/16 01:28	1

Client Sample ID: SRSF-3E(3)
Date Collected: 07/22/16 10:20
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-5
Matrix: Solid
Percent Solids: 97.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg	☼	07/29/16 14:45	08/02/16 01:41	1
Arsenic	8.5		2.0	0.66	mg/Kg	☼	07/29/16 14:45	08/02/16 01:41	1
Copper	15		2.0	0.22	mg/Kg	☼	07/29/16 14:45	08/02/16 01:41	1
Lead	74	B ^	0.91	0.27	mg/Kg	☼	07/29/16 14:45	08/03/16 04:37	1
Tin	1.1	J	10	0.92	mg/Kg	☼	07/29/16 14:45	08/02/16 01:41	1
Zinc	49		3.0	0.40	mg/Kg	☼	07/29/16 14:45	08/03/16 04:37	1
Cadmium	0.83	B	0.50	0.041	mg/Kg	☼	07/29/16 14:45	08/02/16 01:41	1

Client Sample ID: SRSF-4NW(0)
Date Collected: 07/22/16 10:05
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-6
Matrix: Solid
Percent Solids: 97.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2600		1.3	0.32	mg/Kg	☼	07/29/16 14:45	08/02/16 01:43	1
Arsenic	68		1.7	0.55	mg/Kg	☼	07/29/16 14:45	08/02/16 01:43	1
Copper	35		17	1.8	mg/Kg	☼	07/29/16 14:45	08/03/16 04:42	10
Lead	150000	B	380	110	mg/Kg	☼	07/29/16 14:45	08/03/16 16:44	500
Tin	200		8.4	0.76	mg/Kg	☼	07/29/16 14:45	08/02/16 01:43	1
Zinc	55		25	3.3	mg/Kg	☼	07/29/16 14:45	08/03/16 04:42	10
Cadmium	1.4	B	0.42	0.034	mg/Kg	☼	07/29/16 14:45	08/02/16 01:43	1

Client Sample ID: SRSF-4C(0)
Date Collected: 07/22/16 10:10
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-7
Matrix: Solid
Percent Solids: 99.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.9		1.3	0.32	mg/Kg	☼	07/29/16 14:45	08/02/16 01:46	1
Arsenic	5.1		1.7	0.56	mg/Kg	☼	07/29/16 14:45	08/02/16 01:46	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: SRSF-4C(0)
Date Collected: 07/22/16 10:10
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-7
Matrix: Solid
Percent Solids: 99.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	17		1.7	0.19	mg/Kg	☼	07/29/16 14:45	08/02/16 01:46	1
Lead	240	B ^	0.77	0.23	mg/Kg	☼	07/29/16 14:45	08/03/16 04:44	1
Tin	1.7	J	8.5	0.78	mg/Kg	☼	07/29/16 14:45	08/02/16 01:46	1
Zinc	67		2.6	0.34	mg/Kg	☼	07/29/16 14:45	08/03/16 04:44	1
Cadmium	2.1	B	0.43	0.035	mg/Kg	☼	07/29/16 14:45	08/02/16 01:46	1

Client Sample ID: SRSF-4NE(0)
Date Collected: 07/22/16 10:20
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-8
Matrix: Solid
Percent Solids: 98.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.62	J	1.4	0.36	mg/Kg	☼	07/29/16 14:45	08/02/16 01:48	1
Arsenic	6.7		1.9	0.63	mg/Kg	☼	07/29/16 14:45	08/02/16 01:48	1
Copper	13		1.9	0.21	mg/Kg	☼	07/29/16 14:45	08/02/16 01:48	1
Lead	160	B ^	0.86	0.26	mg/Kg	☼	07/29/16 14:45	08/03/16 04:47	1
Tin	1.4	J	9.5	0.87	mg/Kg	☼	07/29/16 14:45	08/02/16 01:48	1
Zinc	44		2.9	0.38	mg/Kg	☼	07/29/16 14:45	08/03/16 04:47	1
Cadmium	0.88	B	0.48	0.039	mg/Kg	☼	07/29/16 14:45	08/02/16 01:48	1

Client Sample ID: SRSF-4SE(0)
Date Collected: 07/22/16 10:25
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-9
Matrix: Solid
Percent Solids: 97.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.35	J	1.4	0.35	mg/Kg	☼	07/29/16 14:45	08/02/16 01:51	1
Arsenic	5.2		1.8	0.61	mg/Kg	☼	07/29/16 14:45	08/02/16 01:51	1
Copper	13		1.8	0.20	mg/Kg	☼	07/29/16 14:45	08/02/16 01:51	1
Lead	120	B ^	0.83	0.25	mg/Kg	☼	07/29/16 14:45	08/03/16 04:49	1
Tin	1.2	J	9.2	0.84	mg/Kg	☼	07/29/16 14:45	08/02/16 01:51	1
Zinc	38		2.8	0.37	mg/Kg	☼	07/29/16 14:45	08/03/16 04:49	1
Cadmium	0.38	J B	0.46	0.038	mg/Kg	☼	07/29/16 14:45	08/02/16 01:51	1

Client Sample ID: SRSF-4E(0)
Date Collected: 07/22/16 10:30
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-10
Matrix: Solid
Percent Solids: 97.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.0012	0.00030	mg/Kg	☼	07/29/16 14:45	08/02/16 01:53	1
Arsenic	0.0098		0.0016	0.00051	mg/Kg	☼	07/29/16 14:45	08/02/16 01:53	1
Copper	0.018		0.0016	0.00017	mg/Kg	☼	07/29/16 14:45	08/02/16 01:53	1
Lead	0.057	B ^	0.00070	0.00021	mg/Kg	☼	07/29/16 14:45	08/03/16 04:52	1
Tin	0.0013	J	0.0078	0.00071	mg/Kg	☼	07/29/16 14:45	08/02/16 01:53	1
Zinc	0.064		0.0023	0.00031	mg/Kg	☼	07/29/16 14:45	08/03/16 04:52	1
Cadmium	0.00071	B	0.00039	0.000032	mg/Kg	☼	07/29/16 14:45	08/02/16 01:53	1

Client Sample ID: NRSF-24
Date Collected: 07/22/16 13:45
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-11
Matrix: Solid
Percent Solids: 97.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.33	mg/Kg	☼	07/29/16 14:45	08/02/16 01:56	1
Arsenic	4.3		1.7	0.57	mg/Kg	☼	07/29/16 14:45	08/02/16 01:56	1
Copper	12		1.7	0.19	mg/Kg	☼	07/29/16 14:45	08/02/16 01:56	1
Lead	37	B ^	0.78	0.23	mg/Kg	☼	07/29/16 14:45	08/03/16 04:54	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: NRSF-24
Date Collected: 07/22/16 13:45
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-11
Matrix: Solid
Percent Solids: 97.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tin	1.1	J	8.6	0.79	mg/Kg	☼	07/29/16 14:45	08/02/16 01:56	1
Zinc	46		2.6	0.34	mg/Kg	☼	07/29/16 14:45	08/03/16 04:54	1
Cadmium	0.26	J B	0.43	0.035	mg/Kg	☼	07/29/16 14:45	08/02/16 01:56	1

Client Sample ID: SRSF-3(0)
Date Collected: 07/22/16 13:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-12
Matrix: Solid
Percent Solids: 96.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.37	mg/Kg	☼	07/29/16 14:45	08/02/16 01:58	1
Arsenic	6.8		1.9	0.64	mg/Kg	☼	07/29/16 14:45	08/02/16 01:58	1
Copper	18		1.9	0.21	mg/Kg	☼	07/29/16 14:45	08/02/16 01:58	1
Lead	220	B ^	0.87	0.26	mg/Kg	☼	07/29/16 14:45	08/03/16 04:57	1
Tin	1.6	J	9.6	0.88	mg/Kg	☼	07/29/16 14:45	08/02/16 01:58	1
Zinc	66		2.9	0.38	mg/Kg	☼	07/29/16 14:45	08/03/16 04:57	1
Cadmium	1.4	B	0.48	0.039	mg/Kg	☼	07/29/16 14:45	08/02/16 01:58	1

Client Sample ID: SRSF-4(0)
Date Collected: 07/22/16 13:45
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-13
Matrix: Solid
Percent Solids: 98.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg	☼	07/29/16 14:45	08/02/16 02:01	1
Arsenic	3.8		2.0	0.66	mg/Kg	☼	07/29/16 14:45	08/02/16 02:01	1
Copper	14		2.0	0.22	mg/Kg	☼	07/29/16 14:45	08/02/16 02:01	1
Lead	200	B ^	0.90	0.27	mg/Kg	☼	07/29/16 14:45	08/03/16 04:59	1
Tin	1.4	J	10	0.91	mg/Kg	☼	07/29/16 14:45	08/02/16 02:01	1
Zinc	43		3.0	0.40	mg/Kg	☼	07/29/16 14:45	08/03/16 04:59	1
Cadmium	1.2	B	0.50	0.041	mg/Kg	☼	07/29/16 14:45	08/02/16 02:01	1

Client Sample ID: SRSF-5(0)
Date Collected: 07/22/16 13:51
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-14
Matrix: Solid
Percent Solids: 98.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.1	0.28	mg/Kg	☼	07/29/16 14:45	08/02/16 02:03	1
Arsenic	5.6		1.5	0.48	mg/Kg	☼	07/29/16 14:45	08/02/16 02:03	1
Copper	14		1.5	0.16	mg/Kg	☼	07/29/16 14:45	08/02/16 02:03	1
Lead	140	B	0.66	0.20	mg/Kg	☼	07/29/16 14:45	08/03/16 05:12	1
Tin	1.1	J	7.3	0.67	mg/Kg	☼	07/29/16 14:45	08/02/16 02:03	1
Zinc	140		2.2	0.29	mg/Kg	☼	07/29/16 14:45	08/03/16 05:12	1
Cadmium	1.4	B	0.37	0.030	mg/Kg	☼	07/29/16 14:45	08/02/16 02:03	1

Client Sample ID: SRSF-6(0)
Date Collected: 07/22/16 13:45
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-15
Matrix: Solid
Percent Solids: 97.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.31	mg/Kg	☼	07/29/16 14:45	08/02/16 02:15	1
Arsenic	6.7		1.6	0.53	mg/Kg	☼	07/29/16 14:45	08/02/16 02:15	1
Copper	14		1.6	0.17	mg/Kg	☼	07/29/16 14:45	08/02/16 02:15	1
Lead	74	B	0.72	0.22	mg/Kg	☼	07/29/16 14:45	08/03/16 05:14	1
Tin	1.0	J	8.0	0.73	mg/Kg	☼	07/29/16 14:45	08/02/16 02:15	1
Zinc	61		2.4	0.32	mg/Kg	☼	07/29/16 14:45	08/03/16 05:14	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: SRSF-6(0)
Date Collected: 07/22/16 13:45
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-15
Matrix: Solid
Percent Solids: 97.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.5	B	0.40	0.033	mg/Kg	☼	07/29/16 14:45	08/02/16 02:15	1

Client Sample ID: SRSF-7(0)
Date Collected: 07/22/16 13:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-16
Matrix: Solid
Percent Solids: 97.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.1	0.27	mg/Kg	☼	07/29/16 14:45	08/02/16 02:18	1
Arsenic	5.9		1.4	0.47	mg/Kg	☼	07/29/16 14:45	08/02/16 02:18	1
Copper	12		1.4	0.16	mg/Kg	☼	07/29/16 14:45	08/02/16 02:18	1
Lead	48	B	0.65	0.19	mg/Kg	☼	07/29/16 14:45	08/03/16 05:17	1
Tin	0.79	J	7.2	0.65	mg/Kg	☼	07/29/16 14:45	08/02/16 02:18	1
Zinc	49		2.2	0.29	mg/Kg	☼	07/29/16 14:45	08/03/16 05:17	1
Cadmium	0.99	B	0.36	0.029	mg/Kg	☼	07/29/16 14:45	08/02/16 02:18	1

Client Sample ID: SRSF-8(0)
Date Collected: 07/22/16 13:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-17
Matrix: Solid
Percent Solids: 98.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	F2	1.1	0.29	mg/Kg	☼	07/29/16 14:45	08/02/16 02:25	1
Arsenic	5.9		1.5	0.50	mg/Kg	☼	07/29/16 14:45	08/02/16 02:25	1
Copper	13		1.8	0.20	mg/Kg	☼	08/05/16 14:40	08/06/16 12:26	1
Lead	56	B	0.68	0.20	mg/Kg	☼	07/29/16 14:45	08/03/16 05:24	1
Tin	0.91	J	7.6	0.69	mg/Kg	☼	07/29/16 14:45	08/02/16 02:25	1
Zinc	52	B	2.3	0.30	mg/Kg	☼	07/29/16 14:45	08/02/16 02:25	1
Cadmium	1.3	B	0.38	0.031	mg/Kg	☼	07/29/16 14:45	08/02/16 02:25	1

Client Sample ID: SRSF-9(0)
Date Collected: 07/22/16 13:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-18
Matrix: Solid
Percent Solids: 98.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.34	mg/Kg	☼	07/29/16 14:45	08/02/16 02:37	1
Arsenic	8.5		1.8	0.59	mg/Kg	☼	07/29/16 14:45	08/02/16 02:37	1
Copper	11		1.6	0.18	mg/Kg	☼	08/05/16 14:40	08/06/16 12:39	1
Lead	88	B	0.81	0.24	mg/Kg	☼	07/29/16 14:45	08/03/16 05:46	1
Tin	1.1	J	9.0	0.82	mg/Kg	☼	07/29/16 14:45	08/02/16 02:37	1
Zinc	54	B	2.7	0.36	mg/Kg	☼	07/29/16 14:45	08/02/16 02:37	1
Cadmium	1.3	B	0.45	0.037	mg/Kg	☼	07/29/16 14:45	08/02/16 02:37	1

Client Sample ID: SRSF-2(0)
Date Collected: 07/22/16 13:40
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-19
Matrix: Solid
Percent Solids: 97.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.1	0.29	mg/Kg	☼	07/29/16 14:45	08/02/16 02:49	1
Arsenic	6.3		1.5	0.50	mg/Kg	☼	07/29/16 14:45	08/02/16 02:49	1
Copper	15		2.0	0.21	mg/Kg	☼	08/05/16 14:40	08/06/16 12:52	1
Lead	80	B	0.69	0.21	mg/Kg	☼	07/29/16 14:45	08/03/16 05:48	1
Tin	1.1	J	7.6	0.70	mg/Kg	☼	07/29/16 14:45	08/02/16 02:49	1
Zinc	51	B	2.3	0.30	mg/Kg	☼	07/29/16 14:45	08/02/16 02:49	1
Cadmium	1.0	B	0.38	0.031	mg/Kg	☼	07/29/16 14:45	08/02/16 02:49	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Method: 6010C - Metals (ICP)

Client Sample ID: SRSF-1(0)
Date Collected: 07/22/16 13:51
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-20
Matrix: Solid
Percent Solids: 97.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.36	mg/Kg	☼	07/29/16 14:45	08/02/16 02:52	1
Arsenic	4.9		1.9	0.63	mg/Kg	☼	07/29/16 14:45	08/02/16 02:52	1
Copper	10		1.4	0.16	mg/Kg	☼	08/05/16 14:40	08/06/16 12:55	1
Lead	17	B	0.85	0.26	mg/Kg	☼	07/29/16 14:45	08/03/16 05:51	1
Tin	0.97	J	9.5	0.87	mg/Kg	☼	07/29/16 14:45	08/02/16 02:52	1
Zinc	39	B	2.8	0.38	mg/Kg	☼	07/29/16 14:45	08/02/16 02:52	1
Cadmium	0.24	J B	0.47	0.039	mg/Kg	☼	07/29/16 14:45	08/02/16 02:52	1

Client Sample ID: SRSF-3A(0)
Date Collected: 07/22/16 09:35
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-21
Matrix: Solid
Percent Solids: 97.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg	☼	07/29/16 14:45	08/02/16 02:54	1
Arsenic	7.0		2.0	0.66	mg/Kg	☼	07/29/16 14:45	08/02/16 02:54	1
Copper	18		1.8	0.20	mg/Kg	☼	08/05/16 14:40	08/06/16 12:58	1
Lead	160	B	0.91	0.27	mg/Kg	☼	07/29/16 14:45	08/03/16 05:53	1
Tin	1.4	J	10	0.92	mg/Kg	☼	07/29/16 14:45	08/02/16 02:54	1
Zinc	69	B	3.0	0.40	mg/Kg	☼	07/29/16 14:45	08/02/16 02:54	1
Cadmium	1.7	B	0.50	0.041	mg/Kg	☼	07/29/16 14:45	08/02/16 02:54	1

Client Sample ID: SRSF-3B(0)
Date Collected: 07/22/16 09:45
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-22
Matrix: Solid
Percent Solids: 95.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.30	mg/Kg	☼	07/29/16 14:45	08/02/16 02:57	1
Arsenic	7.6		1.6	0.52	mg/Kg	☼	07/29/16 14:45	08/02/16 02:57	1
Copper	21		1.6	0.17	mg/Kg	☼	08/05/16 14:40	08/06/16 13:00	1
Lead	220	B	0.71	0.21	mg/Kg	☼	07/29/16 14:45	08/03/16 05:56	1
Tin	1.4	J	7.9	0.72	mg/Kg	☼	07/29/16 14:45	08/02/16 02:57	1
Zinc	61	B	2.4	0.31	mg/Kg	☼	07/29/16 14:45	08/02/16 02:57	1
Cadmium	1.4	B	0.39	0.032	mg/Kg	☼	07/29/16 14:45	08/02/16 02:57	1

Client Sample ID: NRSF-17
Date Collected: 07/22/16 13:45
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-23
Matrix: Solid
Percent Solids: 95.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg	☼	07/29/16 14:45	08/02/16 02:59	1
Arsenic	4.0		2.0	0.66	mg/Kg	☼	07/29/16 14:45	08/02/16 02:59	1
Copper	15		2.1	0.23	mg/Kg	☼	08/05/16 14:40	08/06/16 13:03	1
Lead	26	B	0.90	0.27	mg/Kg	☼	07/29/16 14:45	08/03/16 05:58	1
Tin	1.2	J	10	0.92	mg/Kg	☼	07/29/16 14:45	08/02/16 02:59	1
Zinc	50	B	3.0	0.40	mg/Kg	☼	07/29/16 14:45	08/02/16 02:59	1
Cadmium	0.34	J B	0.50	0.041	mg/Kg	☼	07/29/16 14:45	08/02/16 02:59	1

Client Sample ID: NRSF-16
Date Collected: 07/22/16 13:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-24
Matrix: Solid
Percent Solids: 96.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.34	mg/Kg	☼	07/29/16 14:45	08/02/16 03:02	1
Arsenic	4.2		1.8	0.59	mg/Kg	☼	07/29/16 14:45	08/02/16 03:02	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: NRSF-16
Date Collected: 07/22/16 13:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-24
Matrix: Solid
Percent Solids: 96.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	18		2.0	0.21	mg/Kg	☼	08/05/16 14:40	08/06/16 13:05	1
Lead	42	B	0.80	0.24	mg/Kg	☼	07/29/16 14:45	08/03/16 06:01	1
Tin	1.1	J	8.9	0.82	mg/Kg	☼	07/29/16 14:45	08/02/16 03:02	1
Zinc	54	B	2.7	0.36	mg/Kg	☼	07/29/16 14:45	08/02/16 03:02	1
Cadmium	0.35	J B	0.45	0.037	mg/Kg	☼	07/29/16 14:45	08/02/16 03:02	1

Client Sample ID: NRSF-1
Date Collected: 07/22/16 13:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-25
Matrix: Solid
Percent Solids: 97.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg	☼	07/29/16 14:45	08/02/16 03:04	1
Arsenic	3.9		2.0	0.65	mg/Kg	☼	07/29/16 14:45	08/02/16 03:04	1
Copper	15		1.4	0.15	mg/Kg	☼	08/05/16 14:40	08/06/16 13:08	1
Lead	20	B	0.89	0.27	mg/Kg	☼	07/29/16 14:45	08/03/16 06:03	1
Tin	1.1	J	9.9	0.90	mg/Kg	☼	07/29/16 14:45	08/02/16 03:04	1
Zinc	51	B	3.0	0.39	mg/Kg	☼	07/29/16 14:45	08/02/16 03:04	1
Cadmium	0.35	J B	0.49	0.041	mg/Kg	☼	07/29/16 14:45	08/02/16 03:04	1

Client Sample ID: NRSF-15
Date Collected: 07/22/16 13:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-26
Matrix: Solid
Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.1	0.28	mg/Kg	☼	07/29/16 14:45	08/02/16 03:07	1
Arsenic	4.6		1.4	0.48	mg/Kg	☼	07/29/16 14:45	08/02/16 03:07	1
Copper	14		1.4	0.16	mg/Kg	☼	08/05/16 14:40	08/06/16 13:11	1
Lead	21	B	0.65	0.20	mg/Kg	☼	07/29/16 14:45	08/03/16 06:06	1
Tin	0.99	J	7.2	0.66	mg/Kg	☼	07/29/16 14:45	08/02/16 03:07	1
Zinc	51	B	2.2	0.29	mg/Kg	☼	07/29/16 14:45	08/02/16 03:07	1
Cadmium	0.32	J B	0.36	0.030	mg/Kg	☼	07/29/16 14:45	08/02/16 03:07	1

Client Sample ID: NRSF-23
Date Collected: 07/22/16 13:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-27
Matrix: Solid
Percent Solids: 98.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.1	0.28	mg/Kg	☼	07/29/16 14:45	08/02/16 03:09	1
Arsenic	4.2		1.5	0.49	mg/Kg	☼	07/29/16 14:45	08/02/16 03:09	1
Copper	13		1.8	0.19	mg/Kg	☼	08/05/16 14:40	08/06/16 13:24	1
Lead	29	B	0.66	0.20	mg/Kg	☼	07/29/16 14:45	08/03/16 06:08	1
Tin	0.88	J	7.4	0.67	mg/Kg	☼	07/29/16 14:45	08/02/16 03:09	1
Zinc	43	B	2.2	0.29	mg/Kg	☼	07/29/16 14:45	08/02/16 03:09	1
Cadmium	0.33	J B	0.37	0.030	mg/Kg	☼	07/29/16 14:45	08/02/16 03:09	1

Client Sample ID: NRSF-14
Date Collected: 07/22/16 13:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-28
Matrix: Solid
Percent Solids: 96.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.39	mg/Kg	☼	07/29/16 14:45	08/02/16 03:12	1
Arsenic	4.2		2.0	0.67	mg/Kg	☼	07/29/16 14:45	08/02/16 03:12	1
Copper	16		1.4	0.16	mg/Kg	☼	08/05/16 14:40	08/06/16 13:27	1
Lead	27	B	0.92	0.27	mg/Kg	☼	07/29/16 14:45	08/03/16 06:21	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: NRSF-14
Date Collected: 07/22/16 13:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-28
Matrix: Solid
Percent Solids: 96.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tin	1.4	J	10	0.93	mg/Kg	☼	07/29/16 14:45	08/02/16 03:12	1
Zinc	69	B	3.1	0.40	mg/Kg	☼	07/29/16 14:45	08/02/16 03:12	1
Cadmium	0.50	J B	0.51	0.042	mg/Kg	☼	07/29/16 14:45	08/02/16 03:12	1

Client Sample ID: NRSF-18
Date Collected: 07/22/16 13:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-29
Matrix: Solid
Percent Solids: 97.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.29	mg/Kg	☼	07/29/16 14:45	08/03/16 06:23	1
Arsenic	3.4		1.5	0.51	mg/Kg	☼	07/29/16 14:45	08/02/16 03:24	1
Copper	17		1.5	0.16	mg/Kg	☼	08/05/16 14:40	08/06/16 13:29	1
Lead	18	B	0.69	0.21	mg/Kg	☼	07/29/16 14:45	08/03/16 06:23	1
Tin	1.4	J	7.7	0.70	mg/Kg	☼	07/29/16 14:45	08/02/16 03:24	1
Zinc	48	B	2.3	0.31	mg/Kg	☼	07/29/16 14:45	08/02/16 03:24	1
Cadmium	0.36	J B	0.39	0.032	mg/Kg	☼	07/29/16 14:45	08/02/16 03:24	1

Client Sample ID: NRSF-20
Date Collected: 07/22/16 13:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-30
Matrix: Solid
Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		6.4	1.6	mg/Kg	☼	07/29/16 14:45	08/03/16 06:26	5
Arsenic	6.8	J	8.6	2.8	mg/Kg	☼	07/29/16 14:45	08/03/16 06:26	5
Copper	17		1.7	0.18	mg/Kg	☼	08/05/16 14:40	08/06/16 13:32	1
Lead	30	B	3.9	1.2	mg/Kg	☼	07/29/16 14:45	08/03/16 06:26	5
Tin	ND		43	3.9	mg/Kg	☼	07/29/16 14:45	08/03/16 06:26	5
Zinc	55	B	13	1.7	mg/Kg	☼	07/29/16 14:45	08/03/16 06:26	5
Cadmium	0.55	J	2.1	0.18	mg/Kg	☼	07/29/16 14:45	08/03/16 06:26	5

Client Sample ID: NRSF-19
Date Collected: 07/22/16 13:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-31
Matrix: Solid
Percent Solids: 98.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.1	0.27	mg/Kg	☼	07/29/16 14:45	08/03/16 06:28	1
Arsenic	3.8		1.4	0.47	mg/Kg	☼	07/29/16 14:45	08/02/16 03:29	1
Copper	10		1.5	0.16	mg/Kg	☼	08/05/16 14:40	08/06/16 13:34	1
Lead	13	B	0.64	0.19	mg/Kg	☼	07/29/16 14:45	08/03/16 06:28	1
Tin	0.76	J	7.1	0.65	mg/Kg	☼	07/29/16 14:45	08/02/16 03:29	1
Zinc	32	B	2.1	0.28	mg/Kg	☼	07/29/16 14:45	08/02/16 03:29	1
Cadmium	0.26	J B	0.36	0.029	mg/Kg	☼	07/29/16 14:45	08/02/16 03:29	1

Client Sample ID: DUPE-6
Date Collected: 07/22/16 00:00
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-32
Matrix: Solid
Percent Solids: 97.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.37	mg/Kg	☼	07/29/16 14:45	08/03/16 06:31	1
Arsenic	6.0		2.0	0.65	mg/Kg	☼	07/29/16 14:45	08/02/16 03:31	1
Copper	13		1.5	0.16	mg/Kg	☼	08/05/16 14:40	08/06/16 13:37	1
Lead	66	B	0.88	0.26	mg/Kg	☼	07/29/16 14:45	08/03/16 06:31	1
Tin	1.1	J	9.8	0.89	mg/Kg	☼	07/29/16 14:45	08/02/16 03:31	1
Zinc	55	B	2.9	0.39	mg/Kg	☼	07/29/16 14:45	08/02/16 03:31	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: DUPE-6
Date Collected: 07/22/16 00:00
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-32
Matrix: Solid
Percent Solids: 97.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	1.3	B	0.49	0.040	mg/Kg	☼	07/29/16 14:45	08/02/16 03:31	1

Method: 6010C - Metals (ICP) - TCLP

Client Sample ID: SRSF-3(0)
Date Collected: 07/22/16 13:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-12
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.20	0.016	mg/L		07/29/16 14:45	08/04/16 06:54	1
Arsenic	ND		0.50	0.022	mg/L		07/29/16 14:45	08/05/16 14:38	1
Copper	0.10	J B	2.0	0.021	mg/L		07/29/16 14:45	08/05/16 14:38	1
Lead	0.32	J B	0.50	0.013	mg/L		07/29/16 14:45	08/04/16 06:54	1
Tin	ND		0.20	0.029	mg/L		07/29/16 14:45	08/05/16 14:38	1
Zinc	0.041	J	2.0	0.022	mg/L		07/29/16 14:45	08/04/16 06:54	1
Cadmium	0.0061	J	0.10	0.0020	mg/L		07/29/16 14:45	08/04/16 06:54	1

Client Sample ID: SRSF-4(0)
Date Collected: 07/22/16 13:45
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-13
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0		0.20	0.016	mg/L		07/29/16 14:45	08/04/16 06:57	1
Arsenic	0.14	J	0.50	0.022	mg/L		07/29/16 14:45	08/05/16 14:41	1
Copper	0.055	J B	2.0	0.021	mg/L		07/29/16 14:45	08/05/16 14:41	1
Lead	40	B	0.50	0.013	mg/L		07/29/16 14:45	08/04/16 06:57	1
Tin	ND		0.20	0.029	mg/L		07/29/16 14:45	08/05/16 14:41	1
Zinc	0.12	J	2.0	0.022	mg/L		07/29/16 14:45	08/04/16 06:57	1
Cadmium	0.024	J	0.10	0.0020	mg/L		07/29/16 14:45	08/04/16 06:57	1

General Chemistry

Client Sample ID: SRSF-3C(0)
Date Collected: 07/22/16 09:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-1
Matrix: Solid
Percent Solids: 96.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.9		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-3D(0)
Date Collected: 07/22/16 10:00
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-2
Matrix: Solid
Percent Solids: 95.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.6		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-3E(0)
Date Collected: 07/22/16 10:15
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-3
Matrix: Solid
Percent Solids: 98.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.7		0.1	0.1	%			08/01/16 10:48	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

General Chemistry

Client Sample ID: SRSF-3C(3)
Date Collected: 07/22/16 09:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-4
Matrix: Solid
Percent Solids: 94.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	5.9		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-3E(3)
Date Collected: 07/22/16 10:20
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-5
Matrix: Solid
Percent Solids: 97.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.0		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-4NW(0)
Date Collected: 07/22/16 10:05
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-6
Matrix: Solid
Percent Solids: 97.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.3		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-4C(0)
Date Collected: 07/22/16 10:10
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-7
Matrix: Solid
Percent Solids: 99.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.0		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-4NE(0)
Date Collected: 07/22/16 10:20
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-8
Matrix: Solid
Percent Solids: 98.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.7		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-4SE(0)
Date Collected: 07/22/16 10:25
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-9
Matrix: Solid
Percent Solids: 97.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.4		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-4E(0)
Date Collected: 07/22/16 10:30
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-10
Matrix: Solid
Percent Solids: 97.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.0		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: NRSF-24
Date Collected: 07/22/16 13:45
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-11
Matrix: Solid
Percent Solids: 97.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.3		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-3(0)
Date Collected: 07/22/16 13:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-12
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.9		0.1	0.1	%			08/01/16 10:48	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

General Chemistry

Client Sample ID: SRSF-4(0)
Date Collected: 07/22/16 13:45
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-13
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.7		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-5(0)
Date Collected: 07/22/16 13:51
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-14
Matrix: Solid
Percent Solids: 98.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.4		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-6(0)
Date Collected: 07/22/16 13:45
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-15
Matrix: Solid
Percent Solids: 97.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.1		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-7(0)
Date Collected: 07/22/16 13:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-16
Matrix: Solid
Percent Solids: 97.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.2		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-8(0)
Date Collected: 07/22/16 13:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-17
Matrix: Solid
Percent Solids: 98.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.9		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-9(0)
Date Collected: 07/22/16 13:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-18
Matrix: Solid
Percent Solids: 98.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.8		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-2(0)
Date Collected: 07/22/16 13:40
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-19
Matrix: Solid
Percent Solids: 97.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.0		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-1(0)
Date Collected: 07/22/16 13:51
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-20
Matrix: Solid
Percent Solids: 97.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.7		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: SRSF-3A(0)
Date Collected: 07/22/16 09:35
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-21
Matrix: Solid
Percent Solids: 97.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.8		0.1	0.1	%			08/01/16 10:48	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

General Chemistry

Client Sample ID: SRSF-3B(0)
Date Collected: 07/22/16 09:45
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-22
Matrix: Solid
Percent Solids: 95.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.6		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: NRSF-17
Date Collected: 07/22/16 13:45
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-23
Matrix: Solid
Percent Solids: 95.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.5		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: NRSF-16
Date Collected: 07/22/16 13:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-24
Matrix: Solid
Percent Solids: 96.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.6		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: NRSF-1
Date Collected: 07/22/16 13:50
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-25
Matrix: Solid
Percent Solids: 97.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.6		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: NRSF-15
Date Collected: 07/22/16 13:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-26
Matrix: Solid
Percent Solids: 96.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.1		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: NRSF-23
Date Collected: 07/22/16 13:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-27
Matrix: Solid
Percent Solids: 98.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.0		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: NRSF-14
Date Collected: 07/22/16 13:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-28
Matrix: Solid
Percent Solids: 96.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.2		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: NRSF-18
Date Collected: 07/22/16 13:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-29
Matrix: Solid
Percent Solids: 97.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.7		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: NRSF-20
Date Collected: 07/22/16 13:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-30
Matrix: Solid
Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.3		0.1	0.1	%			08/01/16 10:48	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

General Chemistry

Client Sample ID: NRSF-19
Date Collected: 07/22/16 13:55
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-31
Matrix: Solid
Percent Solids: 98.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.5		0.1	0.1	%			08/01/16 10:48	1

Client Sample ID: DUPE-6
Date Collected: 07/22/16 00:00
Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-32
Matrix: Solid
Percent Solids: 97.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.2		0.1	0.1	%			08/01/16 10:48	1

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 280-335594/1-A
Matrix: Water
Analysis Batch: 336090

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 335594

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		5.0	0.45	ug/L		07/29/16 14:45	08/01/16 18:20	1
Antimony	3.63	J	20	3.1	ug/L		07/29/16 14:45	08/01/16 18:20	1
Arsenic	ND		15	4.4	ug/L		07/29/16 14:45	08/01/16 18:20	1
Copper	ND		15	4.2	ug/L		07/29/16 14:45	08/01/16 18:20	1
Lead	ND		9.0	2.6	ug/L		07/29/16 14:45	08/01/16 18:20	1
Zinc	ND		20	4.5	ug/L		07/29/16 14:45	08/01/16 18:20	1
Tin	ND		100	5.8	ug/L		07/29/16 14:45	08/01/16 18:20	1

Lab Sample ID: LCS 280-335594/2-A
Matrix: Water
Analysis Batch: 336090

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 335594

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	100	104		ug/L		104	88 - 111
Antimony	500	518		ug/L		104	88 - 110
Arsenic	1000	1010		ug/L		101	88 - 110
Copper	250	260		ug/L		104	86 - 112
Lead	500	497		ug/L		99	89 - 110
Zinc	500	486		ug/L		97	85 - 111
Tin	2000	2020		ug/L		101	85 - 113

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-335600/1-A
Matrix: Solid
Analysis Batch: 336112

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 335600

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg		07/29/16 14:45	08/02/16 01:06	1
Arsenic	ND		2.0	0.66	mg/Kg		07/29/16 14:45	08/02/16 01:06	1
Copper	ND		2.0	0.22	mg/Kg		07/29/16 14:45	08/02/16 01:06	1
Tin	ND		10	0.91	mg/Kg		07/29/16 14:45	08/02/16 01:06	1
Cadmium	0.0530	J	0.50	0.041	mg/Kg		07/29/16 14:45	08/02/16 01:06	1

Lab Sample ID: MB 280-335600/1-A
Matrix: Solid
Analysis Batch: 336231

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 335600

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1.79	^	0.90	0.27	mg/Kg		07/29/16 14:45	08/03/16 04:02	1
Zinc	ND		3.0	0.40	mg/Kg		07/29/16 14:45	08/03/16 04:02	1

Lab Sample ID: LCS 280-335600/2-A
Matrix: Solid
Analysis Batch: 336112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 335600

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	48.9		mg/Kg		98	82 - 110
Arsenic	100	97.9		mg/Kg		98	85 - 110

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 280-335600/2-A
Matrix: Solid
Analysis Batch: 336112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 335600

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	25.0	23.8		mg/Kg		95	88 - 110
Tin	200	193		mg/Kg		96	84 - 110
Cadmium	10.0	9.68		mg/Kg		97	87 - 110

Lab Sample ID: LCS 280-335600/2-A
Matrix: Solid
Analysis Batch: 336231

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 335600

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	50.0	49.5	^	mg/Kg		99	86 - 110
Zinc	50.0	47.2		mg/Kg		94	76 - 114

Lab Sample ID: 280-86004-1 MS
Matrix: Solid
Analysis Batch: 336112

Client Sample ID: SRSF-3C(0)
Prep Type: Total/NA
Prep Batch: 335600

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.58	J F1 F2	40.5	180	F1	mg/Kg	☼	443	20 - 200
Arsenic	6.3		80.9	73.9		mg/Kg	☼	84	76 - 111
Copper	20		20.2	36.8		mg/Kg	☼	82	37 - 187
Tin	2.0	J F1	162	124	F1	mg/Kg	☼	76	77 - 126
Cadmium	1.4	B	8.09	8.02		mg/Kg	☼	82	40 - 130

Lab Sample ID: 280-86004-1 MS
Matrix: Solid
Analysis Batch: 336231

Client Sample ID: SRSF-3C(0)
Prep Type: Total/NA
Prep Batch: 335600

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	340	F2 B ^	40.5	56900	E 4 ^	mg/Kg	☼	13969	70 - 200
Zinc	64	F1	40.5	84.6	F1	mg/Kg	☼	50	70 - 200

Lab Sample ID: 280-86004-1 MSD
Matrix: Solid
Analysis Batch: 336112

Client Sample ID: SRSF-3C(0)
Prep Type: Total/NA
Prep Batch: 335600

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	0.58	J F1 F2	43.2	17.0	F2	mg/Kg	☼	38	20 - 200	166	20
Arsenic	6.3		86.4	80.2		mg/Kg	☼	86	76 - 111	8	20
Copper	20		21.6	36.8		mg/Kg	☼	76	37 - 187	0	20
Tin	2.0	J F1	173	136		mg/Kg	☼	77	77 - 126	9	20
Cadmium	1.4	B	8.64	8.59		mg/Kg	☼	84	40 - 130	7	20

Lab Sample ID: 280-86004-1 MSD
Matrix: Solid
Analysis Batch: 336231

Client Sample ID: SRSF-3C(0)
Prep Type: Total/NA
Prep Batch: 335600

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	340	F2 B ^	43.2	248	4 F2 ^	mg/Kg	☼	-223	70 - 200	198	20
Zinc	64	F1	43.2	103		mg/Kg	☼	90	70 - 200	20	20

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Lab Sample ID: MB 280-335601/1-A

Matrix: Solid

Analysis Batch: 336112

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 335601

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg		07/29/16 14:45	08/02/16 02:20	1
Arsenic	ND		2.0	0.66	mg/Kg		07/29/16 14:45	08/02/16 02:20	1
Tin	ND		10	0.91	mg/Kg		07/29/16 14:45	08/02/16 02:20	1
Zinc	1.19	J	3.0	0.40	mg/Kg		07/29/16 14:45	08/02/16 02:20	1
Cadmium	0.0450	J	0.50	0.041	mg/Kg		07/29/16 14:45	08/02/16 02:20	1

Lab Sample ID: MB 280-335601/1-A

Matrix: Solid

Analysis Batch: 336231

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 335601

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.367	J	0.90	0.27	mg/Kg		07/29/16 14:45	08/03/16 05:19	1

Lab Sample ID: LCS 280-335601/2-A

Matrix: Solid

Analysis Batch: 336112

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 335601

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	50.0	48.6		mg/Kg		97	82 - 110
Arsenic	100	95.1		mg/Kg		95	85 - 110
Tin	200	187		mg/Kg		93	84 - 110
Zinc	50.0	45.1		mg/Kg		90	76 - 114
Cadmium	10.0	9.43		mg/Kg		94	87 - 110

Lab Sample ID: LCS 280-335601/2-A

Matrix: Solid

Analysis Batch: 336231

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 335601

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lead	50.0	47.4		mg/Kg		95	86 - 110

Lab Sample ID: 280-86004-17 MS

Matrix: Solid

Analysis Batch: 336112

Client Sample ID: SRSF-8(0)

Prep Type: Total/NA

Prep Batch: 335601

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	ND	F2	39.5	15.3		mg/Kg	☼	39	20 - 200
Arsenic	5.9		78.9	76.1		mg/Kg	☼	89	76 - 111
Tin	0.91	J	158	125		mg/Kg	☼	79	77 - 126
Zinc	52	B	39.5	89.3		mg/Kg	☼	95	70 - 200
Cadmium	1.3	B	7.89	8.20		mg/Kg	☼	87	40 - 130

Lab Sample ID: 280-86004-17 MS

Matrix: Solid

Analysis Batch: 336231

Client Sample ID: SRSF-8(0)

Prep Type: Total/NA

Prep Batch: 335601

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Lead	56	B	39.5	101		mg/Kg	☼	115	70 - 200

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-86004-17 MSD

Matrix: Solid

Analysis Batch: 336112

Client Sample ID: SRSF-8(0)

Prep Type: Total/NA

Prep Batch: 335601

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	ND	F2	44.9	20.5	F2	mg/Kg	☼	46	20 - 200	29	20
Arsenic	5.9		89.9	88.0		mg/Kg	☼	91	76 - 111	14	20
Tin	0.91	J	180	148		mg/Kg	☼	82	77 - 126	17	20
Zinc	52	B	44.9	93.6		mg/Kg	☼	93	70 - 200	5	20
Cadmium	1.3	B	8.99	9.46		mg/Kg	☼	91	40 - 130	14	20

Lab Sample ID: 280-86004-17 MSD

Matrix: Solid

Analysis Batch: 336231

Client Sample ID: SRSF-8(0)

Prep Type: Total/NA

Prep Batch: 335601

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lead	56	B	44.9	93.9		mg/Kg	☼	85	70 - 200	7	20

Lab Sample ID: MB 280-336719/1-A

Matrix: Solid

Analysis Batch: 336881

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 336719

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		2.0	0.22	mg/Kg		08/05/16 14:40	08/06/16 12:21	1

Lab Sample ID: LCS 280-336719/2-A

Matrix: Solid

Analysis Batch: 336881

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 336719

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Copper	25.0	25.3		mg/Kg		101	88 - 110

Lab Sample ID: 280-86004-17 MS

Matrix: Solid

Analysis Batch: 336881

Client Sample ID: SRSF-8(0)

Prep Type: Total/NA

Prep Batch: 336719

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Copper	13		22.3	36.0		mg/Kg	☼	101	37 - 187

Lab Sample ID: 280-86004-17 MSD

Matrix: Solid

Analysis Batch: 336881

Client Sample ID: SRSF-8(0)

Prep Type: Total/NA

Prep Batch: 336719

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Copper	13		21.6	35.9		mg/Kg	☼	104	37 - 187	0	20

Lab Sample ID: LB 280-335267/1-E

Matrix: Solid

Analysis Batch: 336457

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 335619

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.20	0.016	mg/L		07/29/16 14:45	08/04/16 06:36	1
Lead	0.0448	J	0.50	0.013	mg/L		07/29/16 14:45	08/04/16 06:36	1
Zinc	ND		2.0	0.022	mg/L		07/29/16 14:45	08/04/16 06:36	1

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LB 280-335267/1-E
Matrix: Solid
Analysis Batch: 336457

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 335619

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.10	0.0020	mg/L		07/29/16 14:45	08/04/16 06:36	1

Lab Sample ID: LB 280-335267/1-E
Matrix: Solid
Analysis Batch: 336808

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 335619

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.50	0.022	mg/L		07/29/16 14:45	08/05/16 14:20	1
Copper	0.0513	J	2.0	0.021	mg/L		07/29/16 14:45	08/05/16 14:20	1
Tin	ND		0.20	0.029	mg/L		07/29/16 14:45	08/05/16 14:20	1

Lab Sample ID: LCS 280-335267/2-E
Matrix: Solid
Analysis Batch: 336457

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 335619

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.501		mg/L		100	80 - 120
Lead	5.50	5.66		mg/L		103	80 - 120
Zinc	2.50	2.63		mg/L		105	80 - 120
Cadmium	1.10	1.16		mg/L		105	80 - 120

Lab Sample ID: LCS 280-335267/2-E
Matrix: Solid
Analysis Batch: 336808

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 335619

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.00	4.03		mg/L		101	80 - 120
Copper	2.25	2.27		mg/L		101	80 - 120
Tin	2.00	1.94		mg/L		97	80 - 120

Method: Moisture - Percent Moisture

Lab Sample ID: 280-86004-14 DU
Matrix: Solid
Analysis Batch: 335967

Client Sample ID: SRSF-5(0)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	1.4		1.3		%		9	20

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Metals

Leach Batch: 335267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-12	SRSF-3(0)	TCLP	Solid	1311	
280-86004-13	SRSF-4(0)	TCLP	Solid	1311	
LB 280-335267/1-E	Method Blank	TCLP	Solid	1311	
LCS 280-335267/2-E	Lab Control Sample	TCLP	Solid	1311	

Prep Batch: 335594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-33	RINSE-7	Total/NA	Water	3010A	
280-86004-34	RINSE-8	Total/NA	Water	3010A	
MB 280-335594/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-335594/2-A	Lab Control Sample	Total/NA	Water	3010A	

Prep Batch: 335600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-1	SRSF-3C(0)	Total/NA	Solid	3050B	
280-86004-2	SRSF-3D(0)	Total/NA	Solid	3050B	
280-86004-3	SRSF-3E(0)	Total/NA	Solid	3050B	
280-86004-4	SRSF-3C(3)	Total/NA	Solid	3050B	
280-86004-5	SRSF-3E(3)	Total/NA	Solid	3050B	
280-86004-6	SRSF-4NW(0)	Total/NA	Solid	3050B	
280-86004-7	SRSF-4C(0)	Total/NA	Solid	3050B	
280-86004-8	SRSF-4NE(0)	Total/NA	Solid	3050B	
280-86004-9	SRSF-4SE(0)	Total/NA	Solid	3050B	
280-86004-10	SRSF-4E(0)	Total/NA	Solid	3050B	
280-86004-11	NRSF-24	Total/NA	Solid	3050B	
280-86004-12	SRSF-3(0)	Total/NA	Solid	3050B	
280-86004-13	SRSF-4(0)	Total/NA	Solid	3050B	
280-86004-14	SRSF-5(0)	Total/NA	Solid	3050B	
280-86004-15	SRSF-6(0)	Total/NA	Solid	3050B	
280-86004-16	SRSF-7(0)	Total/NA	Solid	3050B	
MB 280-335600/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-335600/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-86004-1 MS	SRSF-3C(0)	Total/NA	Solid	3050B	
280-86004-1 MSD	SRSF-3C(0)	Total/NA	Solid	3050B	

Prep Batch: 335601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-17	SRSF-8(0)	Total/NA	Solid	3050B	
280-86004-18	SRSF-9(0)	Total/NA	Solid	3050B	
280-86004-19	SRSF-2(0)	Total/NA	Solid	3050B	
280-86004-20	SRSF-1(0)	Total/NA	Solid	3050B	
280-86004-21	SRSF-3A(0)	Total/NA	Solid	3050B	
280-86004-22	SRSF-3B(0)	Total/NA	Solid	3050B	
280-86004-23	NRSF-17	Total/NA	Solid	3050B	
280-86004-24	NRSF-16	Total/NA	Solid	3050B	
280-86004-25	NRSF-1	Total/NA	Solid	3050B	
280-86004-26	NRSF-15	Total/NA	Solid	3050B	
280-86004-27	NRSF-23	Total/NA	Solid	3050B	
280-86004-28	NRSF-14	Total/NA	Solid	3050B	
280-86004-29	NRSF-18	Total/NA	Solid	3050B	
280-86004-30	NRSF-20	Total/NA	Solid	3050B	

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Metals (Continued)

Prep Batch: 335601 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-31	NRSF-19	Total/NA	Solid	3050B	
280-86004-32	DUPE-6	Total/NA	Solid	3050B	
MB 280-335601/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-335601/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-86004-17 MS	SRSF-8(0)	Total/NA	Solid	3050B	
280-86004-17 MSD	SRSF-8(0)	Total/NA	Solid	3050B	

Prep Batch: 335619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-12	SRSF-3(0)	TCLP	Solid	3010A	335267
280-86004-13	SRSF-4(0)	TCLP	Solid	3010A	335267
LB 280-335267/1-E	Method Blank	TCLP	Solid	3010A	335267
LCS 280-335267/2-E	Lab Control Sample	TCLP	Solid	3010A	335267

Analysis Batch: 336090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-33	RINSE-7	Total/NA	Water	6010B	335594
280-86004-34	RINSE-8	Total/NA	Water	6010B	335594
MB 280-335594/1-A	Method Blank	Total/NA	Water	6010B	335594
LCS 280-335594/2-A	Lab Control Sample	Total/NA	Water	6010B	335594

Analysis Batch: 336112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-1	SRSF-3C(0)	Total/NA	Solid	6010C	335600
280-86004-2	SRSF-3D(0)	Total/NA	Solid	6010C	335600
280-86004-3	SRSF-3E(0)	Total/NA	Solid	6010C	335600
280-86004-4	SRSF-3C(3)	Total/NA	Solid	6010C	335600
280-86004-5	SRSF-3E(3)	Total/NA	Solid	6010C	335600
280-86004-6	SRSF-4NW(0)	Total/NA	Solid	6010C	335600
280-86004-7	SRSF-4C(0)	Total/NA	Solid	6010C	335600
280-86004-8	SRSF-4NE(0)	Total/NA	Solid	6010C	335600
280-86004-9	SRSF-4SE(0)	Total/NA	Solid	6010C	335600
280-86004-10	SRSF-4E(0)	Total/NA	Solid	6010C	335600
280-86004-11	NRSF-24	Total/NA	Solid	6010C	335600
280-86004-12	SRSF-3(0)	Total/NA	Solid	6010C	335600
280-86004-13	SRSF-4(0)	Total/NA	Solid	6010C	335600
280-86004-14	SRSF-5(0)	Total/NA	Solid	6010C	335600
280-86004-15	SRSF-6(0)	Total/NA	Solid	6010C	335600
280-86004-16	SRSF-7(0)	Total/NA	Solid	6010C	335600
280-86004-17	SRSF-8(0)	Total/NA	Solid	6010C	335601
280-86004-18	SRSF-9(0)	Total/NA	Solid	6010C	335601
280-86004-19	SRSF-2(0)	Total/NA	Solid	6010C	335601
280-86004-20	SRSF-1(0)	Total/NA	Solid	6010C	335601
280-86004-21	SRSF-3A(0)	Total/NA	Solid	6010C	335601
280-86004-22	SRSF-3B(0)	Total/NA	Solid	6010C	335601
280-86004-23	NRSF-17	Total/NA	Solid	6010C	335601
280-86004-24	NRSF-16	Total/NA	Solid	6010C	335601
280-86004-25	NRSF-1	Total/NA	Solid	6010C	335601
280-86004-26	NRSF-15	Total/NA	Solid	6010C	335601
280-86004-27	NRSF-23	Total/NA	Solid	6010C	335601
280-86004-28	NRSF-14	Total/NA	Solid	6010C	335601

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Metals (Continued)

Analysis Batch: 336112 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-29	NRSF-18	Total/NA	Solid	6010C	335601
280-86004-31	NRSF-19	Total/NA	Solid	6010C	335601
280-86004-32	DUPE-6	Total/NA	Solid	6010C	335601
MB 280-335600/1-A	Method Blank	Total/NA	Solid	6010C	335600
MB 280-335601/1-A	Method Blank	Total/NA	Solid	6010C	335601
LCS 280-335600/2-A	Lab Control Sample	Total/NA	Solid	6010C	335600
LCS 280-335601/2-A	Lab Control Sample	Total/NA	Solid	6010C	335601
280-86004-1 MS	SRSF-3C(0)	Total/NA	Solid	6010C	335600
280-86004-1 MSD	SRSF-3C(0)	Total/NA	Solid	6010C	335600
280-86004-17 MS	SRSF-8(0)	Total/NA	Solid	6010C	335601
280-86004-17 MSD	SRSF-8(0)	Total/NA	Solid	6010C	335601

Analysis Batch: 336231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-1	SRSF-3C(0)	Total/NA	Solid	6010C	335600
280-86004-2	SRSF-3D(0)	Total/NA	Solid	6010C	335600
280-86004-3	SRSF-3E(0)	Total/NA	Solid	6010C	335600
280-86004-4	SRSF-3C(3)	Total/NA	Solid	6010C	335600
280-86004-5	SRSF-3E(3)	Total/NA	Solid	6010C	335600
280-86004-6	SRSF-4NW(0)	Total/NA	Solid	6010C	335600
280-86004-7	SRSF-4C(0)	Total/NA	Solid	6010C	335600
280-86004-8	SRSF-4NE(0)	Total/NA	Solid	6010C	335600
280-86004-9	SRSF-4SE(0)	Total/NA	Solid	6010C	335600
280-86004-10	SRSF-4E(0)	Total/NA	Solid	6010C	335600
280-86004-11	NRSF-24	Total/NA	Solid	6010C	335600
280-86004-12	SRSF-3(0)	Total/NA	Solid	6010C	335600
280-86004-13	SRSF-4(0)	Total/NA	Solid	6010C	335600
280-86004-14	SRSF-5(0)	Total/NA	Solid	6010C	335600
280-86004-15	SRSF-6(0)	Total/NA	Solid	6010C	335600
280-86004-16	SRSF-7(0)	Total/NA	Solid	6010C	335600
280-86004-17	SRSF-8(0)	Total/NA	Solid	6010C	335601
280-86004-18	SRSF-9(0)	Total/NA	Solid	6010C	335601
280-86004-19	SRSF-2(0)	Total/NA	Solid	6010C	335601
280-86004-20	SRSF-1(0)	Total/NA	Solid	6010C	335601
280-86004-21	SRSF-3A(0)	Total/NA	Solid	6010C	335601
280-86004-22	SRSF-3B(0)	Total/NA	Solid	6010C	335601
280-86004-23	NRSF-17	Total/NA	Solid	6010C	335601
280-86004-24	NRSF-16	Total/NA	Solid	6010C	335601
280-86004-25	NRSF-1	Total/NA	Solid	6010C	335601
280-86004-26	NRSF-15	Total/NA	Solid	6010C	335601
280-86004-27	NRSF-23	Total/NA	Solid	6010C	335601
280-86004-28	NRSF-14	Total/NA	Solid	6010C	335601
280-86004-29	NRSF-18	Total/NA	Solid	6010C	335601
280-86004-30	NRSF-20	Total/NA	Solid	6010C	335601
280-86004-31	NRSF-19	Total/NA	Solid	6010C	335601
280-86004-32	DUPE-6	Total/NA	Solid	6010C	335601
MB 280-335600/1-A	Method Blank	Total/NA	Solid	6010C	335600
MB 280-335601/1-A	Method Blank	Total/NA	Solid	6010C	335601
LCS 280-335600/2-A	Lab Control Sample	Total/NA	Solid	6010C	335600
LCS 280-335601/2-A	Lab Control Sample	Total/NA	Solid	6010C	335601
280-86004-1 MS	SRSF-3C(0)	Total/NA	Solid	6010C	335600

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Metals (Continued)

Analysis Batch: 336231 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-1 MSD	SRSF-3C(0)	Total/NA	Solid	6010C	335600
280-86004-17 MS	SRSF-8(0)	Total/NA	Solid	6010C	335601
280-86004-17 MSD	SRSF-8(0)	Total/NA	Solid	6010C	335601

Analysis Batch: 336452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-6	SRSF-4NW(0)	Total/NA	Solid	6010C	335600

Analysis Batch: 336457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-12	SRSF-3(0)	TCLP	Solid	6010C	335619
280-86004-13	SRSF-4(0)	TCLP	Solid	6010C	335619
LB 280-335267/1-E	Method Blank	TCLP	Solid	6010C	335619
LCS 280-335267/2-E	Lab Control Sample	TCLP	Solid	6010C	335619

Prep Batch: 336719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-17	SRSF-8(0)	Total/NA	Solid	3050B	
280-86004-18	SRSF-9(0)	Total/NA	Solid	3050B	
280-86004-19	SRSF-2(0)	Total/NA	Solid	3050B	
280-86004-20	SRSF-1(0)	Total/NA	Solid	3050B	
280-86004-21	SRSF-3A(0)	Total/NA	Solid	3050B	
280-86004-22	SRSF-3B(0)	Total/NA	Solid	3050B	
280-86004-23	NRSF-17	Total/NA	Solid	3050B	
280-86004-24	NRSF-16	Total/NA	Solid	3050B	
280-86004-25	NRSF-1	Total/NA	Solid	3050B	
280-86004-26	NRSF-15	Total/NA	Solid	3050B	
280-86004-27	NRSF-23	Total/NA	Solid	3050B	
280-86004-28	NRSF-14	Total/NA	Solid	3050B	
280-86004-29	NRSF-18	Total/NA	Solid	3050B	
280-86004-30	NRSF-20	Total/NA	Solid	3050B	
280-86004-31	NRSF-19	Total/NA	Solid	3050B	
280-86004-32	DUPE-6	Total/NA	Solid	3050B	
MB 280-336719/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-336719/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-86004-17 MS	SRSF-8(0)	Total/NA	Solid	3050B	
280-86004-17 MSD	SRSF-8(0)	Total/NA	Solid	3050B	

Analysis Batch: 336808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-12	SRSF-3(0)	TCLP	Solid	6010C	335619
280-86004-13	SRSF-4(0)	TCLP	Solid	6010C	335619
LB 280-335267/1-E	Method Blank	TCLP	Solid	6010C	335619
LCS 280-335267/2-E	Lab Control Sample	TCLP	Solid	6010C	335619

Analysis Batch: 336881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-17	SRSF-8(0)	Total/NA	Solid	6010C	336719
280-86004-18	SRSF-9(0)	Total/NA	Solid	6010C	336719
280-86004-19	SRSF-2(0)	Total/NA	Solid	6010C	336719
280-86004-20	SRSF-1(0)	Total/NA	Solid	6010C	336719

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Metals (Continued)

Analysis Batch: 336881 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-21	SRSF-3A(0)	Total/NA	Solid	6010C	336719
280-86004-22	SRSF-3B(0)	Total/NA	Solid	6010C	336719
280-86004-23	NRSF-17	Total/NA	Solid	6010C	336719
280-86004-24	NRSF-16	Total/NA	Solid	6010C	336719
280-86004-25	NRSF-1	Total/NA	Solid	6010C	336719
280-86004-26	NRSF-15	Total/NA	Solid	6010C	336719
280-86004-27	NRSF-23	Total/NA	Solid	6010C	336719
280-86004-28	NRSF-14	Total/NA	Solid	6010C	336719
280-86004-29	NRSF-18	Total/NA	Solid	6010C	336719
280-86004-30	NRSF-20	Total/NA	Solid	6010C	336719
280-86004-31	NRSF-19	Total/NA	Solid	6010C	336719
280-86004-32	DUPE-6	Total/NA	Solid	6010C	336719
MB 280-336719/1-A	Method Blank	Total/NA	Solid	6010C	336719
LCS 280-336719/2-A	Lab Control Sample	Total/NA	Solid	6010C	336719
280-86004-17 MS	SRSF-8(0)	Total/NA	Solid	6010C	336719
280-86004-17 MSD	SRSF-8(0)	Total/NA	Solid	6010C	336719

General Chemistry

Analysis Batch: 335967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-1	SRSF-3C(0)	Total/NA	Solid	Moisture	
280-86004-2	SRSF-3D(0)	Total/NA	Solid	Moisture	
280-86004-3	SRSF-3E(0)	Total/NA	Solid	Moisture	
280-86004-4	SRSF-3C(3)	Total/NA	Solid	Moisture	
280-86004-5	SRSF-3E(3)	Total/NA	Solid	Moisture	
280-86004-6	SRSF-4NW(0)	Total/NA	Solid	Moisture	
280-86004-7	SRSF-4C(0)	Total/NA	Solid	Moisture	
280-86004-8	SRSF-4NE(0)	Total/NA	Solid	Moisture	
280-86004-9	SRSF-4SE(0)	Total/NA	Solid	Moisture	
280-86004-10	SRSF-4E(0)	Total/NA	Solid	Moisture	
280-86004-11	NRSF-24	Total/NA	Solid	Moisture	
280-86004-12	SRSF-3(0)	Total/NA	Solid	Moisture	
280-86004-13	SRSF-4(0)	Total/NA	Solid	Moisture	
280-86004-14	SRSF-5(0)	Total/NA	Solid	Moisture	
280-86004-15	SRSF-6(0)	Total/NA	Solid	Moisture	
280-86004-16	SRSF-7(0)	Total/NA	Solid	Moisture	
280-86004-17	SRSF-8(0)	Total/NA	Solid	Moisture	
280-86004-18	SRSF-9(0)	Total/NA	Solid	Moisture	
280-86004-19	SRSF-2(0)	Total/NA	Solid	Moisture	
280-86004-20	SRSF-1(0)	Total/NA	Solid	Moisture	
280-86004-21	SRSF-3A(0)	Total/NA	Solid	Moisture	
280-86004-22	SRSF-3B(0)	Total/NA	Solid	Moisture	
280-86004-23	NRSF-17	Total/NA	Solid	Moisture	
280-86004-24	NRSF-16	Total/NA	Solid	Moisture	
280-86004-25	NRSF-1	Total/NA	Solid	Moisture	
280-86004-26	NRSF-15	Total/NA	Solid	Moisture	
280-86004-27	NRSF-23	Total/NA	Solid	Moisture	
280-86004-28	NRSF-14	Total/NA	Solid	Moisture	
280-86004-29	NRSF-18	Total/NA	Solid	Moisture	

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

General Chemistry (Continued)

Analysis Batch: 335967 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86004-30	NRSF-20	Total/NA	Solid	Moisture	
280-86004-31	NRSF-19	Total/NA	Solid	Moisture	
280-86004-32	DUPE-6	Total/NA	Solid	Moisture	
280-86004-14 DU	SRSF-5(0)	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: SRSF-3C(0)

Date Collected: 07/22/16 09:50

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-3C(0)

Date Collected: 07/22/16 09:50

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-1

Matrix: Solid

Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.088 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 01:11	LLB	TAL DEN
Total/NA	Prep	3050B			1.088 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 04:07	CRR	TAL DEN

Client Sample ID: SRSF-3D(0)

Date Collected: 07/22/16 10:00

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-3D(0)

Date Collected: 07/22/16 10:00

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-2

Matrix: Solid

Percent Solids: 95.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.383 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 01:23	LLB	TAL DEN
Total/NA	Prep	3050B			1.383 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 04:19	CRR	TAL DEN

Client Sample ID: SRSF-3E(0)

Date Collected: 07/22/16 10:15

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-3E(0)

Date Collected: 07/22/16 10:15

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-3

Matrix: Solid

Percent Solids: 98.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.211 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: SRSF-3E(0)

Date Collected: 07/22/16 10:15

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-3

Matrix: Solid

Percent Solids: 98.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010C		1			336112	08/02/16 01:26	LLB	TAL DEN
Total/NA	Prep	3050B			1.211 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 04:22	CRR	TAL DEN

Client Sample ID: SRSF-3C(3)

Date Collected: 07/22/16 09:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-3C(3)

Date Collected: 07/22/16 09:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-4

Matrix: Solid

Percent Solids: 94.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.058 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 01:28	LLB	TAL DEN
Total/NA	Prep	3050B			1.058 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 04:24	CRR	TAL DEN

Client Sample ID: SRSF-3E(3)

Date Collected: 07/22/16 10:20

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-3E(3)

Date Collected: 07/22/16 10:20

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-5

Matrix: Solid

Percent Solids: 97.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.025 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 01:41	LLB	TAL DEN
Total/NA	Prep	3050B			1.025 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 04:37	CRR	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: SRSF-4NW(0)

Date Collected: 07/22/16 10:05

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-4NW(0)

Date Collected: 07/22/16 10:05

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-6

Matrix: Solid

Percent Solids: 97.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.223 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 01:43	LLB	TAL DEN
Total/NA	Prep	3050B			1.223 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		10			336231	08/03/16 04:42	CRR	TAL DEN
Total/NA	Prep	3050B			1.223 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		500			336452	08/03/16 16:44	CRR	TAL DEN

Client Sample ID: SRSF-4C(0)

Date Collected: 07/22/16 10:10

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-4C(0)

Date Collected: 07/22/16 10:10

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-7

Matrix: Solid

Percent Solids: 99.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.183 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 01:46	LLB	TAL DEN
Total/NA	Prep	3050B			1.183 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 04:44	CRR	TAL DEN

Client Sample ID: SRSF-4NE(0)

Date Collected: 07/22/16 10:20

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: SRSF-4NE(0)

Date Collected: 07/22/16 10:20

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-8

Matrix: Solid

Percent Solids: 98.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.068 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 01:48	LLB	TAL DEN
Total/NA	Prep	3050B			1.068 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 04:47	CRR	TAL DEN

Client Sample ID: SRSF-4SE(0)

Date Collected: 07/22/16 10:25

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-4SE(0)

Date Collected: 07/22/16 10:25

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-9

Matrix: Solid

Percent Solids: 97.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.113 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 01:51	LLB	TAL DEN
Total/NA	Prep	3050B			1.113 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 04:49	CRR	TAL DEN

Client Sample ID: SRSF-4E(0)

Date Collected: 07/22/16 10:30

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-4E(0)

Date Collected: 07/22/16 10:30

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-10

Matrix: Solid

Percent Solids: 97.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1324 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 01:53	LLB	TAL DEN
Total/NA	Prep	3050B			1324 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 04:52	CRR	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: NRSF-24

Date Collected: 07/22/16 13:45

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: NRSF-24

Date Collected: 07/22/16 13:45

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-11

Matrix: Solid

Percent Solids: 97.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.185 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 01:56	LLB	TAL DEN
Total/NA	Prep	3050B			1.185 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 04:54	CRR	TAL DEN

Client Sample ID: SRSF-3(0)

Date Collected: 07/22/16 13:50

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	335267	07/26/16 18:28	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	335619	07/29/16 14:45	SUR	TAL DEN
TCLP	Analysis	6010C		1			336457	08/04/16 06:54	CMK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	335267	07/26/16 18:28	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	335619	07/29/16 14:45	SUR	TAL DEN
TCLP	Analysis	6010C		1			336808	08/05/16 14:38	CRR	TAL DEN
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-3(0)

Date Collected: 07/22/16 13:50

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-12

Matrix: Solid

Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.081 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 01:58	LLB	TAL DEN
Total/NA	Prep	3050B			1.081 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 04:57	CRR	TAL DEN

Client Sample ID: SRSF-4(0)

Date Collected: 07/22/16 13:45

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	335267	07/26/16 18:28	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	335619	07/29/16 14:45	SUR	TAL DEN
TCLP	Analysis	6010C		1			336457	08/04/16 06:57	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: SRSF-4(0)

Date Collected: 07/22/16 13:45

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	335267	07/26/16 18:28	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	335619	07/29/16 14:45	SUR	TAL DEN
TCLP	Analysis	6010C		1			336808	08/05/16 14:41	CRR	TAL DEN
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-4(0)

Date Collected: 07/22/16 13:45

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-13

Matrix: Solid

Percent Solids: 98.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.020 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 02:01	LLB	TAL DEN
Total/NA	Prep	3050B			1.020 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 04:59	CRR	TAL DEN

Client Sample ID: SRSF-5(0)

Date Collected: 07/22/16 13:51

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-14

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-5(0)

Date Collected: 07/22/16 13:51

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-14

Matrix: Solid

Percent Solids: 98.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.387 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 02:03	LLB	TAL DEN
Total/NA	Prep	3050B			1.387 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 05:12	CRR	TAL DEN

Client Sample ID: SRSF-6(0)

Date Collected: 07/22/16 13:45

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-15

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: SRSF-6(0)

Date Collected: 07/22/16 13:45

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-15

Matrix: Solid

Percent Solids: 97.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.269 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 02:15	LLB	TAL DEN
Total/NA	Prep	3050B			1.269 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 05:14	CRR	TAL DEN

Client Sample ID: SRSF-7(0)

Date Collected: 07/22/16 13:50

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-16

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-7(0)

Date Collected: 07/22/16 13:50

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-16

Matrix: Solid

Percent Solids: 97.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.425 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 02:18	LLB	TAL DEN
Total/NA	Prep	3050B			1.425 g	100 mL	335600	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 05:17	CRR	TAL DEN

Client Sample ID: SRSF-8(0)

Date Collected: 07/22/16 13:50

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-17

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-8(0)

Date Collected: 07/22/16 13:50

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-17

Matrix: Solid

Percent Solids: 98.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.345 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 02:25	LLB	TAL DEN
Total/NA	Prep	3050B			1.345 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 05:24	CRR	TAL DEN
Total/NA	Prep	3050B			1.106 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336881	08/06/16 12:26	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: SRSF-9(0)

Date Collected: 07/22/16 13:50

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-18

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-9(0)

Date Collected: 07/22/16 13:50

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-18

Matrix: Solid

Percent Solids: 98.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.132 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 02:37	LLB	TAL DEN
Total/NA	Prep	3050B			1.132 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 05:46	CRR	TAL DEN
Total/NA	Prep	3050B			1.252 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336881	08/06/16 12:39	CMK	TAL DEN

Client Sample ID: SRSF-2(0)

Date Collected: 07/22/16 13:40

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-19

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-2(0)

Date Collected: 07/22/16 13:40

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-19

Matrix: Solid

Percent Solids: 97.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.352 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 02:49	LLB	TAL DEN
Total/NA	Prep	3050B			1.352 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 05:48	CRR	TAL DEN
Total/NA	Prep	3050B			1.042 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336881	08/06/16 12:52	CMK	TAL DEN

Client Sample ID: SRSF-1(0)

Date Collected: 07/22/16 13:51

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-20

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: SRSF-1(0)

Date Collected: 07/22/16 13:51

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-20

Matrix: Solid

Percent Solids: 97.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.082 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 02:52	LLB	TAL DEN
Total/NA	Prep	3050B			1.082 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 05:51	CRR	TAL DEN
Total/NA	Prep	3050B			1.432 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336881	08/06/16 12:55	CMK	TAL DEN

Client Sample ID: SRSF-3A(0)

Date Collected: 07/22/16 09:35

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-21

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-3A(0)

Date Collected: 07/22/16 09:35

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-21

Matrix: Solid

Percent Solids: 97.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.022 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 02:54	LLB	TAL DEN
Total/NA	Prep	3050B			1.022 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 05:53	CRR	TAL DEN
Total/NA	Prep	3050B			1.138 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336881	08/06/16 12:58	CMK	TAL DEN

Client Sample ID: SRSF-3B(0)

Date Collected: 07/22/16 09:45

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-22

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: SRSF-3B(0)

Date Collected: 07/22/16 09:45

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-22

Matrix: Solid

Percent Solids: 95.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.333 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 02:57	LLB	TAL DEN
Total/NA	Prep	3050B			1.333 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 05:56	CRR	TAL DEN
Total/NA	Prep	3050B			1.333 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: SRSF-3B(0)

Date Collected: 07/22/16 09:45

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-22

Matrix: Solid

Percent Solids: 95.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010C		1			336881	08/06/16 13:00	CMK	TAL DEN

Client Sample ID: NRSF-17

Date Collected: 07/22/16 13:45

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-23

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: NRSF-17

Date Collected: 07/22/16 13:45

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-23

Matrix: Solid

Percent Solids: 95.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.042 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 02:59	LLB	TAL DEN
Total/NA	Prep	3050B			1.042 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 05:58	CRR	TAL DEN
Total/NA	Prep	3050B			1.001 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336881	08/06/16 13:03	CMK	TAL DEN

Client Sample ID: NRSF-16

Date Collected: 07/22/16 13:50

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-24

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: NRSF-16

Date Collected: 07/22/16 13:50

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-24

Matrix: Solid

Percent Solids: 96.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.160 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 03:02	LLB	TAL DEN
Total/NA	Prep	3050B			1.160 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 06:01	CRR	TAL DEN
Total/NA	Prep	3050B			1.050 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336881	08/06/16 13:05	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: NRSF-1

Date Collected: 07/22/16 13:50

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-25

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: NRSF-1

Date Collected: 07/22/16 13:50

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-25

Matrix: Solid

Percent Solids: 97.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.038 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 03:04	LLB	TAL DEN
Total/NA	Prep	3050B			1.038 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 06:03	CRR	TAL DEN
Total/NA	Prep	3050B			1.466 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336881	08/06/16 13:08	CMK	TAL DEN

Client Sample ID: NRSF-15

Date Collected: 07/22/16 13:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-26

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: NRSF-15

Date Collected: 07/22/16 13:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-26

Matrix: Solid

Percent Solids: 96.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.425 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 03:07	LLB	TAL DEN
Total/NA	Prep	3050B			1.425 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 06:06	CRR	TAL DEN
Total/NA	Prep	3050B			1.440 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336881	08/06/16 13:11	CMK	TAL DEN

Client Sample ID: NRSF-23

Date Collected: 07/22/16 13:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-27

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: NRSF-23

Date Collected: 07/22/16 13:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-27

Matrix: Solid

Percent Solids: 98.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.385 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 03:09	LLB	TAL DEN
Total/NA	Prep	3050B			1.385 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 06:08	CRR	TAL DEN
Total/NA	Prep	3050B			1.165 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336881	08/06/16 13:24	CMK	TAL DEN

Client Sample ID: NRSF-14

Date Collected: 07/22/16 13:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-28

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: NRSF-14

Date Collected: 07/22/16 13:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-28

Matrix: Solid

Percent Solids: 96.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.016 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 03:12	LLB	TAL DEN
Total/NA	Prep	3050B			1.016 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 06:21	CRR	TAL DEN
Total/NA	Prep	3050B			1.431 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336881	08/06/16 13:27	CMK	TAL DEN

Client Sample ID: NRSF-18

Date Collected: 07/22/16 13:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-29

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: NRSF-18

Date Collected: 07/22/16 13:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-29

Matrix: Solid

Percent Solids: 97.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.333 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 03:24	LLB	TAL DEN
Total/NA	Prep	3050B			1.333 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 06:23	CRR	TAL DEN
Total/NA	Prep	3050B			1.400 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: NRSF-18

Date Collected: 07/22/16 13:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-29

Matrix: Solid

Percent Solids: 97.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010C		1			336881	08/06/16 13:29	CMK	TAL DEN

Client Sample ID: NRSF-20

Date Collected: 07/22/16 13:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-30

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: NRSF-20

Date Collected: 07/22/16 13:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-30

Matrix: Solid

Percent Solids: 96.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.208 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		5			336231	08/03/16 06:26	CRR	TAL DEN
Total/NA	Prep	3050B			1.234 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336881	08/06/16 13:32	CMK	TAL DEN

Client Sample ID: NRSF-19

Date Collected: 07/22/16 13:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-31

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: NRSF-19

Date Collected: 07/22/16 13:55

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-31

Matrix: Solid

Percent Solids: 98.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.427 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 03:29	LLB	TAL DEN
Total/NA	Prep	3050B			1.427 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 06:28	CRR	TAL DEN
Total/NA	Prep	3050B			1.385 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336881	08/06/16 13:34	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Client Sample ID: DUPE-6

Date Collected: 07/22/16 00:00

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-32

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 10:48	IEU	TAL DEN

Client Sample ID: DUPE-6

Date Collected: 07/22/16 00:00

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-32

Matrix: Solid

Percent Solids: 97.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.042 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336112	08/02/16 03:31	LLB	TAL DEN
Total/NA	Prep	3050B			1.042 g	100 mL	335601	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336231	08/03/16 06:31	CRR	TAL DEN
Total/NA	Prep	3050B			1.359 g	100 mL	336719	08/05/16 14:40	SEJ	TAL DEN
Total/NA	Analysis	6010C		1			336881	08/06/16 13:37	CMK	TAL DEN

Client Sample ID: RINSE-7

Date Collected: 07/22/16 14:00

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-33

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	335594	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			336090	08/01/16 18:25	SJS	TAL DEN

Client Sample ID: RINSE-8

Date Collected: 07/22/16 14:00

Date Received: 07/22/16 15:25

Lab Sample ID: 280-86004-34

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	335594	07/29/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			336090	08/01/16 18:28	SJS	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TestAmerica Denver

Certification Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86004-1

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	4025	01-09-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture



Client Information		Lab PM:		Carrier Tracking No(s):		COC No:	
Company: Quantum Water & Environment		Kupper, Stephanie K		280-55183-19671.1		Page:	
Address: 1746 Cole Boulevard, Suite 340		E-Mail: stephanie.kupper@quantumwaterco.com		Job #:		Job #:	
City: Lakewood		Phone: 720-524-4294		Analysis Requested		Preservation Codes:	
State Zip: CO, 80401		Due Date Requested:		Field Filtered Sample (Yes or No)		A - HCL	
PO #: 720-524-4294(Tel)		TAT Requested (days):		Perform MS/MSD (Yes or No)		B - NaOH	
Email: John@quantumwaterco.com		Purchase Order Requested		EPA 6010 - Screening Rpt		C - Zn Acetate	
Project #: 28014702		WO #:		EPA 6010 - TCEP		D - Nitric Acid	
Project Name: Adams County Shooting Range		SSOW#:		EPA 6010 - TCEP		E - NaHSO4	
Site:		Sample Date		Sample Time		F - MeOH	
Sample Identification		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=soil, A=air)		G - Amchlor	
SRSF-3C(0)		G		S		H - Ascorbic Acid	
SRSF-3D(0)		1000		1000		I - Icg	
SRSF-3E(0)		1015		1015		J - DI Water	
SRSF-3C(0) (3)		0955		0955		K - EDTA	
SRSF-3E(3)		1020		1020		L - EDA	
SRSF-4NW(0)		1005		1005		Other:	
SRSF-4L(0)		1010		1010		Total Number of containers	
SRSF-4NE(0)		1020		1020		Special Instructions/Note:	
SRSF-4SE(0)		1025		1025			
SRSF-4E(0)		1030		1030			
NRSF-24		1345		1345			
Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological				☐ Return To Client ☐ Disposal By Lab ☐ Archive For ☐ Months			
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements:			
Empty Kit Relinquished by:				Method of Shipment:			
Relinquished by: [Signature]				Date/Time: 7-22-16 1525			
Relinquished by:				Date/Time:			
Relinquished by:				Date/Time:			
Custody Seal No.:				Company: TAD			
Custody Seal No.:				Company:			
Custody Seal No.:				Company:			

Chain of Custody Record

Client Information Client Contact: Mr. John Dellaport Company: Quantum Water & Environment Address: 1746 Cole Boulevard, Suite 340 City: Lakewood State, Zip: CO, 80401 Phone: 720-524-4294 (Tel) Email: John@quantumwaterco.com Project Name: Adams County Shooting Range Site:		Sampler: TCB/JAL Lab PM: Kupper, Stephanie K Phone: 720-524-4294 E-Mail: stephanie.kupper@testamericainc.com		Carrier Tracking No(s): CUC No: 280-55183-19671.1 Page: Job #:							
Due Date Requested: TAT Requested (days): PO #: Purchase Order Requested WO #: Project #: 28014702 SSOW #:		Analysis Requested									
Sample Identification SRSF-3(0) SRSF-4(0) SRSF-5(0) SRSF-6(0) SRSF-7(0) SRSF-8(0) SRSF-9(0) SRSF-2(0) SRSF-1(0) SRSF-3A(0) SRSF-3B(0)		Sample Date 7/22/16	Sample Time 1350 1345 1351 1345 1350 1350 1340 1351 0935 0945	Sample Type (C=Comp, G=grab) S S S S S S S S S	Matrix (Weir, Solid, Sewer, Stormwater, Other) S S S S S S S S S	Field Filtered Sample (Yes or No) X X X X X X X X X X	Perform MS/MSD (Yes or No) X X X X X X X X X X	EPA 600-3-96-001 EPA 600-3-96-001	Total Number of Containers 2 2 1 1 1 1 1 1 1 1	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Ascorbic Acid H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - NCA W - pH 4-5 X - other (specify) Other:	Special Instructions/Note: EPA 600-3-96-001 EPA 600-3-96-001
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:											
Empty Kit Relinquished by:											
Relinquished by: <i>Stephanie Kupper</i> Date: 7/22/16 1525 Company: TAP											
Relinquished by: Date: Company:											
Relinquished by: Date: Company:											
Custody Seals Intact: ☐ Yes ☐ No											
Cooler Temperature(s) °C and Other Remarks:											

Chain of Custody Record

Client Information Client Contact: Mr. John Dellaport Company: Quantum Water & Environment Address: 1746 Cole Boulevard, Suite 340 City: Lakewood State: CO, Zip: 80401 Phone: 720-524-4294 (Tel) Email: John@quantumwaterco.com Project Name: Adams County Shooting Range Site:		Sampler: TCB/SAL Lab PM: Kupper, Stephanie K Phone: 720-524-4244 E-Mail: stephanie.kupper@testamericainc.com		Carrier Tracking No(s): COC No: 280-55183-19671.1 Page: Job #:				
Due Date Requested: TAT Requested (days): PO #: Purchase Order Requested WO #:		Analysis Requested						
Sample Identification NRSE-17 NRSE-16 NRSE-1 NRSE-15 NRSE-23 NRSE-14 NRSE-18 NRSE-20 NRSE-19 NRSE DUPE-6 NRSE-7		Sample Date 7/22/16	Sample Time 1345 1350 1350 1355 1355 1355 1355 1355 1400	Sample Type (C=Comp, G=grab) G G	Matrix (W=Water, S=Solid, O=Other) S W	Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) EPA 6010 - TCLP EPA 6010 - Shooting Range Docs	Total Number of Containers	Special Instructions/Note:
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months						
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:						
Empty Kit Relinquished by:		Date:		Method of Shipment:		Date/Time:		
Relinquished by: [Signature] Relinquished by:		Date/Time: 7/23/16 1525		Received by: [Signature] Received by:		Date/Time: 7-22-16 1525 Company: TAP Company:		
Relinquished by:		Date/Time:		Received by:		Date/Time:		
Custody Seal's Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:				

[illegible]

Login Sample Receipt Checklist

Client: Quantum Water & Environment

Job Number: 280-86004-1

Login Number: 86004

List Source: TestAmerica Denver

List Number: 1

Creator: Muniz, Ashley T

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Thermal preservation not required.
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.	False	SEE CUR
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	False	SEE CUR
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-86054-1

Client Project/Site: Adams County Shooting Range

For:

Quantum Water & Environment

1746 Cole Boulevard, Suite 340

Lakewood, Colorado 80401

Attn: Mr. John Dellaport



Authorized for release by:

8/12/2016 10:39:33 AM

Stephanie Kupper, Project Manager I

(303)736-0182

stephanie.kupper@testamericainc.com

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

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

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

Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	7
Method Summary	13
Sample Summary	14
Client Sample Results	15
QC Sample Results	24
QC Association	31
Chronicle	37
Certification Summary	48
Chain of Custody	49
Receipt Checklists	52



Definitions/Glossary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Qualifiers

Metals

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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)

Case Narrative

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Job ID: 280-86054-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Quantum Water & Environment

Project: Adams County Shooting Range

Report Number: 280-86054-1

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

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

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

RECEIPT

The samples were received on 7/25/2016 at 4:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 41.1° C.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC). The container labels list the sample time for sample SRIB-12(0) as 1330 while the COC lists 1320.

The container labels list the sample ID's as NRSF-8(0), NRSF-9(0), NRSF-21(0), AND NRSF-22(0) while the COC lists NRSF-8, NRSF-9, NRSF-21, AND NRSF-22.

TCLP METALS

Samples SRIB-9 (0) (280-86054-2), SRIB-10 (0) (280-86054-3) and NRIB-3 (0) (280-86054-20) were analyzed for TCLP Metals in accordance with EPA SW-846 Method 1311/6010C. The samples were leached on 08/02/2016, prepared on 08/04/2016 and analyzed on 08/05/2016, 08/06/2016 and 08/08/2016.

Copper, Arsenic and Lead were detected in method blank LB 280-336177/1-B 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. Refer to the QC report for details.

Copper failed the recovery criteria high for LCS 280-336177/2-B. This analyte was biased high in the LCS and was below the RL in the associated samples; therefore, the data have been reported.

Antimony and Lead failed the recovery criteria high for the MS and MSD of sample SRIB-9 (0) (280-86054-2) in batch 280-336882. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

Samples SRIB-9 (0) (280-86054-2)[5X] and SRIB-10 (0) (280-86054-3)[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.

TOTAL METALS (ICP)

Samples SRIB-8 (0) (280-86054-1), SRIB-9 (0) (280-86054-2), SRIB-10 (0) (280-86054-3), SRIB-11 (0) (280-86054-4), SRIB-12 (0) (280-86054-5), SRIB-12 (30) (280-86054-6), SRIB-11 (24) (280-86054-7), SRIB-10 (18) (280-86054-8), SRIB-9 (30) (280-86054-9),

Case Narrative

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Job ID: 280-86054-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

SRIB-8 (30) (280-86054-10), SRIB-7 (12) (280-86054-11), NRSF-8 (280-86054-12), NRSF-9 (280-86054-13), NRSF-21 (280-86054-14), NRSF-22 (280-86054-15), NRIB-1 (0) (280-86054-16), NRIB-1 (6) (280-86054-17), NRIB-2 (0) (280-86054-18), NRIB-2 (18) (280-86054-19), NRIB-3 (0) (280-86054-20), NRIB-3 (18) (280-86054-21), SRIB-7 (0) (280-86054-22) and DUPE-7 (280-86054-23) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 08/01/2016 and 08/09/2016 and analyzed on 08/03/2016, 08/04/2016, 08/06/2016, 08/08/2016, 08/09/2016, 08/10/2016 and 08/11/2016.

Tin was detected in method blank MB 280-335611/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Copper and Tin were detected in method blank MB 280-336954/1-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. Refer to the QC report for details.

Tin and Zinc failed the recovery criteria low for the MS of sample NRSF-21 (280-86054-14) in batch 280-337214. Copper, Zinc and Antimony exceeded the RPD limit for the MSD of sample NRSF-21 (280-86054-14) in batch 280-337444. Refer to the QC report for details.

Antimony, Arsenic, Tin and Lead failed the recovery criteria low for the MS of sample SRIB-8 (0) (280-86054-1) in batch 280-337045. Copper failed the recovery criteria high. For the MSD of sample SRIB-8 (0) (280-86054-1) in batch 280-337045, Antimony, Arsenic and Lead failed the recovery criteria low. Copper failed the recovery criteria high. Also, Arsenic, Tin, Copper and Lead exceeded the RPD limit. The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

Samples SRIB-8 (0) (280-86054-1)[500X], SRIB-9 (0) (280-86054-2)[100X], SRIB-9 (0) (280-86054-2)[25X], SRIB-10 (0) (280-86054-3)[200X], SRIB-11 (0) (280-86054-4)[25X], SRIB-11 (0) (280-86054-4)[500X], SRIB-12 (0) (280-86054-5)[25X], NRIB-1 (0) (280-86054-16)[10X], NRIB-1 (6) (280-86054-17)[20X], NRIB-1 (6) (280-86054-17)[5X], NRIB-2 (0) (280-86054-18)[10X], NRIB-2 (0) (280-86054-18)[5X], NRIB-3 (0) (280-86054-20)[10X], NRIB-3 (0) (280-86054-20)[5X], NRIB-3 (18) (280-86054-21)[2X], SRIB-7 (0) (280-86054-22)[10X], DUPE-7 (280-86054-23)[20X] and DUPE-7 (280-86054-23)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The low level continuing calibration verification (CCVL) associated with batch 280-337045 recovered above the upper control limit for Pb. The samples associated with this CCVL had Pb results greater than 10x the RL and are thus controlled instead to the CCV; therefore, the data have been reported.

The instrument blank for analytical batch 280-336867 contained Pb greater than the reporting limit (RL), and was not reanalyzed because the samples had Pb results greater than 10x the result found in the contaminated CCB. The data have been qualified and reported.

The low level continuing calibration verification (CCVL) associated with batch 280-336867 recovered above the upper control limit for Pb. The samples associated with this CCVL had Pb results greater than 10x the RL and are thus controlled to the CCV; therefore, the data have been reported.

The ICB and CCB for analytical batch 280-336867 contained Sb greater than the reporting limit (RL), and was not reanalyzed because the samples were ND for Sb. The data have been qualified and reported.

The instrument blank for analytical batch 280-337444 contained Sb greater than one-half the reporting limit (RL), and was not re-analyzed because samples were greater than 10x the concentration of the blank. The data have been qualified and reported.

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

PERCENT SOLIDS

Samples SRIB-8 (0) (280-86054-1), SRIB-9 (0) (280-86054-2), SRIB-10 (0) (280-86054-3), SRIB-11 (0) (280-86054-4), SRIB-12 (0) (280-86054-5), SRIB-12 (30) (280-86054-6), SRIB-11 (24) (280-86054-7), SRIB-10 (18) (280-86054-8), SRIB-9 (30) (280-86054-9), SRIB-8 (30) (280-86054-10), SRIB-7 (12) (280-86054-11), NRSF-8 (280-86054-12), NRSF-9 (280-86054-13), NRSF-21 (280-86054-14), NRSF-22 (280-86054-15), NRIB-1 (0) (280-86054-16), NRIB-1 (6) (280-86054-17), NRIB-2 (0) (280-86054-18), NRIB-2 (18) (280-86054-19), NRIB-3 (0) (280-86054-20), NRIB-3 (18) (280-86054-21), SRIB-7 (0) (280-86054-22) and DUPE-7 (280-86054-23) were

Case Narrative

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Job ID: 280-86054-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 08/01/2016.

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

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Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: SRIB-8 (0)

Lab Sample ID: 280-86054-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	1400		1.2	0.31	mg/Kg	1	☼	6010C	Total/NA
Arsenic	410	F2	1.6	0.54	mg/Kg	1	☼	6010C	Total/NA
Copper	740	B F2	1.6	0.18	mg/Kg	1	☼	6010C	Total/NA
Lead	130000	^ F2	370	110	mg/Kg	500	☼	6010C	Total/NA
Tin	66	F2 F1 B	8.2	0.74	mg/Kg	1	☼	6010C	Total/NA
Zinc	110		2.4	0.32	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRIB-9 (0)

Lab Sample ID: 280-86054-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	100		1.2	0.29	mg/Kg	1	☼	6010C	Total/NA
Arsenic	16		1.5	0.51	mg/Kg	1	☼	6010C	Total/NA
Copper	8300		38	4.2	mg/Kg	25	☼	6010C	Total/NA
Lead	34000	^	69	21	mg/Kg	100	☼	6010C	Total/NA
Tin	40	B	7.7	0.70	mg/Kg	1	☼	6010C	Total/NA
Zinc	820		2.3	0.31	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.41		0.38	0.032	mg/Kg	1	☼	6010C	Total/NA
Antimony	2.2		0.20	0.016	mg/L	1		6010C	TCLP
Arsenic	0.13	J B	0.50	0.022	mg/L	1		6010C	TCLP
Copper	1.2	J B *	2.0	0.021	mg/L	1		6010C	TCLP
Lead	1200	B	2.5	0.065	mg/L	5		6010C	TCLP
Zinc	2.0		2.0	0.022	mg/L	1		6010C	TCLP
Cadmium	0.0081	J	0.10	0.0020	mg/L	1		6010C	TCLP

Client Sample ID: SRIB-10 (0)

Lab Sample ID: 280-86054-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	450		1.2	0.30	mg/Kg	1	☼	6010C	Total/NA
Arsenic	31		1.6	0.52	mg/Kg	1	☼	6010C	Total/NA
Copper	1900	B	1.6	0.17	mg/Kg	1	☼	6010C	Total/NA
Lead	86000	^	140	43	mg/Kg	200	☼	6010C	Total/NA
Tin	80	B	7.9	0.72	mg/Kg	1	☼	6010C	Total/NA
Zinc	190		2.4	0.31	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.47		0.40	0.032	mg/Kg	1	☼	6010C	Total/NA
Antimony	2.2		0.20	0.016	mg/L	1		6010C	TCLP
Arsenic	0.28	J B	0.50	0.022	mg/L	1		6010C	TCLP
Copper	0.46	J B *	2.0	0.021	mg/L	1		6010C	TCLP
Lead	1500	B	2.5	0.065	mg/L	5		6010C	TCLP
Zinc	2.1		2.0	0.022	mg/L	1		6010C	TCLP
Cadmium	0.011	J	0.10	0.0020	mg/L	1		6010C	TCLP

Client Sample ID: SRIB-11 (0)

Lab Sample ID: 280-86054-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	1300		1.5	0.38	mg/Kg	1	☼	6010C	Total/NA
Arsenic	130		2.0	0.66	mg/Kg	1	☼	6010C	Total/NA
Copper	21000		50	5.4	mg/Kg	25	☼	6010C	Total/NA
Lead	170000	^	450	130	mg/Kg	500	☼	6010C	Total/NA
Tin	320	B	10	0.91	mg/Kg	1	☼	6010C	Total/NA
Zinc	100		3.0	0.40	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: SRIB-11 (0) (Continued)

Lab Sample ID: 280-86054-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.39	J	0.50	0.041	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRIB-12 (0)

Lab Sample ID: 280-86054-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	90		1.5	0.38	mg/Kg	1	☼	6010C	Total/NA
Arsenic	32		2.0	0.65	mg/Kg	1	☼	6010C	Total/NA
Copper	860	B	2.0	0.21	mg/Kg	1	☼	6010C	Total/NA
Lead	18000	^	22	6.7	mg/Kg	25	☼	6010C	Total/NA
Tin	26	B	9.9	0.90	mg/Kg	1	☼	6010C	Total/NA
Zinc	120		3.0	0.39	mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.0		0.49	0.041	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRIB-12 (30)

Lab Sample ID: 280-86054-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	1.4	J	1.7	0.42	mg/Kg	1	☼	6010C	Total/NA
Arsenic	4.5		2.2	0.73	mg/Kg	1	☼	6010C	Total/NA
Copper	24	B	2.2	0.24	mg/Kg	1	☼	6010C	Total/NA
Lead	180	B ^	0.99	0.30	mg/Kg	1	☼	6010C	Total/NA
Tin	1.5	J B	11	1.0	mg/Kg	1	☼	6010C	Total/NA
Zinc	39		3.3	0.44	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.19	J	0.55	0.045	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRIB-11 (24)

Lab Sample ID: 280-86054-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.5		2.2	0.72	mg/Kg	1	☼	6010C	Total/NA
Copper	12	B	2.2	0.24	mg/Kg	1	☼	6010C	Total/NA
Lead	40	B ^	0.98	0.29	mg/Kg	1	☼	6010C	Total/NA
Tin	1.4	J B	11	0.99	mg/Kg	1	☼	6010C	Total/NA
Zinc	37		3.3	0.43	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.15	J	0.54	0.044	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRIB-10 (18)

Lab Sample ID: 280-86054-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	1.6		1.5	0.39	mg/Kg	1	☼	6010C	Total/NA
Arsenic	3.4		2.0	0.67	mg/Kg	1	☼	6010C	Total/NA
Copper	18	B	2.0	0.22	mg/Kg	1	☼	6010C	Total/NA
Lead	980	B ^	0.92	0.28	mg/Kg	1	☼	6010C	Total/NA
Tin	4.2	J B	10	0.93	mg/Kg	1	☼	6010C	Total/NA
Zinc	40		3.1	0.41	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.16	J	0.51	0.042	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SRIB-9 (30)

Lab Sample ID: 280-86054-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.8		1.9	0.63	mg/Kg	1	☼	6010C	Total/NA
Copper	14	B	1.9	0.21	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: SRIB-9 (30) (Continued)

Lab Sample ID: 280-86054-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Lead	110	B ^	0.85	0.26	mg/Kg	1		✱	6010C	Total/NA
Tin	1.4	J B	9.5	0.86	mg/Kg	1		✱	6010C	Total/NA
Zinc	32		2.8	0.38	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.13	J	0.47	0.039	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: SRIB-8 (30)

Lab Sample ID: 280-86054-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	1.5		1.2	0.31	mg/Kg	1		✱	6010C	Total/NA
Arsenic	2.7		1.6	0.53	mg/Kg	1		✱	6010C	Total/NA
Copper	8.7	B	1.6	0.17	mg/Kg	1		✱	6010C	Total/NA
Lead	52	B ^	0.73	0.22	mg/Kg	1		✱	6010C	Total/NA
Tin	1.1	J B	8.1	0.73	mg/Kg	1		✱	6010C	Total/NA
Zinc	27		2.4	0.32	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.071	J	0.40	0.033	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: SRIB-7 (12)

Lab Sample ID: 280-86054-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	2.3		1.3	0.32	mg/Kg	1		✱	6010C	Total/NA
Arsenic	2.0		1.7	0.56	mg/Kg	1		✱	6010C	Total/NA
Copper	110	B	1.7	0.19	mg/Kg	1		✱	6010C	Total/NA
Lead	650	B ^	0.77	0.23	mg/Kg	1		✱	6010C	Total/NA
Tin	2.4	J B	8.6	0.78	mg/Kg	1		✱	6010C	Total/NA
Zinc	31		2.6	0.34	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.075	J	0.43	0.035	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRSF-8

Lab Sample ID: 280-86054-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.2		1.7	0.55	mg/Kg	1		✱	6010C	Total/NA
Copper	11	B	1.7	0.18	mg/Kg	1		✱	6010C	Total/NA
Lead	25	B ^	0.75	0.22	mg/Kg	1		✱	6010C	Total/NA
Tin	1.0	J B	8.3	0.76	mg/Kg	1		✱	6010C	Total/NA
Zinc	38		2.5	0.33	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.51		0.42	0.034	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRSF-9

Lab Sample ID: 280-86054-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	6.0		1.9	0.64	mg/Kg	1		✱	6010C	Total/NA
Copper	14	B	1.9	0.21	mg/Kg	1		✱	6010C	Total/NA
Lead	35	B ^	0.87	0.26	mg/Kg	1		✱	6010C	Total/NA
Tin	1.3	J B	9.7	0.88	mg/Kg	1		✱	6010C	Total/NA
Zinc	51		2.9	0.39	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.78		0.48	0.040	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRSF-21

Lab Sample ID: 280-86054-14

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: NRSF-21 (Continued)

Lab Sample ID: 280-86054-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	5.1		1.9	0.62	mg/Kg	1		✱	6010C	Total/NA
Copper	14	B F2	1.7	0.19	mg/Kg	1		✱	6010C	Total/NA
Lead	39		0.77	0.23	mg/Kg	1		✱	6010C	Total/NA
Tin	1.2	J B F1	8.6	0.78	mg/Kg	1		✱	6010C	Total/NA
Zinc	47	F1 F2	2.6	0.34	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.84		0.43	0.035	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRSF-22

Lab Sample ID: 280-86054-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.5		1.8	0.59	mg/Kg	1		✱	6010C	Total/NA
Copper	14	B	1.7	0.19	mg/Kg	1		✱	6010C	Total/NA
Lead	36		0.77	0.23	mg/Kg	1		✱	6010C	Total/NA
Tin	1.1	J B	8.5	0.78	mg/Kg	1		✱	6010C	Total/NA
Zinc	47		2.6	0.34	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.46		0.43	0.035	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRIB-1 (0)

Lab Sample ID: 280-86054-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	190		1.4	0.35	mg/Kg	1		✱	6010C	Total/NA
Arsenic	45		1.6	0.52	mg/Kg	1		✱	6010C	Total/NA
Copper	450	B	1.9	0.20	mg/Kg	1		✱	6010C	Total/NA
Lead	32000		8.4	2.5	mg/Kg	10		✱	6010C	Total/NA
Tin	27	B	9.3	0.85	mg/Kg	1		✱	6010C	Total/NA
Zinc	79		2.8	0.37	mg/Kg	1		✱	6010C	Total/NA
Cadmium	1.0		0.46	0.038	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRIB-1 (6)

Lab Sample ID: 280-86054-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	1900		1.2	0.31	mg/Kg	1		✱	6010C	Total/NA
Arsenic	1.9	J	2.0	0.66	mg/Kg	1		✱	6010C	Total/NA
Copper	13	B	1.6	0.18	mg/Kg	1		✱	6010C	Total/NA
Lead	52000		15	4.4	mg/Kg	20		✱	6010C	Total/NA
Tin	2.1	J B	8.2	0.75	mg/Kg	1		✱	6010C	Total/NA
Zinc	9.8		2.5	0.33	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRIB-2 (0)

Lab Sample ID: 280-86054-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	270		1.1	0.29	mg/Kg	1		✱	6010C	Total/NA
Arsenic	96		2.0	0.66	mg/Kg	1		✱	6010C	Total/NA
Copper	810	B	7.5	0.82	mg/Kg	5		✱	6010C	Total/NA
Lead	34000		6.8	2.0	mg/Kg	10		✱	6010C	Total/NA
Tin	53	B	7.5	0.69	mg/Kg	1		✱	6010C	Total/NA
Zinc	99		2.3	0.30	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.61		0.38	0.031	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRIB-2 (18)

Lab Sample ID: 280-86054-19

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: NRIB-2 (18) (Continued)

Lab Sample ID: 280-86054-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.2		2.1	0.69	mg/Kg	1		☼	6010C	Total/NA
Copper	12	B	2.1	0.23	mg/Kg	1		☼	6010C	Total/NA
Lead	28		0.96	0.29	mg/Kg	1		☼	6010C	Total/NA
Tin	1.6	J B	11	0.98	mg/Kg	1		☼	6010C	Total/NA
Zinc	37		3.2	0.43	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.092	J	0.54	0.044	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: NRIB-3 (0)

Lab Sample ID: 280-86054-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	240		1.3	0.34	mg/Kg	1		☼	6010C	Total/NA
Arsenic	350		1.5	0.48	mg/Kg	1		☼	6010C	Total/NA
Copper	850	B	8.9	0.97	mg/Kg	5		☼	6010C	Total/NA
Lead	30000		8.0	2.4	mg/Kg	10		☼	6010C	Total/NA
Tin	17	B	8.9	0.81	mg/Kg	1		☼	6010C	Total/NA
Zinc	130		2.7	0.36	mg/Kg	1		☼	6010C	Total/NA
Cadmium	1.6		0.45	0.037	mg/Kg	1		☼	6010C	Total/NA
Antimony	2.4		0.20	0.016	mg/L	1			6010C	TCLP
Arsenic	0.79	B	0.50	0.022	mg/L	1			6010C	TCLP
Copper	1.2	J B *	2.0	0.021	mg/L	1			6010C	TCLP
Lead	450	B	0.50	0.013	mg/L	1			6010C	TCLP
Zinc	1.1	J	2.0	0.022	mg/L	1			6010C	TCLP
Cadmium	0.016	J	0.10	0.0020	mg/L	1			6010C	TCLP

Client Sample ID: NRIB-3 (18)

Lab Sample ID: 280-86054-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	1.8		1.5	0.38	mg/Kg	1		☼	6010C	Total/NA
Arsenic	4.4		2.1	0.68	mg/Kg	1		☼	6010C	Total/NA
Copper	28	B	2.0	0.22	mg/Kg	1		☼	6010C	Total/NA
Lead	310		1.8	0.54	mg/Kg	2		☼	6010C	Total/NA
Tin	1.6	J B	10	0.91	mg/Kg	1		☼	6010C	Total/NA
Zinc	34		3.0	0.40	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.21	J	0.50	0.041	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: SRIB-7 (0)

Lab Sample ID: 280-86054-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	140		1.4	0.35	mg/Kg	1		☼	6010C	Total/NA
Arsenic	36		1.9	0.63	mg/Kg	1		☼	6010C	Total/NA
Copper	820	B	1.8	0.20	mg/Kg	1		☼	6010C	Total/NA
Lead	25000		8.2	2.5	mg/Kg	10		☼	6010C	Total/NA
Tin	29	B	9.2	0.84	mg/Kg	1		☼	6010C	Total/NA
Zinc	110		2.7	0.36	mg/Kg	1		☼	6010C	Total/NA
Cadmium	0.32	J	0.46	0.038	mg/Kg	1		☼	6010C	Total/NA

Client Sample ID: DUPE-7

Lab Sample ID: 280-86054-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	2200		1.4	0.35	mg/Kg	1		☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: DUPE-7 (Continued)

Lab Sample ID: 280-86054-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	45		1.8	0.59	mg/Kg	1		☼	6010C	Total/NA
Copper	250	B	1.9	0.20	mg/Kg	1		☼	6010C	Total/NA
Lead	81000		17	5.0	mg/Kg	20		☼	6010C	Total/NA
Tin	14	B	9.3	0.85	mg/Kg	1		☼	6010C	Total/NA
Zinc	56		2.8	0.37	mg/Kg	1		☼	6010C	Total/NA
Cadmium	1.1	J	2.3	0.19	mg/Kg	5		☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Method Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-86054-1	SRIB-8 (0)	Solid	07/25/16 12:50	07/25/16 16:05
280-86054-2	SRIB-9 (0)	Solid	07/25/16 12:55	07/25/16 16:05
280-86054-3	SRIB-10 (0)	Solid	07/25/16 13:00	07/25/16 16:05
280-86054-4	SRIB-11 (0)	Solid	07/25/16 13:05	07/25/16 16:05
280-86054-5	SRIB-12 (0)	Solid	07/25/16 13:20	07/25/16 16:05
280-86054-6	SRIB-12 (30)	Solid	07/25/16 13:30	07/25/16 16:05
280-86054-7	SRIB-11 (24)	Solid	07/25/16 13:45	07/25/16 16:05
280-86054-8	SRIB-10 (18)	Solid	07/25/16 13:50	07/25/16 16:05
280-86054-9	SRIB-9 (30)	Solid	07/25/16 13:55	07/25/16 16:05
280-86054-10	SRIB-8 (30)	Solid	07/25/16 14:15	07/25/16 16:05
280-86054-11	SRIB-7 (12)	Solid	07/25/16 14:25	07/25/16 16:05
280-86054-12	NRSF-8	Solid	07/25/16 09:05	07/25/16 16:05
280-86054-13	NRSF-9	Solid	07/25/16 09:25	07/25/16 16:05
280-86054-14	NRSF-21	Solid	07/25/16 09:13	07/25/16 16:05
280-86054-15	NRSF-22	Solid	07/25/16 09:06	07/25/16 16:05
280-86054-16	NRIB-1 (0)	Solid	07/25/16 10:15	07/25/16 16:05
280-86054-17	NRIB-1 (6)	Solid	07/25/16 11:20	07/25/16 16:05
280-86054-18	NRIB-2 (0)	Solid	07/25/16 10:15	07/25/16 16:05
280-86054-19	NRIB-2 (18)	Solid	07/25/16 11:10	07/25/16 16:05
280-86054-20	NRIB-3 (0)	Solid	07/25/16 10:15	07/25/16 16:05
280-86054-21	NRIB-3 (18)	Solid	07/25/16 10:45	07/25/16 16:05
280-86054-22	SRIB-7 (0)	Solid	07/25/16 12:45	07/25/16 16:05
280-86054-23	DUPE-7	Solid	07/25/16 00:00	07/25/16 16:05

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Method: 6010C - Metals (ICP)

Client Sample ID: SRIB-8 (0)
Date Collected: 07/25/16 12:50
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-1
Matrix: Solid
Percent Solids: 99.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1400		1.2	0.31	mg/Kg	☼	08/01/16 08:15	08/03/16 20:12	1
Arsenic	410	F2	1.6	0.54	mg/Kg	☼	08/01/16 08:15	08/04/16 19:22	1
Copper	740	B F2	1.6	0.18	mg/Kg	☼	08/01/16 08:15	08/06/16 17:30	1
Lead	130000	^ F2	370	110	mg/Kg	☼	08/01/16 08:15	08/08/16 14:43	500
Tin	66	F2 F1 B	8.2	0.74	mg/Kg	☼	08/01/16 08:15	08/04/16 19:22	1
Zinc	110		2.4	0.32	mg/Kg	☼	08/01/16 08:15	08/03/16 20:12	1
Cadmium	ND		0.41	0.033	mg/Kg	☼	08/01/16 08:15	08/03/16 20:12	1

Client Sample ID: SRIB-9 (0)
Date Collected: 07/25/16 12:55
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-2
Matrix: Solid
Percent Solids: 99.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	100		1.2	0.29	mg/Kg	☼	08/01/16 08:15	08/03/16 20:25	1
Arsenic	16		1.5	0.51	mg/Kg	☼	08/01/16 08:15	08/04/16 19:35	1
Copper	8300		38	4.2	mg/Kg	☼	08/01/16 08:15	08/08/16 15:06	25
Lead	34000	^	69	21	mg/Kg	☼	08/01/16 08:15	08/08/16 15:08	100
Tin	40	B	7.7	0.70	mg/Kg	☼	08/01/16 08:15	08/04/16 19:35	1
Zinc	820		2.3	0.31	mg/Kg	☼	08/01/16 08:15	08/03/16 20:25	1
Cadmium	0.41		0.38	0.032	mg/Kg	☼	08/01/16 08:15	08/03/16 20:25	1

Client Sample ID: SRIB-10 (0)
Date Collected: 07/25/16 13:00
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-3
Matrix: Solid
Percent Solids: 99.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	450		1.2	0.30	mg/Kg	☼	08/01/16 08:15	08/03/16 20:28	1
Arsenic	31		1.6	0.52	mg/Kg	☼	08/01/16 08:15	08/04/16 19:37	1
Copper	1900	B	1.6	0.17	mg/Kg	☼	08/01/16 08:15	08/06/16 17:46	1
Lead	86000	^	140	43	mg/Kg	☼	08/01/16 08:15	08/08/16 15:11	200
Tin	80	B	7.9	0.72	mg/Kg	☼	08/01/16 08:15	08/04/16 19:37	1
Zinc	190		2.4	0.31	mg/Kg	☼	08/01/16 08:15	08/03/16 20:28	1
Cadmium	0.47		0.40	0.032	mg/Kg	☼	08/01/16 08:15	08/03/16 20:28	1

Client Sample ID: SRIB-11 (0)
Date Collected: 07/25/16 13:05
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-4
Matrix: Solid
Percent Solids: 99.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1300		1.5	0.38	mg/Kg	☼	08/01/16 08:15	08/03/16 20:40	1
Arsenic	130		2.0	0.66	mg/Kg	☼	08/01/16 08:15	08/04/16 19:40	1
Copper	21000		50	5.4	mg/Kg	☼	08/01/16 08:15	08/08/16 15:13	25
Lead	170000	^	450	130	mg/Kg	☼	08/01/16 08:15	08/08/16 15:16	500
Tin	320	B	10	0.91	mg/Kg	☼	08/01/16 08:15	08/04/16 19:40	1
Zinc	100		3.0	0.40	mg/Kg	☼	08/01/16 08:15	08/03/16 20:40	1
Cadmium	0.39	J	0.50	0.041	mg/Kg	☼	08/01/16 08:15	08/03/16 20:40	1

Client Sample ID: SRIB-12 (0)
Date Collected: 07/25/16 13:20
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-5
Matrix: Solid
Percent Solids: 99.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	90		1.5	0.38	mg/Kg	☼	08/01/16 08:15	08/03/16 20:43	1
Arsenic	32		2.0	0.65	mg/Kg	☼	08/01/16 08:15	08/04/16 20:22	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: SRIB-12 (0)
Date Collected: 07/25/16 13:20
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-5
Matrix: Solid
Percent Solids: 99.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	860	B	2.0	0.21	mg/Kg	☼	08/01/16 08:15	08/06/16 16:58	1
Lead	18000	^	22	6.7	mg/Kg	☼	08/01/16 08:15	08/08/16 15:18	25
Tin	26	B	9.9	0.90	mg/Kg	☼	08/01/16 08:15	08/04/16 20:22	1
Zinc	120		3.0	0.39	mg/Kg	☼	08/01/16 08:15	08/03/16 20:43	1
Cadmium	1.0		0.49	0.041	mg/Kg	☼	08/01/16 08:15	08/03/16 20:43	1

Client Sample ID: SRIB-12 (30)
Date Collected: 07/25/16 13:30
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-6
Matrix: Solid
Percent Solids: 90.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.4	J	1.7	0.42	mg/Kg	☼	08/01/16 08:15	08/03/16 20:45	1
Arsenic	4.5		2.2	0.73	mg/Kg	☼	08/01/16 08:15	08/04/16 20:25	1
Copper	24	B	2.2	0.24	mg/Kg	☼	08/01/16 08:15	08/06/16 17:01	1
Lead	180	B ^	0.99	0.30	mg/Kg	☼	08/01/16 08:15	08/06/16 17:01	1
Tin	1.5	J B	11	1.0	mg/Kg	☼	08/01/16 08:15	08/04/16 20:25	1
Zinc	39		3.3	0.44	mg/Kg	☼	08/01/16 08:15	08/03/16 20:45	1
Cadmium	0.19	J	0.55	0.045	mg/Kg	☼	08/01/16 08:15	08/03/16 20:45	1

Client Sample ID: SRIB-11 (24)
Date Collected: 07/25/16 13:45
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-7
Matrix: Solid
Percent Solids: 91.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.6	0.41	mg/Kg	☼	08/01/16 08:15	08/03/16 20:48	1
Arsenic	3.5		2.2	0.72	mg/Kg	☼	08/01/16 08:15	08/04/16 20:27	1
Copper	12	B	2.2	0.24	mg/Kg	☼	08/01/16 08:15	08/06/16 17:03	1
Lead	40	B ^	0.98	0.29	mg/Kg	☼	08/01/16 08:15	08/06/16 17:03	1
Tin	1.4	J B	11	0.99	mg/Kg	☼	08/01/16 08:15	08/04/16 20:27	1
Zinc	37		3.3	0.43	mg/Kg	☼	08/01/16 08:15	08/03/16 20:48	1
Cadmium	0.15	J	0.54	0.044	mg/Kg	☼	08/01/16 08:15	08/03/16 20:48	1

Client Sample ID: SRIB-10 (18)
Date Collected: 07/25/16 13:50
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-8
Matrix: Solid
Percent Solids: 87.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.6		1.5	0.39	mg/Kg	☼	08/01/16 08:15	08/03/16 20:50	1
Arsenic	3.4		2.0	0.67	mg/Kg	☼	08/01/16 08:15	08/04/16 20:30	1
Copper	18	B	2.0	0.22	mg/Kg	☼	08/01/16 08:15	08/06/16 17:06	1
Lead	980	B ^	0.92	0.28	mg/Kg	☼	08/01/16 08:15	08/06/16 17:06	1
Tin	4.2	J B	10	0.93	mg/Kg	☼	08/01/16 08:15	08/04/16 20:30	1
Zinc	40		3.1	0.41	mg/Kg	☼	08/01/16 08:15	08/03/16 20:50	1
Cadmium	0.16	J	0.51	0.042	mg/Kg	☼	08/01/16 08:15	08/03/16 20:50	1

Client Sample ID: SRIB-9 (30)
Date Collected: 07/25/16 13:55
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-9
Matrix: Solid
Percent Solids: 90.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.36	mg/Kg	☼	08/01/16 08:15	08/06/16 17:08	1
Arsenic	2.8		1.9	0.63	mg/Kg	☼	08/01/16 08:15	08/04/16 20:32	1
Copper	14	B	1.9	0.21	mg/Kg	☼	08/01/16 08:15	08/06/16 17:08	1
Lead	110	B ^	0.85	0.26	mg/Kg	☼	08/01/16 08:15	08/06/16 17:08	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: SRIB-9 (30)
Date Collected: 07/25/16 13:55
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-9
Matrix: Solid
Percent Solids: 90.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tin	1.4	J B	9.5	0.86	mg/Kg	☼	08/01/16 08:15	08/04/16 20:32	1
Zinc	32		2.8	0.38	mg/Kg	☼	08/01/16 08:15	08/04/16 20:32	1
Cadmium	0.13	J	0.47	0.039	mg/Kg	☼	08/01/16 08:15	08/04/16 20:32	1

Client Sample ID: SRIB-8 (30)
Date Collected: 07/25/16 14:15
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-10
Matrix: Solid
Percent Solids: 89.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.5		1.2	0.31	mg/Kg	☼	08/01/16 08:15	08/03/16 20:55	1
Arsenic	2.7		1.6	0.53	mg/Kg	☼	08/01/16 08:15	08/04/16 20:35	1
Copper	8.7	B	1.6	0.17	mg/Kg	☼	08/01/16 08:15	08/06/16 17:11	1
Lead	52	B ^	0.73	0.22	mg/Kg	☼	08/01/16 08:15	08/06/16 17:11	1
Tin	1.1	J B	8.1	0.73	mg/Kg	☼	08/01/16 08:15	08/04/16 20:35	1
Zinc	27		2.4	0.32	mg/Kg	☼	08/01/16 08:15	08/03/16 20:55	1
Cadmium	0.071	J	0.40	0.033	mg/Kg	☼	08/01/16 08:15	08/03/16 20:55	1

Client Sample ID: SRIB-7 (12)
Date Collected: 07/25/16 14:25
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-11
Matrix: Solid
Percent Solids: 97.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.3		1.3	0.32	mg/Kg	☼	08/01/16 08:15	08/03/16 20:58	1
Arsenic	2.0		1.7	0.56	mg/Kg	☼	08/01/16 08:15	08/04/16 20:37	1
Copper	110	B	1.7	0.19	mg/Kg	☼	08/01/16 08:15	08/06/16 17:13	1
Lead	650	B ^	0.77	0.23	mg/Kg	☼	08/01/16 08:15	08/06/16 17:13	1
Tin	2.4	J B	8.6	0.78	mg/Kg	☼	08/01/16 08:15	08/04/16 20:37	1
Zinc	31		2.6	0.34	mg/Kg	☼	08/01/16 08:15	08/03/16 20:58	1
Cadmium	0.075	J	0.43	0.035	mg/Kg	☼	08/01/16 08:15	08/03/16 20:58	1

Client Sample ID: NRSF-8
Date Collected: 07/25/16 09:05
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-12
Matrix: Solid
Percent Solids: 97.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.32	mg/Kg	☼	08/01/16 08:15	08/06/16 17:16	1
Arsenic	4.2		1.7	0.55	mg/Kg	☼	08/01/16 08:15	08/04/16 20:40	1
Copper	11	B	1.7	0.18	mg/Kg	☼	08/01/16 08:15	08/06/16 17:16	1
Lead	25	B ^	0.75	0.22	mg/Kg	☼	08/01/16 08:15	08/06/16 17:16	1
Tin	1.0	J B	8.3	0.76	mg/Kg	☼	08/01/16 08:15	08/04/16 20:40	1
Zinc	38		2.5	0.33	mg/Kg	☼	08/01/16 08:15	08/04/16 20:40	1
Cadmium	0.51		0.42	0.034	mg/Kg	☼	08/01/16 08:15	08/04/16 20:40	1

Client Sample ID: NRSF-9
Date Collected: 07/25/16 09:25
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-13
Matrix: Solid
Percent Solids: 98.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.37	mg/Kg	☼	08/01/16 08:15	08/03/16 21:03	1
Arsenic	6.0		1.9	0.64	mg/Kg	☼	08/01/16 08:15	08/04/16 20:42	1
Copper	14	B	1.9	0.21	mg/Kg	☼	08/01/16 08:15	08/06/16 17:18	1
Lead	35	B ^	0.87	0.26	mg/Kg	☼	08/01/16 08:15	08/06/16 17:18	1
Tin	1.3	J B	9.7	0.88	mg/Kg	☼	08/01/16 08:15	08/04/16 20:42	1
Zinc	51		2.9	0.39	mg/Kg	☼	08/01/16 08:15	08/03/16 21:03	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: NRSF-9
Date Collected: 07/25/16 09:25
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-13
Matrix: Solid
Percent Solids: 98.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	0.78		0.48	0.040	mg/Kg	☼	08/01/16 08:15	08/03/16 21:03	1

Client Sample ID: NRSF-21
Date Collected: 07/25/16 09:13
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-14
Matrix: Solid
Percent Solids: 98.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND	F2	1.3	0.33	mg/Kg	☼	08/09/16 09:15	08/10/16 16:05	1
Arsenic	5.1		1.9	0.62	mg/Kg	☼	08/01/16 08:15	08/04/16 20:59	1
Copper	14	B F2	1.7	0.19	mg/Kg	☼	08/09/16 09:15	08/10/16 03:58	1
Lead	39		0.77	0.23	mg/Kg	☼	08/09/16 09:15	08/11/16 13:00	1
Tin	1.2	J B F1	8.6	0.78	mg/Kg	☼	08/09/16 09:15	08/10/16 03:58	1
Zinc	47	F1 F2	2.6	0.34	mg/Kg	☼	08/09/16 09:15	08/10/16 03:58	1
Cadmium	0.84		0.43	0.035	mg/Kg	☼	08/09/16 09:15	08/10/16 16:05	1

Client Sample ID: NRSF-22
Date Collected: 07/25/16 09:06
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-15
Matrix: Solid
Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.32	mg/Kg	☼	08/09/16 09:15	08/10/16 16:19	1
Arsenic	3.5		1.8	0.59	mg/Kg	☼	08/01/16 08:15	08/04/16 21:11	1
Copper	14	B	1.7	0.19	mg/Kg	☼	08/09/16 09:15	08/10/16 04:11	1
Lead	36		0.77	0.23	mg/Kg	☼	08/09/16 09:15	08/11/16 13:14	1
Tin	1.1	J B	8.5	0.78	mg/Kg	☼	08/09/16 09:15	08/10/16 04:11	1
Zinc	47		2.6	0.34	mg/Kg	☼	08/09/16 09:15	08/10/16 04:11	1
Cadmium	0.46		0.43	0.035	mg/Kg	☼	08/09/16 09:15	08/10/16 16:19	1

Client Sample ID: NRIB-1 (0)
Date Collected: 07/25/16 10:15
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-16
Matrix: Solid
Percent Solids: 99.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	190		1.4	0.35	mg/Kg	☼	08/09/16 09:15	08/10/16 17:04	1
Arsenic	45		1.6	0.52	mg/Kg	☼	08/01/16 08:15	08/04/16 21:24	1
Copper	450	B	1.9	0.20	mg/Kg	☼	08/09/16 09:15	08/10/16 04:13	1
Lead	32000		8.4	2.5	mg/Kg	☼	08/09/16 09:15	08/11/16 13:28	10
Tin	27	B	9.3	0.85	mg/Kg	☼	08/09/16 09:15	08/10/16 04:13	1
Zinc	79		2.8	0.37	mg/Kg	☼	08/09/16 09:15	08/10/16 04:13	1
Cadmium	1.0		0.46	0.038	mg/Kg	☼	08/09/16 09:15	08/10/16 17:04	1

Client Sample ID: NRIB-1 (6)
Date Collected: 07/25/16 11:20
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-17
Matrix: Solid
Percent Solids: 98.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1900		1.2	0.31	mg/Kg	☼	08/09/16 09:15	08/10/16 17:07	1
Arsenic	1.9	J	2.0	0.66	mg/Kg	☼	08/01/16 08:15	08/04/16 21:29	1
Copper	13	B	1.6	0.18	mg/Kg	☼	08/09/16 09:15	08/10/16 04:26	1
Lead	52000		15	4.4	mg/Kg	☼	08/09/16 09:15	08/11/16 13:31	20
Tin	2.1	J B	8.2	0.75	mg/Kg	☼	08/09/16 09:15	08/10/16 04:26	1
Zinc	9.8		2.5	0.33	mg/Kg	☼	08/09/16 09:15	08/10/16 04:26	1
Cadmium	ND		2.0	0.17	mg/Kg	☼	08/09/16 09:15	08/10/16 16:35	5

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Method: 6010C - Metals (ICP)

Client Sample ID: NRIB-2 (0)
Date Collected: 07/25/16 10:15
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-18
Matrix: Solid
Percent Solids: 99.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	270		1.1	0.29	mg/Kg	☼	08/09/16 09:15	08/10/16 17:09	1
Arsenic	96		2.0	0.66	mg/Kg	☼	08/01/16 08:15	08/04/16 21:31	1
Copper	810	B	7.5	0.82	mg/Kg	☼	08/09/16 09:15	08/09/16 20:31	5
Lead	34000		6.8	2.0	mg/Kg	☼	08/09/16 09:15	08/11/16 13:33	10
Tin	53	B	7.5	0.69	mg/Kg	☼	08/09/16 09:15	08/10/16 04:28	1
Zinc	99		2.3	0.30	mg/Kg	☼	08/09/16 09:15	08/10/16 04:28	1
Cadmium	0.61		0.38	0.031	mg/Kg	☼	08/09/16 09:15	08/10/16 17:09	1

Client Sample ID: NRIB-2 (18)
Date Collected: 07/25/16 11:10
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-19
Matrix: Solid
Percent Solids: 88.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.6	0.41	mg/Kg	☼	08/09/16 09:15	08/11/16 13:36	1
Arsenic	4.2		2.1	0.69	mg/Kg	☼	08/01/16 08:15	08/04/16 21:34	1
Copper	12	B	2.1	0.23	mg/Kg	☼	08/09/16 09:15	08/10/16 04:31	1
Lead	28		0.96	0.29	mg/Kg	☼	08/09/16 09:15	08/11/16 13:36	1
Tin	1.6	J B	11	0.98	mg/Kg	☼	08/09/16 09:15	08/10/16 04:31	1
Zinc	37		3.2	0.43	mg/Kg	☼	08/09/16 09:15	08/10/16 04:31	1
Cadmium	0.092	J	0.54	0.044	mg/Kg	☼	08/09/16 09:15	08/10/16 17:12	1

Client Sample ID: NRIB-3 (0)
Date Collected: 07/25/16 10:15
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-20
Matrix: Solid
Percent Solids: 99.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	240		1.3	0.34	mg/Kg	☼	08/09/16 09:15	08/10/16 16:43	1
Arsenic	350		1.5	0.48	mg/Kg	☼	08/01/16 08:15	08/04/16 21:36	1
Copper	850	B	8.9	0.97	mg/Kg	☼	08/09/16 09:15	08/09/16 20:36	5
Lead	30000		8.0	2.4	mg/Kg	☼	08/09/16 09:15	08/11/16 13:39	10
Tin	17	B	8.9	0.81	mg/Kg	☼	08/09/16 09:15	08/10/16 04:33	1
Zinc	130		2.7	0.36	mg/Kg	☼	08/09/16 09:15	08/10/16 04:33	1
Cadmium	1.6		0.45	0.037	mg/Kg	☼	08/09/16 09:15	08/10/16 16:43	1

Client Sample ID: NRIB-3 (18)
Date Collected: 07/25/16 10:45
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-21
Matrix: Solid
Percent Solids: 90.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.8		1.5	0.38	mg/Kg	☼	08/09/16 09:15	08/10/16 16:45	1
Arsenic	4.4		2.1	0.68	mg/Kg	☼	08/01/16 08:15	08/04/16 21:41	1
Copper	28	B	2.0	0.22	mg/Kg	☼	08/09/16 09:15	08/10/16 04:36	1
Lead	310		1.8	0.54	mg/Kg	☼	08/09/16 09:15	08/11/16 13:41	2
Tin	1.6	J B	10	0.91	mg/Kg	☼	08/09/16 09:15	08/10/16 04:36	1
Zinc	34		3.0	0.40	mg/Kg	☼	08/09/16 09:15	08/10/16 04:36	1
Cadmium	0.21	J	0.50	0.041	mg/Kg	☼	08/09/16 09:15	08/10/16 16:45	1

Client Sample ID: SRIB-7 (0)
Date Collected: 07/25/16 12:45
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-22
Matrix: Solid
Percent Solids: 99.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	140		1.4	0.35	mg/Kg	☼	08/09/16 09:15	08/10/16 17:14	1
Arsenic	36		1.9	0.63	mg/Kg	☼	08/01/16 08:15	08/04/16 21:44	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: SRIB-7 (0)
Date Collected: 07/25/16 12:45
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-22
Matrix: Solid
Percent Solids: 99.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	820	B	1.8	0.20	mg/Kg	☼	08/09/16 09:15	08/10/16 04:38	1
Lead	25000		8.2	2.5	mg/Kg	☼	08/09/16 09:15	08/11/16 13:44	10
Tin	29	B	9.2	0.84	mg/Kg	☼	08/09/16 09:15	08/10/16 04:38	1
Zinc	110		2.7	0.36	mg/Kg	☼	08/09/16 09:15	08/10/16 04:38	1
Cadmium	0.32	J	0.46	0.038	mg/Kg	☼	08/09/16 09:15	08/10/16 17:14	1

Client Sample ID: DUPE-7
Date Collected: 07/25/16 00:00
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-23
Matrix: Solid
Percent Solids: 99.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2200		1.4	0.35	mg/Kg	☼	08/09/16 09:15	08/10/16 17:17	1
Arsenic	45		1.8	0.59	mg/Kg	☼	08/01/16 08:15	08/04/16 21:46	1
Copper	250	B	1.9	0.20	mg/Kg	☼	08/09/16 09:15	08/10/16 04:41	1
Lead	81000		17	5.0	mg/Kg	☼	08/09/16 09:15	08/11/16 13:47	20
Tin	14	B	9.3	0.85	mg/Kg	☼	08/09/16 09:15	08/10/16 04:41	1
Zinc	56		2.8	0.37	mg/Kg	☼	08/09/16 09:15	08/10/16 04:41	1
Cadmium	1.1	J	2.3	0.19	mg/Kg	☼	08/09/16 09:15	08/10/16 16:51	5

Method: 6010C - Metals (ICP) - TCLP

Client Sample ID: SRIB-9 (0)
Date Collected: 07/25/16 12:55
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.2		0.20	0.016	mg/L	—	08/04/16 08:30	08/05/16 00:58	1
Arsenic	0.13	J B	0.50	0.022	mg/L		08/04/16 08:30	08/06/16 17:15	1
Copper	1.2	J B *	2.0	0.021	mg/L		08/04/16 08:30	08/05/16 00:58	1
Lead	1200	B	2.5	0.065	mg/L		08/04/16 08:30	08/06/16 15:58	5
Tin	ND		0.20	0.029	mg/L		08/04/16 08:30	08/05/16 00:58	1
Zinc	2.0		2.0	0.022	mg/L		08/04/16 08:30	08/06/16 17:15	1
Cadmium	0.0081	J	0.10	0.0020	mg/L		08/04/16 08:30	08/05/16 00:58	1

Client Sample ID: SRIB-10 (0)
Date Collected: 07/25/16 13:00
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.2		0.20	0.016	mg/L	—	08/04/16 08:30	08/05/16 01:12	1
Arsenic	0.28	J B	0.50	0.022	mg/L		08/04/16 08:30	08/06/16 16:12	1
Copper	0.46	J B *	2.0	0.021	mg/L		08/04/16 08:30	08/05/16 01:12	1
Lead	1500	B	2.5	0.065	mg/L		08/04/16 08:30	08/08/16 13:31	5
Tin	ND		0.20	0.029	mg/L		08/04/16 08:30	08/05/16 01:12	1
Zinc	2.1		2.0	0.022	mg/L		08/04/16 08:30	08/06/16 16:12	1
Cadmium	0.011	J	0.10	0.0020	mg/L		08/04/16 08:30	08/05/16 01:12	1

Client Sample ID: NRIB-3 (0)
Date Collected: 07/25/16 10:15
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-20
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.4		0.20	0.016	mg/L	—	08/04/16 08:30	08/05/16 01:26	1
Arsenic	0.79	B	0.50	0.022	mg/L		08/04/16 08:30	08/06/16 16:15	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Method: 6010C - Metals (ICP) - TCLP (Continued)

Client Sample ID: NRIB-3 (0)
Date Collected: 07/25/16 10:15
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-20
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	1.2	J B *	2.0	0.021	mg/L	-	08/04/16 08:30	08/05/16 01:26	1
Lead	450	B	0.50	0.013	mg/L	-	08/04/16 08:30	08/06/16 16:15	1
Tin	ND		0.20	0.029	mg/L	-	08/04/16 08:30	08/05/16 01:26	1
Zinc	1.1	J	2.0	0.022	mg/L	-	08/04/16 08:30	08/06/16 16:15	1
Cadmium	0.016	J	0.10	0.0020	mg/L	-	08/04/16 08:30	08/05/16 01:26	1

General Chemistry

Client Sample ID: SRIB-8 (0)
Date Collected: 07/25/16 12:50
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-1
Matrix: Solid
Percent Solids: 99.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.7		0.1	0.1	%	-		08/01/16 14:03	1

Client Sample ID: SRIB-9 (0)
Date Collected: 07/25/16 12:55
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.6		0.1	0.1	%	-		08/01/16 14:03	1

Client Sample ID: SRIB-10 (0)
Date Collected: 07/25/16 13:00
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.6		0.1	0.1	%	-		08/01/16 14:03	1

Client Sample ID: SRIB-11 (0)
Date Collected: 07/25/16 13:05
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-4
Matrix: Solid
Percent Solids: 99.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.8		0.1	0.1	%	-		08/01/16 14:03	1

Client Sample ID: SRIB-12 (0)
Date Collected: 07/25/16 13:20
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-5
Matrix: Solid
Percent Solids: 99.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.9		0.1	0.1	%	-		08/01/16 14:03	1

Client Sample ID: SRIB-12 (30)
Date Collected: 07/25/16 13:30
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-6
Matrix: Solid
Percent Solids: 90.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.9		0.1	0.1	%	-		08/01/16 14:03	1

Client Sample ID: SRIB-11 (24)
Date Collected: 07/25/16 13:45
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-7
Matrix: Solid
Percent Solids: 91.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	8.5		0.1	0.1	%	-		08/01/16 14:03	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

General Chemistry

Client Sample ID: SRIB-10 (18)
Date Collected: 07/25/16 13:50
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-8
Matrix: Solid
Percent Solids: 87.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12.7		0.1	0.1	%			08/01/16 14:03	1

Client Sample ID: SRIB-9 (30)
Date Collected: 07/25/16 13:55
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-9
Matrix: Solid
Percent Solids: 90.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10		0.1	0.1	%			08/01/16 14:03	1

Client Sample ID: SRIB-8 (30)
Date Collected: 07/25/16 14:15
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-10
Matrix: Solid
Percent Solids: 89.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.0		0.1	0.1	%			08/01/16 14:03	1

Client Sample ID: SRIB-7 (12)
Date Collected: 07/25/16 14:25
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-11
Matrix: Solid
Percent Solids: 97.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.9		0.1	0.1	%			08/01/16 14:03	1

Client Sample ID: NRSF-8
Date Collected: 07/25/16 09:05
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-12
Matrix: Solid
Percent Solids: 97.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.6		0.1	0.1	%			08/01/16 14:03	1

Client Sample ID: NRSF-9
Date Collected: 07/25/16 09:25
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-13
Matrix: Solid
Percent Solids: 98.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.8		0.1	0.1	%			08/01/16 14:03	1

Client Sample ID: NRSF-21
Date Collected: 07/25/16 09:13
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-14
Matrix: Solid
Percent Solids: 98.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.9		0.1	0.1	%			08/01/16 14:03	1

Client Sample ID: NRSF-22
Date Collected: 07/25/16 09:06
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-15
Matrix: Solid
Percent Solids: 96.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	3.3		0.1	0.1	%			08/01/16 14:03	1

Client Sample ID: NRIB-1 (0)
Date Collected: 07/25/16 10:15
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-16
Matrix: Solid
Percent Solids: 99.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.5		0.1	0.1	%			08/01/16 14:03	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

General Chemistry

Client Sample ID: NRIB-1 (6)
Date Collected: 07/25/16 11:20
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-17
Matrix: Solid
Percent Solids: 98.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.7		0.1	0.1	%			08/01/16 14:06	1

Client Sample ID: NRIB-2 (0)
Date Collected: 07/25/16 10:15
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-18
Matrix: Solid
Percent Solids: 99.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.5		0.1	0.1	%			08/01/16 14:06	1

Client Sample ID: NRIB-2 (18)
Date Collected: 07/25/16 11:10
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-19
Matrix: Solid
Percent Solids: 88.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	11.7		0.1	0.1	%			08/01/16 14:06	1

Client Sample ID: NRIB-3 (0)
Date Collected: 07/25/16 10:15
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-20
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.5		0.1	0.1	%			08/01/16 14:06	1

Client Sample ID: NRIB-3 (18)
Date Collected: 07/25/16 10:45
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-21
Matrix: Solid
Percent Solids: 90.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	9.5		0.1	0.1	%			08/01/16 14:06	1

Client Sample ID: SRIB-7 (0)
Date Collected: 07/25/16 12:45
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-22
Matrix: Solid
Percent Solids: 99.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.0		0.1	0.1	%			08/01/16 16:30	1

Client Sample ID: DUPE-7
Date Collected: 07/25/16 00:00
Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-23
Matrix: Solid
Percent Solids: 99.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.5		0.1	0.1	%			08/01/16 16:30	1

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-335611/1-A

Matrix: Solid

Analysis Batch: 336453

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 335611

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg		08/01/16 08:15	08/03/16 20:08	1
Zinc	ND		3.0	0.40	mg/Kg		08/01/16 08:15	08/03/16 20:08	1
Cadmium	ND		0.50	0.041	mg/Kg		08/01/16 08:15	08/03/16 20:08	1

Lab Sample ID: MB 280-335611/1-A

Matrix: Solid

Analysis Batch: 336684

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 335611

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.66	mg/Kg		08/01/16 08:15	08/04/16 19:17	1
Tin	1.18	J	10	0.91	mg/Kg		08/01/16 08:15	08/04/16 19:17	1

Lab Sample ID: MB 280-335611/1-A

Matrix: Solid

Analysis Batch: 337045

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 335611

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		2.0	0.22	mg/Kg		08/01/16 08:15	08/08/16 14:38	1
Lead	ND	^	0.90	0.27	mg/Kg		08/01/16 08:15	08/08/16 14:38	1

Lab Sample ID: LCS 280-335611/2-A

Matrix: Solid

Analysis Batch: 336453

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 335611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	49.1		mg/Kg		98	82 - 110
Zinc	50.0	48.9		mg/Kg		98	76 - 114
Cadmium	10.0	9.82		mg/Kg		98	87 - 110

Lab Sample ID: LCS 280-335611/2-A

Matrix: Solid

Analysis Batch: 336684

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 335611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	103		mg/Kg		103	85 - 110
Tin	200	201		mg/Kg		100	84 - 110

Lab Sample ID: LCS 280-335611/2-A

Matrix: Solid

Analysis Batch: 337045

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 335611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	25.0	25.2		mg/Kg		101	88 - 110
Lead	50.0	50.7	^	mg/Kg		101	86 - 110

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-86054-1 MS

Matrix: Solid

Analysis Batch: 336453

Client Sample ID: SRIB-8 (0)

Prep Type: Total/NA

Prep Batch: 335611

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	1400		38.6	276	4	mg/Kg	☼	-2798	20 - 200
Zinc	110		38.6	151		mg/Kg	☼	103	70 - 200
Cadmium	ND		7.72	7.28		mg/Kg	☼	94	40 - 130

Lab Sample ID: 280-86054-1 MS

Matrix: Solid

Analysis Batch: 336684

Client Sample ID: SRIB-8 (0)

Prep Type: Total/NA

Prep Batch: 335611

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	410	F2	77.2	85.6	4	mg/Kg	☼	-419	76 - 111
Tin	66	F2 F1 B	154	182	F1	mg/Kg	☼	75	77 - 126

Lab Sample ID: 280-86054-1 MS

Matrix: Solid

Analysis Batch: 336867

Client Sample ID: SRIB-8 (0)

Prep Type: Total/NA

Prep Batch: 335611

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Copper	740	B F2	19.3	1120	4	mg/Kg	☼	1937	37 - 187

Lab Sample ID: 280-86054-1 MS

Matrix: Solid

Analysis Batch: 337045

Client Sample ID: SRIB-8 (0)

Prep Type: Total/NA

Prep Batch: 335611

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Lead	130000	^ F2	38.6	24300	4 ^	mg/Kg	☼	-2717 11	70 - 200

Lab Sample ID: 280-86054-1 MSD

Matrix: Solid

Analysis Batch: 336453

Client Sample ID: SRIB-8 (0)

Prep Type: Total/NA

Prep Batch: 335611

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	1400		46.7	336	4	mg/Kg	☼	-2187	20 - 200	19	20
Zinc	110		46.7	175		mg/Kg	☼	137	70 - 200	15	20
Cadmium	ND		9.33	8.90		mg/Kg	☼	95	40 - 130	20	20

Lab Sample ID: 280-86054-1 MSD

Matrix: Solid

Analysis Batch: 336684

Client Sample ID: SRIB-8 (0)

Prep Type: Total/NA

Prep Batch: 335611

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	410	F2	93.3	106	4 F2	mg/Kg	☼	-324	76 - 111	21	20
Tin	66	F2 F1 B	187	269	F2	mg/Kg	☼	109	77 - 126	38	20

Lab Sample ID: 280-86054-1 MSD

Matrix: Solid

Analysis Batch: 336867

Client Sample ID: SRIB-8 (0)

Prep Type: Total/NA

Prep Batch: 335611

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Copper	740	B F2	23.3	1910	4 F2	mg/Kg	☼	5010	37 - 187	52	20

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Lab Sample ID: 280-86054-1 MSD

Matrix: Solid

Analysis Batch: 337045

Client Sample ID: SRIB-8 (0)

Prep Type: Total/NA

Prep Batch: 335611

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	130000	^ F2	46.7	38900	4 F2 ^	mg/Kg	☼	-1936 44	70 - 200	46	20

Lab Sample ID: MB 280-335612/1-A

Matrix: Solid

Analysis Batch: 336684

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 335612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.66	mg/Kg		08/01/16 08:15	08/04/16 20:54	1

Lab Sample ID: LCS 280-335612/2-A

Matrix: Solid

Analysis Batch: 336684

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 335612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	101		mg/Kg		101	85 - 110

Lab Sample ID: 280-86054-14 MS

Matrix: Solid

Analysis Batch: 336684

Client Sample ID: NRSF-21

Prep Type: Total/NA

Prep Batch: 335612

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	5.1		81.9	77.5		mg/Kg	☼	88	76 - 111

Lab Sample ID: 280-86054-14 MSD

Matrix: Solid

Analysis Batch: 336684

Client Sample ID: NRSF-21

Prep Type: Total/NA

Prep Batch: 335612

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	5.1		69.4	66.8		mg/Kg	☼	89	76 - 111	15	20

Lab Sample ID: MB 280-336954/1-A

Matrix: Solid

Analysis Batch: 337214

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 336954

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	0.289	J	2.0	0.22	mg/Kg		08/09/16 09:15	08/09/16 19:55	1
Tin	0.966	J	10	0.91	mg/Kg		08/09/16 09:15	08/09/16 19:55	1
Zinc	ND		3.0	0.40	mg/Kg		08/09/16 09:15	08/09/16 19:55	1

Lab Sample ID: MB 280-336954/1-A

Matrix: Solid

Analysis Batch: 337444

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 336954

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg		08/09/16 09:15	08/10/16 16:00	1
Cadmium	ND		0.50	0.041	mg/Kg		08/09/16 09:15	08/10/16 16:00	1

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 280-336954/1-A
Matrix: Solid
Analysis Batch: 337544

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 336954

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.90	0.27	mg/Kg		08/09/16 09:15	08/11/16 12:55	1

Lab Sample ID: LCS 280-336954/2-A
Matrix: Solid
Analysis Batch: 337214

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 336954

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Copper	25.0	25.2		mg/Kg		101	88 - 110
Tin	200	193		mg/Kg		96	84 - 110
Zinc	50.0	46.4		mg/Kg		93	76 - 114

Lab Sample ID: LCS 280-336954/2-A
Matrix: Solid
Analysis Batch: 337444

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 336954

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	50.0	47.9		mg/Kg		96	82 - 110
Cadmium	10.0	9.69		mg/Kg		97	87 - 110

Lab Sample ID: LCS 280-336954/2-A
Matrix: Solid
Analysis Batch: 337544

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 336954

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Lead	50.0	49.4		mg/Kg		99	86 - 110

Lab Sample ID: 280-86054-14 MS
Matrix: Solid
Analysis Batch: 337214

Client Sample ID: NRSF-21
Prep Type: Total/NA
Prep Batch: 336954

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Copper	14	B F2	25.4	26.8		mg/Kg	☼	52	37 - 187
Tin	1.2	J B F1	203	125	F1	mg/Kg	☼	61	77 - 126
Zinc	47	F1 F2	50.7	71.1	F1	mg/Kg	☼	48	70 - 200

Lab Sample ID: 280-86054-14 MS
Matrix: Solid
Analysis Batch: 337444

Client Sample ID: NRSF-21
Prep Type: Total/NA
Prep Batch: 336954

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	ND	F2	50.7	21.7		mg/Kg	☼	43	20 - 200
Cadmium	0.84		10.1	10.4		mg/Kg	☼	94	40 - 130

Lab Sample ID: 280-86054-14 MS
Matrix: Solid
Analysis Batch: 337544

Client Sample ID: NRSF-21
Prep Type: Total/NA
Prep Batch: 336954

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Lead	39		50.7	88.8		mg/Kg	☼	99	70 - 200

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-86054-14 MSD

Matrix: Solid

Analysis Batch: 337214

Client Sample ID: NRSF-21

Prep Type: Total/NA

Prep Batch: 336954

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Copper	14	B F2	21.8	35.8	F2	mg/Kg	☼	102	37 - 187	29	20
Tin	1.2	J B F1	174	150		mg/Kg	☼	85	77 - 126	18	20
Zinc	47	F1 F2	43.6	91.2	F2	mg/Kg	☼	102	70 - 200	25	20

Lab Sample ID: 280-86054-14 MSD

Matrix: Solid

Analysis Batch: 337444

Client Sample ID: NRSF-21

Prep Type: Total/NA

Prep Batch: 336954

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Antimony	ND	F2	43.6	16.4	F2	mg/Kg	☼	38	20 - 200	28	20
Cadmium	0.84		8.72	8.55		mg/Kg	☼	88	40 - 130	19	20

Lab Sample ID: 280-86054-14 MSD

Matrix: Solid

Analysis Batch: 337544

Client Sample ID: NRSF-21

Prep Type: Total/NA

Prep Batch: 336954

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Lead	39		43.6	77.2		mg/Kg	☼	88	70 - 200	14	20

Lab Sample ID: LB 280-336177/1-B

Matrix: Solid

Analysis Batch: 336680

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 336372

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.20	0.016	mg/L		08/04/16 08:30	08/05/16 00:53	1
Copper	0.0707	J	2.0	0.021	mg/L		08/04/16 08:30	08/05/16 00:53	1
Tin	ND		0.20	0.029	mg/L		08/04/16 08:30	08/05/16 00:53	1
Cadmium	ND		0.10	0.0020	mg/L		08/04/16 08:30	08/05/16 00:53	1

Lab Sample ID: LB 280-336177/1-B

Matrix: Solid

Analysis Batch: 336882

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 336372

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0513	J	0.50	0.022	mg/L		08/04/16 08:30	08/06/16 15:53	1
Lead	0.0555	J	0.50	0.013	mg/L		08/04/16 08:30	08/06/16 15:53	1
Zinc	ND		2.0	0.022	mg/L		08/04/16 08:30	08/06/16 15:53	1

Lab Sample ID: LCS 280-336177/2-B

Matrix: Solid

Analysis Batch: 336680

Client Sample ID: Lab Control Sample

Prep Type: TCLP

Prep Batch: 336372

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.557		mg/L		111	80 - 120
Copper	2.25	2.73	*	mg/L		121	80 - 120
Tin	2.00	2.16		mg/L		108	80 - 120
Cadmium	1.10	1.31		mg/L		119	80 - 120

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCS 280-336177/2-B

Matrix: Solid

Analysis Batch: 336882

Client Sample ID: Lab Control Sample

Prep Type: TCLP

Prep Batch: 336372

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.00	4.64		mg/L		116	80 - 120
Lead	5.50	6.11		mg/L		111	80 - 120
Zinc	2.50	2.69		mg/L		108	80 - 120

Lab Sample ID: 280-86054-2 MS

Matrix: Solid

Analysis Batch: 336680

Client Sample ID: SRIB-9 (0)

Prep Type: TCLP

Prep Batch: 336372

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	2.2		0.500	2.92	4	mg/L		143	80 - 120
Copper	1.2	J B *	2.25	3.91		mg/L		119	80 - 120
Tin	ND		2.00	2.08		mg/L		104	80 - 120
Zinc	2.4	*	2.50	5.41		mg/L		120	80 - 120
Cadmium	0.0081	J	1.10	1.27		mg/L		114	80 - 120

Lab Sample ID: 280-86054-2 MS

Matrix: Solid

Analysis Batch: 336882

Client Sample ID: SRIB-9 (0)

Prep Type: TCLP

Prep Batch: 336372

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1200	B	5.50	1250	4	mg/L		1857	80 - 120

Lab Sample ID: 280-86054-2 MS

Matrix: Solid

Analysis Batch: 336882

Client Sample ID: SRIB-9 (0)

Prep Type: TCLP

Prep Batch: 336372

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.13	J B	4.00	4.59		mg/L		111	80 - 120
Zinc	2.0		2.50	4.59		mg/L		102	80 - 120

Lab Sample ID: 280-86054-2 MSD

Matrix: Solid

Analysis Batch: 336680

Client Sample ID: SRIB-9 (0)

Prep Type: TCLP

Prep Batch: 336372

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	2.2		0.500	2.81	4	mg/L		121	80 - 120	4	20
Copper	1.2	J B *	2.25	3.80		mg/L		114	80 - 120	3	20
Tin	ND		2.00	2.01		mg/L		101	80 - 120	3	20
Zinc	2.4	*	2.50	5.21		mg/L		112	80 - 120	4	20
Cadmium	0.0081	J	1.10	1.22		mg/L		111	80 - 120	3	20

Lab Sample ID: 280-86054-2 MSD

Matrix: Solid

Analysis Batch: 336882

Client Sample ID: SRIB-9 (0)

Prep Type: TCLP

Prep Batch: 336372

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	1200	B	5.50	1220	4	mg/L		1275	80 - 120	3	20

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 280-86054-2 MSD

Matrix: Solid

Analysis Batch: 336882

Client Sample ID: SRIB-9 (0)

Prep Type: TCLP

Prep Batch: 336372

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.13	J B	4.00	4.41		mg/L		107	80 - 120	4	20
Zinc	2.0		2.50	4.57		mg/L		101	80 - 120	0	20

Method: Moisture - Percent Moisture

Lab Sample ID: 280-86054-6 DU

Matrix: Solid

Analysis Batch: 335967

Client Sample ID: SRIB-12 (30)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	9.9		9.8		%		0.6	20

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Metals

Prep Batch: 335611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-1	SRIB-8 (0)	Total/NA	Solid	3050B	
280-86054-2	SRIB-9 (0)	Total/NA	Solid	3050B	
280-86054-3	SRIB-10 (0)	Total/NA	Solid	3050B	
280-86054-4	SRIB-11 (0)	Total/NA	Solid	3050B	
280-86054-5	SRIB-12 (0)	Total/NA	Solid	3050B	
280-86054-6	SRIB-12 (30)	Total/NA	Solid	3050B	
280-86054-7	SRIB-11 (24)	Total/NA	Solid	3050B	
280-86054-8	SRIB-10 (18)	Total/NA	Solid	3050B	
280-86054-9	SRIB-9 (30)	Total/NA	Solid	3050B	
280-86054-10	SRIB-8 (30)	Total/NA	Solid	3050B	
280-86054-11	SRIB-7 (12)	Total/NA	Solid	3050B	
280-86054-12	NRSF-8	Total/NA	Solid	3050B	
280-86054-13	NRSF-9	Total/NA	Solid	3050B	
MB 280-335611/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-335611/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-86054-1 MS	SRIB-8 (0)	Total/NA	Solid	3050B	
280-86054-1 MSD	SRIB-8 (0)	Total/NA	Solid	3050B	

Prep Batch: 335612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-14	NRSF-21	Total/NA	Solid	3050B	
280-86054-15	NRSF-22	Total/NA	Solid	3050B	
280-86054-16	NRIB-1 (0)	Total/NA	Solid	3050B	
280-86054-17	NRIB-1 (6)	Total/NA	Solid	3050B	
280-86054-18	NRIB-2 (0)	Total/NA	Solid	3050B	
280-86054-19	NRIB-2 (18)	Total/NA	Solid	3050B	
280-86054-20	NRIB-3 (0)	Total/NA	Solid	3050B	
280-86054-21	NRIB-3 (18)	Total/NA	Solid	3050B	
280-86054-22	SRIB-7 (0)	Total/NA	Solid	3050B	
280-86054-23	DUPE-7	Total/NA	Solid	3050B	
MB 280-335612/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-335612/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-86054-14 MS	NRSF-21	Total/NA	Solid	3050B	
280-86054-14 MSD	NRSF-21	Total/NA	Solid	3050B	

Leach Batch: 336177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-2	SRIB-9 (0)	TCLP	Solid	1311	
280-86054-3	SRIB-10 (0)	TCLP	Solid	1311	
280-86054-20	NRIB-3 (0)	TCLP	Solid	1311	
LB 280-336177/1-B	Method Blank	TCLP	Solid	1311	
LCS 280-336177/2-B	Lab Control Sample	TCLP	Solid	1311	
280-86054-2 MS	SRIB-9 (0)	TCLP	Solid	1311	
280-86054-2 MSD	SRIB-9 (0)	TCLP	Solid	1311	

Prep Batch: 336372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-2	SRIB-9 (0)	TCLP	Solid	3010A	336177
280-86054-3	SRIB-10 (0)	TCLP	Solid	3010A	336177
280-86054-20	NRIB-3 (0)	TCLP	Solid	3010A	336177
LB 280-336177/1-B	Method Blank	TCLP	Solid	3010A	336177

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Metals (Continued)

Prep Batch: 336372 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-336177/2-B	Lab Control Sample	TCLP	Solid	3010A	336177
280-86054-2 MS	SRIB-9 (0)	TCLP	Solid	3010A	336177
280-86054-2 MSD	SRIB-9 (0)	TCLP	Solid	3010A	336177

Analysis Batch: 336453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-1	SRIB-8 (0)	Total/NA	Solid	6010C	335611
280-86054-2	SRIB-9 (0)	Total/NA	Solid	6010C	335611
280-86054-3	SRIB-10 (0)	Total/NA	Solid	6010C	335611
280-86054-4	SRIB-11 (0)	Total/NA	Solid	6010C	335611
280-86054-5	SRIB-12 (0)	Total/NA	Solid	6010C	335611
280-86054-6	SRIB-12 (30)	Total/NA	Solid	6010C	335611
280-86054-7	SRIB-11 (24)	Total/NA	Solid	6010C	335611
280-86054-8	SRIB-10 (18)	Total/NA	Solid	6010C	335611
280-86054-10	SRIB-8 (30)	Total/NA	Solid	6010C	335611
280-86054-11	SRIB-7 (12)	Total/NA	Solid	6010C	335611
280-86054-13	NRSF-9	Total/NA	Solid	6010C	335611
MB 280-335611/1-A	Method Blank	Total/NA	Solid	6010C	335611
LCS 280-335611/2-A	Lab Control Sample	Total/NA	Solid	6010C	335611
280-86054-1 MS	SRIB-8 (0)	Total/NA	Solid	6010C	335611
280-86054-1 MSD	SRIB-8 (0)	Total/NA	Solid	6010C	335611

Analysis Batch: 336680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-2	SRIB-9 (0)	TCLP	Solid	6010C	336372
280-86054-3	SRIB-10 (0)	TCLP	Solid	6010C	336372
280-86054-20	NRIB-3 (0)	TCLP	Solid	6010C	336372
LB 280-336177/1-B	Method Blank	TCLP	Solid	6010C	336372
LCS 280-336177/2-B	Lab Control Sample	TCLP	Solid	6010C	336372
280-86054-2 MS	SRIB-9 (0)	TCLP	Solid	6010C	336372
280-86054-2 MSD	SRIB-9 (0)	TCLP	Solid	6010C	336372

Analysis Batch: 336684

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-1	SRIB-8 (0)	Total/NA	Solid	6010C	335611
280-86054-2	SRIB-9 (0)	Total/NA	Solid	6010C	335611
280-86054-3	SRIB-10 (0)	Total/NA	Solid	6010C	335611
280-86054-4	SRIB-11 (0)	Total/NA	Solid	6010C	335611
280-86054-5	SRIB-12 (0)	Total/NA	Solid	6010C	335611
280-86054-6	SRIB-12 (30)	Total/NA	Solid	6010C	335611
280-86054-7	SRIB-11 (24)	Total/NA	Solid	6010C	335611
280-86054-8	SRIB-10 (18)	Total/NA	Solid	6010C	335611
280-86054-9	SRIB-9 (30)	Total/NA	Solid	6010C	335611
280-86054-10	SRIB-8 (30)	Total/NA	Solid	6010C	335611
280-86054-11	SRIB-7 (12)	Total/NA	Solid	6010C	335611
280-86054-12	NRSF-8	Total/NA	Solid	6010C	335611
280-86054-13	NRSF-9	Total/NA	Solid	6010C	335611
280-86054-14	NRSF-21	Total/NA	Solid	6010C	335612
280-86054-15	NRSF-22	Total/NA	Solid	6010C	335612
280-86054-16	NRIB-1 (0)	Total/NA	Solid	6010C	335612
280-86054-17	NRIB-1 (6)	Total/NA	Solid	6010C	335612

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Metals (Continued)

Analysis Batch: 336684 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-18	NRIB-2 (0)	Total/NA	Solid	6010C	335612
280-86054-19	NRIB-2 (18)	Total/NA	Solid	6010C	335612
280-86054-20	NRIB-3 (0)	Total/NA	Solid	6010C	335612
280-86054-21	NRIB-3 (18)	Total/NA	Solid	6010C	335612
280-86054-22	SRIB-7 (0)	Total/NA	Solid	6010C	335612
280-86054-23	DUPE-7	Total/NA	Solid	6010C	335612
MB 280-335611/1-A	Method Blank	Total/NA	Solid	6010C	335611
MB 280-335612/1-A	Method Blank	Total/NA	Solid	6010C	335612
LCS 280-335611/2-A	Lab Control Sample	Total/NA	Solid	6010C	335611
LCS 280-335612/2-A	Lab Control Sample	Total/NA	Solid	6010C	335612
280-86054-1 MS	SRIB-8 (0)	Total/NA	Solid	6010C	335611
280-86054-1 MSD	SRIB-8 (0)	Total/NA	Solid	6010C	335611
280-86054-14 MS	NRSF-21	Total/NA	Solid	6010C	335612
280-86054-14 MSD	NRSF-21	Total/NA	Solid	6010C	335612

Analysis Batch: 336867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-1	SRIB-8 (0)	Total/NA	Solid	6010C	335611
280-86054-3	SRIB-10 (0)	Total/NA	Solid	6010C	335611
280-86054-5	SRIB-12 (0)	Total/NA	Solid	6010C	335611
280-86054-6	SRIB-12 (30)	Total/NA	Solid	6010C	335611
280-86054-7	SRIB-11 (24)	Total/NA	Solid	6010C	335611
280-86054-8	SRIB-10 (18)	Total/NA	Solid	6010C	335611
280-86054-9	SRIB-9 (30)	Total/NA	Solid	6010C	335611
280-86054-10	SRIB-8 (30)	Total/NA	Solid	6010C	335611
280-86054-11	SRIB-7 (12)	Total/NA	Solid	6010C	335611
280-86054-12	NRSF-8	Total/NA	Solid	6010C	335611
280-86054-13	NRSF-9	Total/NA	Solid	6010C	335611
280-86054-1 MS	SRIB-8 (0)	Total/NA	Solid	6010C	335611
280-86054-1 MSD	SRIB-8 (0)	Total/NA	Solid	6010C	335611

Analysis Batch: 336882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-2	SRIB-9 (0)	TCLP	Solid	6010C	336372
280-86054-2	SRIB-9 (0)	TCLP	Solid	6010C	336372
280-86054-3	SRIB-10 (0)	TCLP	Solid	6010C	336372
280-86054-20	NRIB-3 (0)	TCLP	Solid	6010C	336372
LB 280-336177/1-B	Method Blank	TCLP	Solid	6010C	336372
LCS 280-336177/2-B	Lab Control Sample	TCLP	Solid	6010C	336372
280-86054-2 MS	SRIB-9 (0)	TCLP	Solid	6010C	336372
280-86054-2 MS	SRIB-9 (0)	TCLP	Solid	6010C	336372
280-86054-2 MSD	SRIB-9 (0)	TCLP	Solid	6010C	336372
280-86054-2 MSD	SRIB-9 (0)	TCLP	Solid	6010C	336372

Prep Batch: 336954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-14	NRSF-21	Total/NA	Solid	3050B	
280-86054-15	NRSF-22	Total/NA	Solid	3050B	
280-86054-16	NRIB-1 (0)	Total/NA	Solid	3050B	
280-86054-17	NRIB-1 (6)	Total/NA	Solid	3050B	
280-86054-18	NRIB-2 (0)	Total/NA	Solid	3050B	

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Metals (Continued)

Prep Batch: 336954 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-19	NRIB-2 (18)	Total/NA	Solid	3050B	
280-86054-20	NRIB-3 (0)	Total/NA	Solid	3050B	
280-86054-21	NRIB-3 (18)	Total/NA	Solid	3050B	
280-86054-22	SRIB-7 (0)	Total/NA	Solid	3050B	
280-86054-23	DUPE-7	Total/NA	Solid	3050B	
MB 280-336954/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-336954/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-86054-14 MS	NRSF-21	Total/NA	Solid	3050B	
280-86054-14 MSD	NRSF-21	Total/NA	Solid	3050B	

Analysis Batch: 337045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-1	SRIB-8 (0)	Total/NA	Solid	6010C	335611
280-86054-2	SRIB-9 (0)	Total/NA	Solid	6010C	335611
280-86054-2	SRIB-9 (0)	Total/NA	Solid	6010C	335611
280-86054-3	SRIB-10 (0)	Total/NA	Solid	6010C	335611
280-86054-4	SRIB-11 (0)	Total/NA	Solid	6010C	335611
280-86054-4	SRIB-11 (0)	Total/NA	Solid	6010C	335611
280-86054-5	SRIB-12 (0)	Total/NA	Solid	6010C	335611
MB 280-335611/1-A	Method Blank	Total/NA	Solid	6010C	335611
LCS 280-335611/2-A	Lab Control Sample	Total/NA	Solid	6010C	335611
280-86054-1 MS	SRIB-8 (0)	Total/NA	Solid	6010C	335611
280-86054-1 MSD	SRIB-8 (0)	Total/NA	Solid	6010C	335611

Analysis Batch: 337049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-3	SRIB-10 (0)	TCLP	Solid	6010C	336372

Analysis Batch: 337214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-14	NRSF-21	Total/NA	Solid	6010C	336954
280-86054-15	NRSF-22	Total/NA	Solid	6010C	336954
280-86054-16	NRIB-1 (0)	Total/NA	Solid	6010C	336954
280-86054-17	NRIB-1 (6)	Total/NA	Solid	6010C	336954
280-86054-18	NRIB-2 (0)	Total/NA	Solid	6010C	336954
280-86054-18	NRIB-2 (0)	Total/NA	Solid	6010C	336954
280-86054-19	NRIB-2 (18)	Total/NA	Solid	6010C	336954
280-86054-20	NRIB-3 (0)	Total/NA	Solid	6010C	336954
280-86054-20	NRIB-3 (0)	Total/NA	Solid	6010C	336954
280-86054-21	NRIB-3 (18)	Total/NA	Solid	6010C	336954
280-86054-22	SRIB-7 (0)	Total/NA	Solid	6010C	336954
280-86054-23	DUPE-7	Total/NA	Solid	6010C	336954
MB 280-336954/1-A	Method Blank	Total/NA	Solid	6010C	336954
LCS 280-336954/2-A	Lab Control Sample	Total/NA	Solid	6010C	336954
280-86054-14 MS	NRSF-21	Total/NA	Solid	6010C	336954
280-86054-14 MSD	NRSF-21	Total/NA	Solid	6010C	336954

Analysis Batch: 337444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-14	NRSF-21	Total/NA	Solid	6010C	336954
280-86054-15	NRSF-22	Total/NA	Solid	6010C	336954

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Metals (Continued)

Analysis Batch: 337444 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-16	NRIB-1 (0)	Total/NA	Solid	6010C	336954
280-86054-17	NRIB-1 (6)	Total/NA	Solid	6010C	336954
280-86054-17	NRIB-1 (6)	Total/NA	Solid	6010C	336954
280-86054-18	NRIB-2 (0)	Total/NA	Solid	6010C	336954
280-86054-19	NRIB-2 (18)	Total/NA	Solid	6010C	336954
280-86054-20	NRIB-3 (0)	Total/NA	Solid	6010C	336954
280-86054-21	NRIB-3 (18)	Total/NA	Solid	6010C	336954
280-86054-22	SRIB-7 (0)	Total/NA	Solid	6010C	336954
280-86054-23	DUPE-7	Total/NA	Solid	6010C	336954
280-86054-23	DUPE-7	Total/NA	Solid	6010C	336954
MB 280-336954/1-A	Method Blank	Total/NA	Solid	6010C	336954
LCS 280-336954/2-A	Lab Control Sample	Total/NA	Solid	6010C	336954
280-86054-14 MS	NRSF-21	Total/NA	Solid	6010C	336954
280-86054-14 MSD	NRSF-21	Total/NA	Solid	6010C	336954

Analysis Batch: 337544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-14	NRSF-21	Total/NA	Solid	6010C	336954
280-86054-15	NRSF-22	Total/NA	Solid	6010C	336954
280-86054-16	NRIB-1 (0)	Total/NA	Solid	6010C	336954
280-86054-17	NRIB-1 (6)	Total/NA	Solid	6010C	336954
280-86054-18	NRIB-2 (0)	Total/NA	Solid	6010C	336954
280-86054-19	NRIB-2 (18)	Total/NA	Solid	6010C	336954
280-86054-20	NRIB-3 (0)	Total/NA	Solid	6010C	336954
280-86054-21	NRIB-3 (18)	Total/NA	Solid	6010C	336954
280-86054-22	SRIB-7 (0)	Total/NA	Solid	6010C	336954
280-86054-23	DUPE-7	Total/NA	Solid	6010C	336954
MB 280-336954/1-A	Method Blank	Total/NA	Solid	6010C	336954
LCS 280-336954/2-A	Lab Control Sample	Total/NA	Solid	6010C	336954
280-86054-14 MS	NRSF-21	Total/NA	Solid	6010C	336954
280-86054-14 MSD	NRSF-21	Total/NA	Solid	6010C	336954

General Chemistry

Analysis Batch: 335967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-1	SRIB-8 (0)	Total/NA	Solid	Moisture	
280-86054-2	SRIB-9 (0)	Total/NA	Solid	Moisture	
280-86054-3	SRIB-10 (0)	Total/NA	Solid	Moisture	
280-86054-4	SRIB-11 (0)	Total/NA	Solid	Moisture	
280-86054-5	SRIB-12 (0)	Total/NA	Solid	Moisture	
280-86054-6	SRIB-12 (30)	Total/NA	Solid	Moisture	
280-86054-7	SRIB-11 (24)	Total/NA	Solid	Moisture	
280-86054-8	SRIB-10 (18)	Total/NA	Solid	Moisture	
280-86054-9	SRIB-9 (30)	Total/NA	Solid	Moisture	
280-86054-10	SRIB-8 (30)	Total/NA	Solid	Moisture	
280-86054-11	SRIB-7 (12)	Total/NA	Solid	Moisture	
280-86054-12	NRSF-8	Total/NA	Solid	Moisture	
280-86054-13	NRSF-9	Total/NA	Solid	Moisture	
280-86054-14	NRSF-21	Total/NA	Solid	Moisture	

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

General Chemistry (Continued)

Analysis Batch: 335967 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86054-15	NRSF-22	Total/NA	Solid	Moisture	
280-86054-16	NRIB-1 (0)	Total/NA	Solid	Moisture	
280-86054-17	NRIB-1 (6)	Total/NA	Solid	Moisture	
280-86054-18	NRIB-2 (0)	Total/NA	Solid	Moisture	
280-86054-19	NRIB-2 (18)	Total/NA	Solid	Moisture	
280-86054-20	NRIB-3 (0)	Total/NA	Solid	Moisture	
280-86054-21	NRIB-3 (18)	Total/NA	Solid	Moisture	
280-86054-22	SRIB-7 (0)	Total/NA	Solid	Moisture	
280-86054-23	DUPE-7	Total/NA	Solid	Moisture	
280-86054-6 DU	SRIB-12 (30)	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: SRIB-8 (0)

Date Collected: 07/25/16 12:50

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

Client Sample ID: SRIB-8 (0)

Date Collected: 07/25/16 12:50

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-1

Matrix: Solid

Percent Solids: 99.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.234 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336453	08/03/16 20:12	SJS	TAL DEN
Total/NA	Prep	3050B			1.234 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 19:22	SJS	TAL DEN
Total/NA	Prep	3050B			1.234 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336867	08/06/16 17:30	CRR	TAL DEN
Total/NA	Prep	3050B			1.234 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		500			337045	08/08/16 14:43	CRR	TAL DEN

Client Sample ID: SRIB-9 (0)

Date Collected: 07/25/16 12:55

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336680	08/05/16 00:58	CMK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		5			336882	08/06/16 15:58	CMK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336882	08/06/16 17:15	CMK	TAL DEN
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

Client Sample ID: SRIB-9 (0)

Date Collected: 07/25/16 12:55

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-2

Matrix: Solid

Percent Solids: 99.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.309 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336453	08/03/16 20:25	SJS	TAL DEN
Total/NA	Prep	3050B			1.309 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 19:35	SJS	TAL DEN
Total/NA	Prep	3050B			1.309 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		25			337045	08/08/16 15:06	CRR	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: SRIB-9 (0)

Date Collected: 07/25/16 12:55

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-2

Matrix: Solid

Percent Solids: 99.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.309 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		100			337045	08/08/16 15:08	CRR	TAL DEN

Client Sample ID: SRIB-10 (0)

Date Collected: 07/25/16 13:00

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336680	08/05/16 01:12	CMK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336882	08/06/16 16:12	CMK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		5			337049	08/08/16 13:31	CMK	TAL DEN
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

Client Sample ID: SRIB-10 (0)

Date Collected: 07/25/16 13:00

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-3

Matrix: Solid

Percent Solids: 99.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.271 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336453	08/03/16 20:28	SJS	TAL DEN
Total/NA	Prep	3050B			1.271 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 19:37	SJS	TAL DEN
Total/NA	Prep	3050B			1.271 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336867	08/06/16 17:46	CRR	TAL DEN
Total/NA	Prep	3050B			1.271 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		200			337045	08/08/16 15:11	CRR	TAL DEN

Client Sample ID: SRIB-11 (0)

Date Collected: 07/25/16 13:05

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: SRIB-11 (0)

Date Collected: 07/25/16 13:05

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-4

Matrix: Solid

Percent Solids: 99.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.012 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336453	08/03/16 20:40	SJS	TAL DEN
Total/NA	Prep	3050B			1.012 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 19:40	SJS	TAL DEN
Total/NA	Prep	3050B			1.012 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		25			337045	08/08/16 15:13	CRR	TAL DEN
Total/NA	Prep	3050B			1.012 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		500			337045	08/08/16 15:16	CRR	TAL DEN

Client Sample ID: SRIB-12 (0)

Date Collected: 07/25/16 13:20

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

Client Sample ID: SRIB-12 (0)

Date Collected: 07/25/16 13:20

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-5

Matrix: Solid

Percent Solids: 99.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.021 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336453	08/03/16 20:43	SJS	TAL DEN
Total/NA	Prep	3050B			1.021 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 20:22	SJS	TAL DEN
Total/NA	Prep	3050B			1.021 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336867	08/06/16 16:58	CRR	TAL DEN
Total/NA	Prep	3050B			1.021 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		25			337045	08/08/16 15:18	CRR	TAL DEN

Client Sample ID: SRIB-12 (30)

Date Collected: 07/25/16 13:30

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

Client Sample ID: SRIB-12 (30)

Date Collected: 07/25/16 13:30

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-6

Matrix: Solid

Percent Solids: 90.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.008 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: SRIB-12 (30)

Date Collected: 07/25/16 13:30

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-6

Matrix: Solid

Percent Solids: 90.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010C		1			336453	08/03/16 20:45	SJS	TAL DEN
Total/NA	Prep	3050B			1.008 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 20:25	SJS	TAL DEN
Total/NA	Prep	3050B			1.008 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336867	08/06/16 17:01	CRR	TAL DEN

Client Sample ID: SRIB-11 (24)

Date Collected: 07/25/16 13:45

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

Client Sample ID: SRIB-11 (24)

Date Collected: 07/25/16 13:45

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-7

Matrix: Solid

Percent Solids: 91.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.008 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336453	08/03/16 20:48	SJS	TAL DEN
Total/NA	Prep	3050B			1.008 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 20:27	SJS	TAL DEN
Total/NA	Prep	3050B			1.008 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336867	08/06/16 17:03	CRR	TAL DEN

Client Sample ID: SRIB-10 (18)

Date Collected: 07/25/16 13:50

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

Client Sample ID: SRIB-10 (18)

Date Collected: 07/25/16 13:50

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-8

Matrix: Solid

Percent Solids: 87.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.121 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336453	08/03/16 20:50	SJS	TAL DEN
Total/NA	Prep	3050B			1.121 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 20:30	SJS	TAL DEN
Total/NA	Prep	3050B			1.121 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336867	08/06/16 17:06	CRR	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: SRIB-9 (30)

Date Collected: 07/25/16 13:55

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

Client Sample ID: SRIB-9 (30)

Date Collected: 07/25/16 13:55

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-9

Matrix: Solid

Percent Solids: 90.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.173 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 20:32	SJS	TAL DEN
Total/NA	Prep	3050B			1.173 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336867	08/06/16 17:08	CRR	TAL DEN

Client Sample ID: SRIB-8 (30)

Date Collected: 07/25/16 14:15

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

Client Sample ID: SRIB-8 (30)

Date Collected: 07/25/16 14:15

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-10

Matrix: Solid

Percent Solids: 89.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.394 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336453	08/03/16 20:55	SJS	TAL DEN
Total/NA	Prep	3050B			1.394 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 20:35	SJS	TAL DEN
Total/NA	Prep	3050B			1.394 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336867	08/06/16 17:11	CRR	TAL DEN

Client Sample ID: SRIB-7 (12)

Date Collected: 07/25/16 14:25

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: SRIB-7 (12)

Date Collected: 07/25/16 14:25

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-11

Matrix: Solid

Percent Solids: 97.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.204 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336453	08/03/16 20:58	SJS	TAL DEN
Total/NA	Prep	3050B			1.204 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 20:37	SJS	TAL DEN
Total/NA	Prep	3050B			1.204 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336867	08/06/16 17:13	CRR	TAL DEN

Client Sample ID: NRSF-8

Date Collected: 07/25/16 09:05

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

Client Sample ID: NRSF-8

Date Collected: 07/25/16 09:05

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-12

Matrix: Solid

Percent Solids: 97.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.234 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 20:40	SJS	TAL DEN
Total/NA	Prep	3050B			1.234 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336867	08/06/16 17:16	CRR	TAL DEN

Client Sample ID: NRSF-9

Date Collected: 07/25/16 09:25

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

Client Sample ID: NRSF-9

Date Collected: 07/25/16 09:25

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-13

Matrix: Solid

Percent Solids: 98.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.053 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336453	08/03/16 21:03	SJS	TAL DEN
Total/NA	Prep	3050B			1.053 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 20:42	SJS	TAL DEN
Total/NA	Prep	3050B			1.053 g	100 mL	335611	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336867	08/06/16 17:18	CRR	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: NRSF-21

Date Collected: 07/25/16 09:13

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-14

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

Client Sample ID: NRSF-21

Date Collected: 07/25/16 09:13

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-14

Matrix: Solid

Percent Solids: 98.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.091 g	100 mL	335612	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 20:59	SJS	TAL DEN
Total/NA	Prep	3050B			1.190 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337214	08/10/16 03:58	CMK	TAL DEN
Total/NA	Prep	3050B			1.190 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337444	08/10/16 16:05	CMK	TAL DEN
Total/NA	Prep	3050B			1.190 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337544	08/11/16 13:00	CMK	TAL DEN

Client Sample ID: NRSF-22

Date Collected: 07/25/16 09:06

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-15

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

Client Sample ID: NRSF-22

Date Collected: 07/25/16 09:06

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-15

Matrix: Solid

Percent Solids: 96.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.163 g	100 mL	335612	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 21:11	SJS	TAL DEN
Total/NA	Prep	3050B			1.211 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337214	08/10/16 04:11	CMK	TAL DEN
Total/NA	Prep	3050B			1.211 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337444	08/10/16 16:19	CMK	TAL DEN
Total/NA	Prep	3050B			1.211 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337544	08/11/16 13:14	CMK	TAL DEN

Client Sample ID: NRIB-1 (0)

Date Collected: 07/25/16 10:15

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-16

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:03	IEU	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: NRIB-1 (0)

Date Collected: 07/25/16 10:15

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-16

Matrix: Solid

Percent Solids: 99.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.266 g	100 mL	335612	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 21:24	SJS	TAL DEN
Total/NA	Prep	3050B			1.082 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337214	08/10/16 04:13	CMK	TAL DEN
Total/NA	Prep	3050B			1.082 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337444	08/10/16 17:04	CMK	TAL DEN
Total/NA	Prep	3050B			1.082 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		10			337544	08/11/16 13:28	CMK	TAL DEN

Client Sample ID: NRIB-1 (6)

Date Collected: 07/25/16 11:20

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-17

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:06	IEU	TAL DEN

Client Sample ID: NRIB-1 (6)

Date Collected: 07/25/16 11:20

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-17

Matrix: Solid

Percent Solids: 98.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.013 g	100 mL	335612	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 21:29	SJS	TAL DEN
Total/NA	Prep	3050B			1.242 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337214	08/10/16 04:26	CMK	TAL DEN
Total/NA	Prep	3050B			1.242 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		5			337444	08/10/16 16:35	CMK	TAL DEN
Total/NA	Prep	3050B			1.242 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337444	08/10/16 17:07	CMK	TAL DEN
Total/NA	Prep	3050B			1.242 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		20			337544	08/11/16 13:31	CMK	TAL DEN

Client Sample ID: NRIB-2 (0)

Date Collected: 07/25/16 10:15

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-18

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:06	IEU	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: NRIB-2 (0)

Date Collected: 07/25/16 10:15

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-18

Matrix: Solid

Percent Solids: 99.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.012 g	100 mL	335612	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 21:31	SJS	TAL DEN
Total/NA	Prep	3050B			1.338 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		5			337214	08/09/16 20:31	CMK	TAL DEN
Total/NA	Prep	3050B			1.338 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337214	08/10/16 04:28	CMK	TAL DEN
Total/NA	Prep	3050B			1.338 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337444	08/10/16 17:09	CMK	TAL DEN
Total/NA	Prep	3050B			1.338 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		10			337544	08/11/16 13:33	CMK	TAL DEN

Client Sample ID: NRIB-2 (18)

Date Collected: 07/25/16 11:10

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-19

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:06	IEU	TAL DEN

Client Sample ID: NRIB-2 (18)

Date Collected: 07/25/16 11:10

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-19

Matrix: Solid

Percent Solids: 88.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.076 g	100 mL	335612	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 21:34	SJS	TAL DEN
Total/NA	Prep	3050B			1.057 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337214	08/10/16 04:31	CMK	TAL DEN
Total/NA	Prep	3050B			1.057 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337444	08/10/16 17:12	CMK	TAL DEN
Total/NA	Prep	3050B			1.057 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337544	08/11/16 13:36	CMK	TAL DEN

Client Sample ID: NRIB-3 (0)

Date Collected: 07/25/16 10:15

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-20

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336680	08/05/16 01:26	CMK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336882	08/06/16 16:15	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: NRIB-3 (0)

Date Collected: 07/25/16 10:15

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-20

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:06	IEU	TAL DEN

Client Sample ID: NRIB-3 (0)

Date Collected: 07/25/16 10:15

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-20

Matrix: Solid

Percent Solids: 99.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.375 g	100 mL	335612	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 21:36	SJS	TAL DEN
Total/NA	Prep	3050B			1.125 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		5			337214	08/09/16 20:36	CMK	TAL DEN
Total/NA	Prep	3050B			1.125 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337214	08/10/16 04:33	CMK	TAL DEN
Total/NA	Prep	3050B			1.125 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337444	08/10/16 16:43	CMK	TAL DEN
Total/NA	Prep	3050B			1.125 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		10			337544	08/11/16 13:39	CMK	TAL DEN

Client Sample ID: NRIB-3 (18)

Date Collected: 07/25/16 10:45

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-21

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 14:06	IEU	TAL DEN

Client Sample ID: NRIB-3 (18)

Date Collected: 07/25/16 10:45

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-21

Matrix: Solid

Percent Solids: 90.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.068 g	100 mL	335612	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 21:41	SJS	TAL DEN
Total/NA	Prep	3050B			1.104 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337214	08/10/16 04:36	CMK	TAL DEN
Total/NA	Prep	3050B			1.104 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337444	08/10/16 16:45	CMK	TAL DEN
Total/NA	Prep	3050B			1.104 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		2			337544	08/11/16 13:41	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Client Sample ID: SRIB-7 (0)

Date Collected: 07/25/16 12:45

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-22

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 16:30	IEU	TAL DEN

Client Sample ID: SRIB-7 (0)

Date Collected: 07/25/16 12:45

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-22

Matrix: Solid

Percent Solids: 99.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.052 g	100 mL	335612	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 21:44	SJS	TAL DEN
Total/NA	Prep	3050B			1.103 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337214	08/10/16 04:38	CMK	TAL DEN
Total/NA	Prep	3050B			1.103 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337444	08/10/16 17:14	CMK	TAL DEN
Total/NA	Prep	3050B			1.103 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		10			337544	08/11/16 13:44	CMK	TAL DEN

Client Sample ID: DUPE-7

Date Collected: 07/25/16 00:00

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-23

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			335967	08/01/16 16:30	IEU	TAL DEN

Client Sample ID: DUPE-7

Date Collected: 07/25/16 00:00

Date Received: 07/25/16 16:05

Lab Sample ID: 280-86054-23

Matrix: Solid

Percent Solids: 99.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.118 g	100 mL	335612	08/01/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336684	08/04/16 21:46	SJS	TAL DEN
Total/NA	Prep	3050B			1.081 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337214	08/10/16 04:41	CMK	TAL DEN
Total/NA	Prep	3050B			1.081 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		5			337444	08/10/16 16:51	CMK	TAL DEN
Total/NA	Prep	3050B			1.081 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		1			337444	08/10/16 17:17	CMK	TAL DEN
Total/NA	Prep	3050B			1.081 g	100 mL	336954	08/09/16 09:15	MLS	TAL DEN
Total/NA	Analysis	6010C		20			337544	08/11/16 13:47	CMK	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TestAmerica Denver

Certification Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86054-1

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	4025	01-09-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture

Chain of Custody Record



280-86054 Chain of Custody

Client Information Client Contact: Mr. John Dellaport Company: Quantum Water & Environment Address: 1746 Cole Boulevard, Suite 340 City: Lakewood State, Zip: CO, 80401 Phone: 720-524-4294(Tel) Email: John@quantumwaterco.com Project Name: Adams County Shooting Range Site:		Sampler: <u>703/541</u> Lab PM: Kupper, Stephanie K Phone: <u>720-524-4294</u> E-Mail: stephanie.kupper@testamericainc.com		OC No: 280-55170-19558.1 Page:	Job #:							
Due Date Requested: TAT Requested (days): PO #: <u>720-524-4294(Tel)</u> Purchase Order Requested WO #: <u>28014702-Groundwater-APP+</u> Project #: <u>28014702-Groundwater-APP+</u> SSOW#:		Analysis Requested EPA 6010 - Shooting Range EPA 6010 - TAP NO3-N/NO2-N/NO3+NO2/As/MSD VOA 4200B Total Metals (6010B/6020) Field Filtered Sample (Yes or No)										
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oli, BT=Tissue, A=Air)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NO3-N/NO2-N/NO3+NO2/As/MSD	EPA 6010 - Shooting Range	EPA 6010 - TAP	Total Number of Containers	Special Instructions/Note:
SRIB-8(0)	7/25/16	1250	G	S							1	shot holder-NO3 and NO2 (0)
SRIB-9(0)		1255									2	
SRIB-10(0)		1300									2	
SRIB-11(0)		1305									1	
SRIB-12(0)		1320									1	
SRIB-12(30)		1330									1	
SRIB-11(24)		1345									1	
SRIB-10(18)		1350									1	
SRIB-9(30)		1355									1	
SRIB-8(30)		1415									1	
SRIB-7(12)		1425									1	
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:												
Empty Kit Relinquished by:												
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested: I, II, III, IV, Other (specify)												
Relinquished by: <u>Stephanie Kupper</u> Date: <u>7/25/16</u> Company: <u>Quantum Water & Environment</u>												
Relinquished by: Date: Company:												
Relinquished by: Date: Company:												
Custody Seals Intact: ☐ Yes ☐ No Custody Seal No.:												
Cooler Temperature(s) °C and Other Remarks: <u>HA 71.1 S-R CFOW transferred SPU 7-26-16</u> <u>SPU 7-26-16</u>												

Chain of Custody Record

Client Information Client Contact: Mr. John Dellaport Company: Quantum Water & Environment Address: 1746 Cole Boulevard, Suite 340 City: Lakewood State, Zip: CO, 80401 Phone: 720-524-4294(Tel) Email: John@quantumwaterco.com Project Name: Adams County Shooting Range Site:		Sampler: <u>TEB/JAL</u> Lab PM: Kupper, Stephanie K Phone: <u>720-524-4294</u> E-Mail: stephanie.kupper@testamericainc.com		Carrier Tracking No(s): COC No: 280-55170-19558.1 Page:	
Due Date Requested: TAT Requested (days): PO #: <u>720-524-4294(Tel)</u> Purchase Order Requested WO #: <u>28044702 - Groundwater APP-1</u> Project #: <u>28044702 - Groundwater APP-1</u> SSOW#:		Analysis Requested EPA 6010 Shooting Range EPA 6010 - T2LP NO3(N), NO2(N), Cl(SO4), Al(Ks) VOA 8260B Total Metals (6010B/6020) Field Filtered Sample (Yes or No) ☒ Perform MS/MSD (Yes or No) ☒ Total Number of Containers ☒			
Sample Identification NRSF-8 NRSF-9 NASF-21 NRSF-22 NRI8-1(6) NRI8-1(6) NRI8-2(6) NRI8-2(18) NRI8-3(6) NRI8-3(18) SRI8-7(6)	Sample Date 7/25/16 0905 0925 0913 0906 1015 1120 1015 1110 1015 1045 1245	Sample Time 0905 0925 0913 0906 1015 1120 1015 1110 1015 1045 1245	Sample Type (C=Comp, G=grab) G G G G G G G G G G G	Matrix (W=water, S=solid, O=waste/oil, ST=tissue, AS=air) S S S S S S S S S S S	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - H2SO4 H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)
Special Instructions/Note: Short holds: NO3 and NO2 (IC)		Special Instructions/Note: Short holds: NO3 and NO2 (IC)			
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:					
Empty Kit Relinquished by: <u>John Dellaport</u> Relinquished by: <u>John Dellaport</u> Relinquished by:		Date: <u>7/25/16</u> Date/Time: <u>7/25/16</u> Date/Time:		Date/Time: <u>7/25/16</u> Date/Time: <u>7/25/16</u> Date/Time:	
Custody Seals Intact: <u>Yes</u> ☒ <u>No</u> ☐ Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			

Client Information					
Company: Quantum Water & Environment					
Address: 1746 Cole Boulevard, Suite 340					
City: Lakewood					
State, Zip: CO, 80401					
Phone: 720-524-4294(Tel)					
Email: John@quantumwaterco.com					
Project Name: Adams County Shooting Range					
Site:					
Due Date Requested:					
TAT Requested (days):					
PO #: Purchase Order Requested					
WO #:					
Project #:					
SSOW#:					
Sample Identification					
DUPE-7					
Sample Date					
7/25/16					
Sample Type (C=Comp, G=grab)					
G					
Matrix (W=Water, S=solid, O=Other/Liq.)					
S					
Preservation Code:					
Field Filtered Sample (Yes or No)					
X					
Perform MS/MSD (Yes or No)					
X					
Total Metals (6010B/6020)					
N					
VOA 8260B					
NO3(N), NO2(N), NH4(N), SO4(S)					
EPA 6010 - Shooting Range					
EPA 6010 - TGLP					
Analysis Requested					
Carrier Tracking No(s):					
280-55170-19558.1					
Lab PM:					
Kupper, Stephanie K					
E-Mail:					
stephanie.kupper@testamericainc.com					
Job #:					
COC No:					
280-55170-19558.1					
Page:					
Job #:					
Preservation Codes:					
M - Hexane					
N - None					
O - AsNaO2					
P - Na2O4S					
Q - Na2SO3					
R - MeOH					
S - H2SO4					
T - TSP Dodecahydrate					
U - Acetone					
V - DI Water					
W - ph 4-5					
L - EDA					
Z - other (specify)					
Other:					
Special Instructions/Note:					
short holds: NO3 and NO2 (H)					
Total Number of Containers					
1					
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:					
Empty Kit Relinquished by:					
Relinquished by:					
Date/Time:					
7/25/16					
Relinquished by:					
Date/Time:					
Relinquished by:					
Date/Time:					
Custody Seal Intact:					
Yes					
No					
Custody Seal No.:					

Login Sample Receipt Checklist

Client: Quantum Water & Environment

Job Number: 280-86054-1

Login Number: 86054

List Source: TestAmerica Denver

List Number: 1

Creator: Woodworth, Sean P

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

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-86094-1

Client Project/Site: Adams County Shooting Range

For:

Quantum Water & Environment

1746 Cole Boulevard, Suite 340

Lakewood, Colorado 80401

Attn: Mr. John Dellaport



Authorized for release by:

8/10/2016 5:07:31 PM

Stephanie Kupper, Project Manager I

(303)736-0182

stephanie.kupper@testamericainc.com

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

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

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



Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	6
Method Summary	10
Sample Summary	11
Client Sample Results	12
QC Sample Results	19
QC Association	22
Chronicle	25
Certification Summary	32
Chain of Custody	33
Receipt Checklists	35

Definitions/Glossary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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)

Case Narrative

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Job ID: 280-86094-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Quantum Water & Environment

Project: Adams County Shooting Range

Report Number: 280-86094-1

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

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

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

RECEIPT

The samples were received on 7/26/2016 at 11:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 23.6° C.

All samples were received at the laboratory at an elevated temperature of 23.6 degrees Celsius. The samples are still considered acceptable since it was collected and submitted to the laboratory on the same day and there is evidence that the chilling process has begun.

TOTAL METALS

Samples RINSE-9 (280-86094-19) and RINSE-10 (280-86094-20) were analyzed for total metals in accordance with EPA SW-846 Method 6010B. The samples were prepared on 08/02/2016 and analyzed on 08/03/2016.

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

TCLP METALS

Samples SRIB-7 (0) (280-86094-13), SRIB-8 (0) (280-86094-14), SRIB-12 (0) (280-86094-15), NRIB-1 (0) (280-86094-16), NRIB-2 (0) (280-86094-17) and SRRF-PAH (280-86094-18) were analyzed for TCLP Metals in accordance with EPA SW-846 Method 1311/6010C. The samples were leached on 08/02/2016, prepared on 08/04/2016 and analyzed on 08/05/2016, 08/06/2016 and 08/08/2016.

Arsenic, Copper and Lead were detected in method blank LB 280-336177/1-B 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. Refer to the QC report for details.

Samples SRIB-7 (0) (280-86094-13)[5X] and SRIB-8 (0) (280-86094-14)[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.

TOTAL METALS (ICP)

Samples NRSF-2 (280-86094-1), NRSF-3 (280-86094-2), NRSF-4 (280-86094-3), NRSF-5 (280-86094-4), NRSF-7 (280-86094-5), NRSF-10 (280-86094-6), NRSF-11 (280-86094-7), NRSF-6 (280-86094-8), NRSF-12 (280-86094-9), NRSF-13 (280-86094-10), DUPE-9 (280-86094-11) and DUPE-10 (280-86094-12) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 08/02/2016 and analyzed on 08/04/2016.

Case Narrative

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Job ID: 280-86094-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

Tin was detected in method blank MB 280-335905/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

PERCENT SOLIDS

Samples NRSF-2 (280-86094-1), NRSF-3 (280-86094-2), NRSF-4 (280-86094-3), NRSF-5 (280-86094-4), NRSF-7 (280-86094-5), NRSF-10 (280-86094-6), NRSF-11 (280-86094-7), NRSF-6 (280-86094-8), NRSF-12 (280-86094-9), NRSF-13 (280-86094-10), DUPE-9 (280-86094-11) and DUPE-10 (280-86094-12) were analyzed for percent solids in accordance with ASTM D2216-90. The samples were analyzed on 08/01/2016.

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

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Client Sample ID: NRSF-2

Lab Sample ID: 280-86094-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	2.6		1.6	0.54	mg/Kg	1		✱	6010C	Total/NA
Copper	11		1.6	0.18	mg/Kg	1		✱	6010C	Total/NA
Lead	14		0.74	0.22	mg/Kg	1		✱	6010C	Total/NA
Tin	1.4	J B	8.2	0.75	mg/Kg	1		✱	6010C	Total/NA
Zinc	34		2.5	0.33	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.26	J	0.41	0.034	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRSF-3

Lab Sample ID: 280-86094-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.2		1.8	0.61	mg/Kg	1		✱	6010C	Total/NA
Copper	18		1.8	0.20	mg/Kg	1		✱	6010C	Total/NA
Lead	22		0.83	0.25	mg/Kg	1		✱	6010C	Total/NA
Tin	1.6	J B	9.2	0.84	mg/Kg	1		✱	6010C	Total/NA
Zinc	55		2.8	0.37	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.31	J	0.46	0.038	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRSF-4

Lab Sample ID: 280-86094-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.4		1.7	0.55	mg/Kg	1		✱	6010C	Total/NA
Copper	11		1.7	0.18	mg/Kg	1		✱	6010C	Total/NA
Lead	22		0.75	0.22	mg/Kg	1		✱	6010C	Total/NA
Tin	1.4	J B	8.3	0.76	mg/Kg	1		✱	6010C	Total/NA
Zinc	39		2.5	0.33	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.20	J	0.41	0.034	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRSF-5

Lab Sample ID: 280-86094-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.7		1.6	0.54	mg/Kg	1		✱	6010C	Total/NA
Copper	9.3		1.6	0.18	mg/Kg	1		✱	6010C	Total/NA
Lead	23		0.74	0.22	mg/Kg	1		✱	6010C	Total/NA
Tin	1.2	J B	8.2	0.75	mg/Kg	1		✱	6010C	Total/NA
Zinc	92		2.5	0.33	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.73		0.41	0.034	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRSF-7

Lab Sample ID: 280-86094-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.5		1.7	0.56	mg/Kg	1		✱	6010C	Total/NA
Copper	11		1.7	0.18	mg/Kg	1		✱	6010C	Total/NA
Lead	18		0.76	0.23	mg/Kg	1		✱	6010C	Total/NA
Tin	1.3	J B	8.5	0.77	mg/Kg	1		✱	6010C	Total/NA
Zinc	40		2.5	0.34	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.41	J	0.42	0.035	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: NRSF-10

Lab Sample ID: 280-86094-6

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Client Sample ID: NRSF-10 (Continued)

Lab Sample ID: 280-86094-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	6.7		1.8	0.59	mg/Kg	1	☼	6010C	Total/NA
Copper	12		1.8	0.19	mg/Kg	1	☼	6010C	Total/NA
Lead	27		0.80	0.24	mg/Kg	1	☼	6010C	Total/NA
Tin	1.4	J B	8.9	0.81	mg/Kg	1	☼	6010C	Total/NA
Zinc	45		2.7	0.35	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.63		0.45	0.037	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: NRSF-11

Lab Sample ID: 280-86094-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.0		1.7	0.55	mg/Kg	1	☼	6010C	Total/NA
Copper	4.2		1.7	0.18	mg/Kg	1	☼	6010C	Total/NA
Lead	6.9		0.75	0.22	mg/Kg	1	☼	6010C	Total/NA
Tin	1.2	J B	8.3	0.76	mg/Kg	1	☼	6010C	Total/NA
Zinc	20		2.5	0.33	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.086	J	0.42	0.034	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: NRSF-6

Lab Sample ID: 280-86094-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	7.9		1.7	0.55	mg/Kg	1	☼	6010C	Total/NA
Copper	9.8		1.7	0.18	mg/Kg	1	☼	6010C	Total/NA
Lead	14		0.75	0.23	mg/Kg	1	☼	6010C	Total/NA
Tin	1.4	J B	8.3	0.76	mg/Kg	1	☼	6010C	Total/NA
Zinc	36		2.5	0.33	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.38	J	0.42	0.034	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: NRSF-12

Lab Sample ID: 280-86094-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.5		1.6	0.54	mg/Kg	1	☼	6010C	Total/NA
Copper	5.8		1.6	0.18	mg/Kg	1	☼	6010C	Total/NA
Lead	11		0.73	0.22	mg/Kg	1	☼	6010C	Total/NA
Tin	1.2	J B	8.1	0.74	mg/Kg	1	☼	6010C	Total/NA
Zinc	31		2.4	0.32	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.19	J	0.41	0.033	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: NRSF-13

Lab Sample ID: 280-86094-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.2		1.8	0.58	mg/Kg	1	☼	6010C	Total/NA
Copper	11		1.8	0.19	mg/Kg	1	☼	6010C	Total/NA
Lead	18		0.79	0.24	mg/Kg	1	☼	6010C	Total/NA
Tin	1.4	J B	8.8	0.80	mg/Kg	1	☼	6010C	Total/NA
Zinc	50		2.6	0.35	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.29	J	0.44	0.036	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: DUPE-9

Lab Sample ID: 280-86094-11

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Client Sample ID: DUPE-9 (Continued)

Lab Sample ID: 280-86094-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.1		1.9	0.64	mg/Kg	1		✱	6010C	Total/NA
Copper	19		1.9	0.21	mg/Kg	1		✱	6010C	Total/NA
Lead	23		0.87	0.26	mg/Kg	1		✱	6010C	Total/NA
Tin	1.5	J B	9.7	0.88	mg/Kg	1		✱	6010C	Total/NA
Zinc	56		2.9	0.38	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.31	J	0.48	0.040	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: DUPE-10

Lab Sample ID: 280-86094-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	2.4		2.0	0.65	mg/Kg	1		✱	6010C	Total/NA
Copper	12		2.0	0.22	mg/Kg	1		✱	6010C	Total/NA
Lead	16		0.89	0.27	mg/Kg	1		✱	6010C	Total/NA
Tin	1.5	J B	9.9	0.90	mg/Kg	1		✱	6010C	Total/NA
Zinc	37		3.0	0.39	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.32	J	0.50	0.041	mg/Kg	1		✱	6010C	Total/NA

Client Sample ID: SRIB-7 (0)

Lab Sample ID: 280-86094-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	1.4		0.20	0.016	mg/L	1			6010C	TCLP
Arsenic	0.12	J B	0.50	0.022	mg/L	1			6010C	TCLP
Copper	0.33	J B	2.0	0.021	mg/L	1			6010C	TCLP
Lead	1100	B	2.5	0.065	mg/L	5			6010C	TCLP
Zinc	1.1	J	2.0	0.022	mg/L	1			6010C	TCLP
Cadmium	0.0048	J	0.10	0.0020	mg/L	1			6010C	TCLP

Client Sample ID: SRIB-8 (0)

Lab Sample ID: 280-86094-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	2.8		0.20	0.016	mg/L	1			6010C	TCLP
Arsenic	0.14	J B	0.50	0.022	mg/L	1			6010C	TCLP
Copper	2.0	B	2.0	0.021	mg/L	1			6010C	TCLP
Lead	1300	B	2.5	0.065	mg/L	5			6010C	TCLP
Zinc	3.3		2.0	0.022	mg/L	1			6010C	TCLP
Cadmium	0.0089	J	0.10	0.0020	mg/L	1			6010C	TCLP

Client Sample ID: SRIB-12 (0)

Lab Sample ID: 280-86094-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Antimony	2.0		0.20	0.016	mg/L	1			6010C	TCLP
Arsenic	0.11	J B	0.50	0.022	mg/L	1			6010C	TCLP
Copper	1.8	J B	2.0	0.021	mg/L	1			6010C	TCLP
Lead	790	B	0.50	0.013	mg/L	1			6010C	TCLP
Zinc	5.6		2.0	0.022	mg/L	1			6010C	TCLP
Cadmium	0.014	J	0.10	0.0020	mg/L	1			6010C	TCLP

Client Sample ID: NRIB-1 (0)

Lab Sample ID: 280-86094-16

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Detection Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Client Sample ID: NRIB-1 (0) (Continued)

Lab Sample ID: 280-86094-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	3.0		0.20	0.016	mg/L	1		6010C	TCLP
Arsenic	0.44	J B	0.50	0.022	mg/L	1		6010C	TCLP
Copper	1.7	J B	2.0	0.021	mg/L	1		6010C	TCLP
Lead	710	B	0.50	0.013	mg/L	1		6010C	TCLP
Zinc	0.83	J	2.0	0.022	mg/L	1		6010C	TCLP
Cadmium	0.0076	J	0.10	0.0020	mg/L	1		6010C	TCLP

Client Sample ID: NRIB-2 (0)

Lab Sample ID: 280-86094-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	3.0		0.20	0.016	mg/L	1		6010C	TCLP
Arsenic	0.93	B	0.50	0.022	mg/L	1		6010C	TCLP
Copper	2.6	B	2.0	0.021	mg/L	1		6010C	TCLP
Lead	410	B	0.50	0.013	mg/L	1		6010C	TCLP
Zinc	0.72	J	2.0	0.022	mg/L	1		6010C	TCLP
Cadmium	0.0048	J	0.10	0.0020	mg/L	1		6010C	TCLP

Client Sample ID: SRRF-PAH

Lab Sample ID: 280-86094-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.16	J	0.20	0.016	mg/L	1		6010C	TCLP
Arsenic	0.041	J B	0.50	0.022	mg/L	1		6010C	TCLP
Copper	1.1	J B	2.0	0.021	mg/L	1		6010C	TCLP
Lead	20	B	0.50	0.013	mg/L	1		6010C	TCLP
Zinc	0.29	J	2.0	0.022	mg/L	1		6010C	TCLP
Cadmium	0.0076	J	0.10	0.0020	mg/L	1		6010C	TCLP

Client Sample ID: RINSE-9

Lab Sample ID: 280-86094-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	7.2	J	15	4.4	ug/L	1		6010B	Total/NA

Client Sample ID: RINSE-10

Lab Sample ID: 280-86094-20

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Method Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
Moisture	Percent Moisture	EPA	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-86094-1	NRSF-2	Solid	07/26/16 09:00	07/26/16 11:50
280-86094-2	NRSF-3	Solid	07/26/16 08:52	07/26/16 11:50
280-86094-3	NRSF-4	Solid	07/26/16 08:46	07/26/16 11:50
280-86094-4	NRSF-5	Solid	07/26/16 08:12	07/26/16 11:50
280-86094-5	NRSF-7	Solid	07/26/16 07:17	07/26/16 11:50
280-86094-6	NRSF-10	Solid	07/26/16 07:27	07/26/16 11:50
280-86094-7	NRSF-11	Solid	07/26/16 07:38	07/26/16 11:50
280-86094-8	NRSF-6	Solid	07/26/16 07:54	07/26/16 11:50
280-86094-9	NRSF-12	Solid	07/26/16 08:28	07/26/16 11:50
280-86094-10	NRSF-13	Solid	07/26/16 08:36	07/26/16 11:50
280-86094-11	DUPE-9	Solid	07/26/16 00:00	07/26/16 11:50
280-86094-12	DUPE-10	Solid	07/26/16 00:00	07/26/16 11:50
280-86094-13	SRIB-7 (0)	Solid	07/26/16 10:20	07/26/16 11:50
280-86094-14	SRIB-8 (0)	Solid	07/26/16 10:25	07/26/16 11:50
280-86094-15	SRIB-12 (0)	Solid	07/26/16 10:25	07/26/16 11:50
280-86094-16	NRIB-1 (0)	Solid	07/26/16 10:30	07/26/16 11:50
280-86094-17	NRIB-2 (0)	Solid	07/26/16 10:35	07/26/16 11:50
280-86094-18	SRRF-PAH	Solid	07/26/16 10:20	07/26/16 11:50
280-86094-19	RINSE-9	Water	07/26/16 10:40	07/26/16 11:50
280-86094-20	RINSE-10	Water	07/26/16 10:40	07/26/16 11:50

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Method: 6010B - Metals (ICP)

Client Sample ID: RINSE-9
Date Collected: 07/26/16 10:40
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-19
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		5.0	0.45	ug/L		08/02/16 08:15	08/03/16 02:39	1
Antimony	ND		20	3.1	ug/L		08/02/16 08:15	08/03/16 02:39	1
Arsenic	7.2	J	15	4.4	ug/L		08/02/16 08:15	08/03/16 02:39	1
Copper	ND		15	4.2	ug/L		08/02/16 08:15	08/03/16 02:39	1
Lead	ND		9.0	2.6	ug/L		08/02/16 08:15	08/03/16 02:39	1
Zinc	ND		20	4.5	ug/L		08/02/16 08:15	08/03/16 02:39	1
Tin	ND		0.10	0.0058	mg/L		08/02/16 08:15	08/03/16 02:39	1

Client Sample ID: RINSE-10
Date Collected: 07/26/16 10:40
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-20
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		5.0	0.45	ug/L		08/02/16 08:15	08/03/16 02:42	1
Antimony	ND		20	3.1	ug/L		08/02/16 08:15	08/03/16 02:42	1
Arsenic	ND		15	4.4	ug/L		08/02/16 08:15	08/03/16 02:42	1
Copper	ND		15	4.2	ug/L		08/02/16 08:15	08/03/16 02:42	1
Lead	ND		9.0	2.6	ug/L		08/02/16 08:15	08/03/16 02:42	1
Zinc	ND		20	4.5	ug/L		08/02/16 08:15	08/03/16 02:42	1
Tin	ND		0.10	0.0058	mg/L		08/02/16 08:15	08/03/16 02:42	1

Method: 6010C - Metals (ICP)

Client Sample ID: NRSF-2
Date Collected: 07/26/16 09:00
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-1
Matrix: Solid
Percent Solids: 98.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.31	mg/Kg	☼	08/02/16 08:15	08/04/16 18:58	1
Arsenic	2.6		1.6	0.54	mg/Kg	☼	08/02/16 08:15	08/04/16 18:58	1
Copper	11		1.6	0.18	mg/Kg	☼	08/02/16 08:15	08/04/16 18:58	1
Lead	14		0.74	0.22	mg/Kg	☼	08/02/16 08:15	08/04/16 18:58	1
Tin	1.4	J B	8.2	0.75	mg/Kg	☼	08/02/16 08:15	08/04/16 18:58	1
Zinc	34		2.5	0.33	mg/Kg	☼	08/02/16 08:15	08/04/16 18:58	1
Cadmium	0.26	J	0.41	0.034	mg/Kg	☼	08/02/16 08:15	08/04/16 18:58	1

Client Sample ID: NRSF-3
Date Collected: 07/26/16 08:52
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-2
Matrix: Solid
Percent Solids: 95.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.35	mg/Kg	☼	08/02/16 08:15	08/04/16 19:12	1
Arsenic	3.2		1.8	0.61	mg/Kg	☼	08/02/16 08:15	08/04/16 19:12	1
Copper	18		1.8	0.20	mg/Kg	☼	08/02/16 08:15	08/04/16 19:12	1
Lead	22		0.83	0.25	mg/Kg	☼	08/02/16 08:15	08/04/16 19:12	1
Tin	1.6	J B	9.2	0.84	mg/Kg	☼	08/02/16 08:15	08/04/16 19:12	1
Zinc	55		2.8	0.37	mg/Kg	☼	08/02/16 08:15	08/04/16 19:12	1
Cadmium	0.31	J	0.46	0.038	mg/Kg	☼	08/02/16 08:15	08/04/16 19:12	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Method: 6010C - Metals (ICP)

Client Sample ID: NRSF-4
Date Collected: 07/26/16 08:46
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-3
Matrix: Solid
Percent Solids: 97.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.32	mg/Kg	☼	08/02/16 08:15	08/04/16 19:14	1
Arsenic	4.4		1.7	0.55	mg/Kg	☼	08/02/16 08:15	08/04/16 19:14	1
Copper	11		1.7	0.18	mg/Kg	☼	08/02/16 08:15	08/04/16 19:14	1
Lead	22		0.75	0.22	mg/Kg	☼	08/02/16 08:15	08/04/16 19:14	1
Tin	1.4	J B	8.3	0.76	mg/Kg	☼	08/02/16 08:15	08/04/16 19:14	1
Zinc	39		2.5	0.33	mg/Kg	☼	08/02/16 08:15	08/04/16 19:14	1
Cadmium	0.20	J	0.41	0.034	mg/Kg	☼	08/02/16 08:15	08/04/16 19:14	1

Client Sample ID: NRSF-5
Date Collected: 07/26/16 08:12
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-4
Matrix: Solid
Percent Solids: 99.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.31	mg/Kg	☼	08/02/16 08:15	08/04/16 19:28	1
Arsenic	3.7		1.6	0.54	mg/Kg	☼	08/02/16 08:15	08/04/16 19:28	1
Copper	9.3		1.6	0.18	mg/Kg	☼	08/02/16 08:15	08/04/16 19:28	1
Lead	23		0.74	0.22	mg/Kg	☼	08/02/16 08:15	08/04/16 19:28	1
Tin	1.2	J B	8.2	0.75	mg/Kg	☼	08/02/16 08:15	08/04/16 19:28	1
Zinc	92		2.5	0.33	mg/Kg	☼	08/02/16 08:15	08/04/16 19:28	1
Cadmium	0.73		0.41	0.034	mg/Kg	☼	08/02/16 08:15	08/04/16 19:28	1

Client Sample ID: NRSF-7
Date Collected: 07/26/16 07:17
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-5
Matrix: Solid
Percent Solids: 98.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.32	mg/Kg	☼	08/02/16 08:15	08/04/16 19:30	1
Arsenic	4.5		1.7	0.56	mg/Kg	☼	08/02/16 08:15	08/04/16 19:30	1
Copper	11		1.7	0.18	mg/Kg	☼	08/02/16 08:15	08/04/16 19:30	1
Lead	18		0.76	0.23	mg/Kg	☼	08/02/16 08:15	08/04/16 19:30	1
Tin	1.3	J B	8.5	0.77	mg/Kg	☼	08/02/16 08:15	08/04/16 19:30	1
Zinc	40		2.5	0.34	mg/Kg	☼	08/02/16 08:15	08/04/16 19:30	1
Cadmium	0.41	J	0.42	0.035	mg/Kg	☼	08/02/16 08:15	08/04/16 19:30	1

Client Sample ID: NRSF-10
Date Collected: 07/26/16 07:27
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-6
Matrix: Solid
Percent Solids: 97.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.34	mg/Kg	☼	08/02/16 08:15	08/04/16 19:33	1
Arsenic	6.7		1.8	0.59	mg/Kg	☼	08/02/16 08:15	08/04/16 19:33	1
Copper	12		1.8	0.19	mg/Kg	☼	08/02/16 08:15	08/04/16 19:33	1
Lead	27		0.80	0.24	mg/Kg	☼	08/02/16 08:15	08/04/16 19:33	1
Tin	1.4	J B	8.9	0.81	mg/Kg	☼	08/02/16 08:15	08/04/16 19:33	1
Zinc	45		2.7	0.35	mg/Kg	☼	08/02/16 08:15	08/04/16 19:33	1
Cadmium	0.63		0.45	0.037	mg/Kg	☼	08/02/16 08:15	08/04/16 19:33	1

Client Sample ID: NRSF-11
Date Collected: 07/26/16 07:38
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-7
Matrix: Solid
Percent Solids: 99.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.32	mg/Kg	☼	08/02/16 08:15	08/04/16 19:36	1
Arsenic	4.0		1.7	0.55	mg/Kg	☼	08/02/16 08:15	08/04/16 19:36	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: NRSF-11
Date Collected: 07/26/16 07:38
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-7
Matrix: Solid
Percent Solids: 99.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	4.2		1.7	0.18	mg/Kg	☼	08/02/16 08:15	08/04/16 19:36	1
Lead	6.9		0.75	0.22	mg/Kg	☼	08/02/16 08:15	08/04/16 19:36	1
Tin	1.2	J B	8.3	0.76	mg/Kg	☼	08/02/16 08:15	08/04/16 19:36	1
Zinc	20		2.5	0.33	mg/Kg	☼	08/02/16 08:15	08/04/16 19:36	1
Cadmium	0.086	J	0.42	0.034	mg/Kg	☼	08/02/16 08:15	08/04/16 19:36	1

Client Sample ID: NRSF-6
Date Collected: 07/26/16 07:54
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-8
Matrix: Solid
Percent Solids: 98.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.32	mg/Kg	☼	08/02/16 08:15	08/04/16 19:38	1
Arsenic	7.9		1.7	0.55	mg/Kg	☼	08/02/16 08:15	08/04/16 19:38	1
Copper	9.8		1.7	0.18	mg/Kg	☼	08/02/16 08:15	08/04/16 19:38	1
Lead	14		0.75	0.23	mg/Kg	☼	08/02/16 08:15	08/04/16 19:38	1
Tin	1.4	J B	8.3	0.76	mg/Kg	☼	08/02/16 08:15	08/04/16 19:38	1
Zinc	36		2.5	0.33	mg/Kg	☼	08/02/16 08:15	08/04/16 19:38	1
Cadmium	0.38	J	0.42	0.034	mg/Kg	☼	08/02/16 08:15	08/04/16 19:38	1

Client Sample ID: NRSF-12
Date Collected: 07/26/16 08:28
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-9
Matrix: Solid
Percent Solids: 99.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.2	0.31	mg/Kg	☼	08/02/16 08:15	08/04/16 19:41	1
Arsenic	2.5		1.6	0.54	mg/Kg	☼	08/02/16 08:15	08/04/16 19:41	1
Copper	5.8		1.6	0.18	mg/Kg	☼	08/02/16 08:15	08/04/16 19:41	1
Lead	11		0.73	0.22	mg/Kg	☼	08/02/16 08:15	08/04/16 19:41	1
Tin	1.2	J B	8.1	0.74	mg/Kg	☼	08/02/16 08:15	08/04/16 19:41	1
Zinc	31		2.4	0.32	mg/Kg	☼	08/02/16 08:15	08/04/16 19:41	1
Cadmium	0.19	J	0.41	0.033	mg/Kg	☼	08/02/16 08:15	08/04/16 19:41	1

Client Sample ID: NRSF-13
Date Collected: 07/26/16 08:36
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-10
Matrix: Solid
Percent Solids: 97.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.3	0.33	mg/Kg	☼	08/02/16 08:15	08/04/16 19:43	1
Arsenic	3.2		1.8	0.58	mg/Kg	☼	08/02/16 08:15	08/04/16 19:43	1
Copper	11		1.8	0.19	mg/Kg	☼	08/02/16 08:15	08/04/16 19:43	1
Lead	18		0.79	0.24	mg/Kg	☼	08/02/16 08:15	08/04/16 19:43	1
Tin	1.4	J B	8.8	0.80	mg/Kg	☼	08/02/16 08:15	08/04/16 19:43	1
Zinc	50		2.6	0.35	mg/Kg	☼	08/02/16 08:15	08/04/16 19:43	1
Cadmium	0.29	J	0.44	0.036	mg/Kg	☼	08/02/16 08:15	08/04/16 19:43	1

Client Sample ID: DUPE-9
Date Collected: 07/26/16 00:00
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-11
Matrix: Solid
Percent Solids: 95.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.4	0.37	mg/Kg	☼	08/02/16 08:15	08/04/16 19:46	1
Arsenic	3.1		1.9	0.64	mg/Kg	☼	08/02/16 08:15	08/04/16 19:46	1
Copper	19		1.9	0.21	mg/Kg	☼	08/02/16 08:15	08/04/16 19:46	1
Lead	23		0.87	0.26	mg/Kg	☼	08/02/16 08:15	08/04/16 19:46	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: DUPE-9
Date Collected: 07/26/16 00:00
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-11
Matrix: Solid
Percent Solids: 95.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tin	1.5	J B	9.7	0.88	mg/Kg	☼	08/02/16 08:15	08/04/16 19:46	1
Zinc	56		2.9	0.38	mg/Kg	☼	08/02/16 08:15	08/04/16 19:46	1
Cadmium	0.31	J	0.48	0.040	mg/Kg	☼	08/02/16 08:15	08/04/16 19:46	1

Client Sample ID: DUPE-10
Date Collected: 07/26/16 00:00
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-12
Matrix: Solid
Percent Solids: 98.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg	☼	08/02/16 08:15	08/04/16 19:49	1
Arsenic	2.4		2.0	0.65	mg/Kg	☼	08/02/16 08:15	08/04/16 19:49	1
Copper	12		2.0	0.22	mg/Kg	☼	08/02/16 08:15	08/04/16 19:49	1
Lead	16		0.89	0.27	mg/Kg	☼	08/02/16 08:15	08/04/16 19:49	1
Tin	1.5	J B	9.9	0.90	mg/Kg	☼	08/02/16 08:15	08/04/16 19:49	1
Zinc	37		3.0	0.39	mg/Kg	☼	08/02/16 08:15	08/04/16 19:49	1
Cadmium	0.32	J	0.50	0.041	mg/Kg	☼	08/02/16 08:15	08/04/16 19:49	1

Method: 6010C - Metals (ICP) - TCLP

Client Sample ID: SRIB-7 (0)
Date Collected: 07/26/16 10:20
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-13
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.4		0.20	0.016	mg/L		08/04/16 08:30	08/05/16 01:28	1
Arsenic	0.12	J B	0.50	0.022	mg/L		08/04/16 08:30	08/06/16 16:17	1
Copper	0.33	J B	2.0	0.021	mg/L		08/04/16 08:30	08/06/16 16:17	1
Lead	1100	B	2.5	0.065	mg/L		08/04/16 08:30	08/08/16 13:34	5
Tin	ND		0.20	0.029	mg/L		08/04/16 08:30	08/05/16 01:28	1
Zinc	1.1	J	2.0	0.022	mg/L		08/04/16 08:30	08/06/16 16:17	1
Cadmium	0.0048	J	0.10	0.0020	mg/L		08/04/16 08:30	08/05/16 01:28	1

Client Sample ID: SRIB-8 (0)
Date Collected: 07/26/16 10:25
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-14
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.8		0.20	0.016	mg/L		08/04/16 08:30	08/05/16 01:31	1
Arsenic	0.14	J B	0.50	0.022	mg/L		08/04/16 08:30	08/06/16 16:31	1
Copper	2.0	B	2.0	0.021	mg/L		08/04/16 08:30	08/06/16 16:31	1
Lead	1300	B	2.5	0.065	mg/L		08/04/16 08:30	08/08/16 13:37	5
Tin	ND		0.20	0.029	mg/L		08/04/16 08:30	08/05/16 01:31	1
Zinc	3.3		2.0	0.022	mg/L		08/04/16 08:30	08/06/16 16:31	1
Cadmium	0.0089	J	0.10	0.0020	mg/L		08/04/16 08:30	08/05/16 01:31	1

Client Sample ID: SRIB-12 (0)
Date Collected: 07/26/16 10:25
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-15
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0		0.20	0.016	mg/L		08/04/16 08:30	08/05/16 01:34	1
Arsenic	0.11	J B	0.50	0.022	mg/L		08/04/16 08:30	08/06/16 16:34	1
Copper	1.8	J B	2.0	0.021	mg/L		08/04/16 08:30	08/06/16 16:34	1
Lead	790	B	0.50	0.013	mg/L		08/04/16 08:30	08/06/16 16:34	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Method: 6010C - Metals (ICP) - TCLP (Continued)

Client Sample ID: SRIB-12 (0)
Date Collected: 07/26/16 10:25
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-15
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tin	ND		0.20	0.029	mg/L		08/04/16 08:30	08/05/16 01:34	1
Zinc	5.6		2.0	0.022	mg/L		08/04/16 08:30	08/06/16 16:34	1
Cadmium	0.014	J	0.10	0.0020	mg/L		08/04/16 08:30	08/05/16 01:34	1

Client Sample ID: NRIB-1 (0)
Date Collected: 07/26/16 10:30
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-16
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.0		0.20	0.016	mg/L		08/04/16 08:30	08/05/16 01:37	1
Arsenic	0.44	J B	0.50	0.022	mg/L		08/04/16 08:30	08/06/16 16:36	1
Copper	1.7	J B	2.0	0.021	mg/L		08/04/16 08:30	08/06/16 16:36	1
Lead	710	B	0.50	0.013	mg/L		08/04/16 08:30	08/06/16 16:36	1
Tin	ND		0.20	0.029	mg/L		08/04/16 08:30	08/05/16 01:37	1
Zinc	0.83	J	2.0	0.022	mg/L		08/04/16 08:30	08/06/16 16:36	1
Cadmium	0.0076	J	0.10	0.0020	mg/L		08/04/16 08:30	08/05/16 01:37	1

Client Sample ID: NRIB-2 (0)
Date Collected: 07/26/16 10:35
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-17
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.0		0.20	0.016	mg/L		08/04/16 08:30	08/05/16 01:39	1
Arsenic	0.93	B	0.50	0.022	mg/L		08/04/16 08:30	08/06/16 16:39	1
Copper	2.6	B	2.0	0.021	mg/L		08/04/16 08:30	08/06/16 16:39	1
Lead	410	B	0.50	0.013	mg/L		08/04/16 08:30	08/06/16 16:39	1
Tin	ND		0.20	0.029	mg/L		08/04/16 08:30	08/05/16 01:39	1
Zinc	0.72	J	2.0	0.022	mg/L		08/04/16 08:30	08/06/16 16:39	1
Cadmium	0.0048	J	0.10	0.0020	mg/L		08/04/16 08:30	08/05/16 01:39	1

Client Sample ID: SRRF-PAH
Date Collected: 07/26/16 10:20
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-18
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.16	J	0.20	0.016	mg/L		08/04/16 08:30	08/05/16 01:42	1
Arsenic	0.041	J B	0.50	0.022	mg/L		08/04/16 08:30	08/06/16 16:42	1
Copper	1.1	J B	2.0	0.021	mg/L		08/04/16 08:30	08/06/16 16:42	1
Lead	20	B	0.50	0.013	mg/L		08/04/16 08:30	08/06/16 16:42	1
Tin	ND		0.20	0.029	mg/L		08/04/16 08:30	08/05/16 01:42	1
Zinc	0.29	J	2.0	0.022	mg/L		08/04/16 08:30	08/06/16 16:42	1
Cadmium	0.0076	J	0.10	0.0020	mg/L		08/04/16 08:30	08/05/16 01:42	1

General Chemistry

Client Sample ID: NRSF-2
Date Collected: 07/26/16 09:00
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-1
Matrix: Solid
Percent Solids: 98.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.0		0.1	0.1	%			08/01/16 16:07	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

General Chemistry

Client Sample ID: NRSF-3
Date Collected: 07/26/16 08:52
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-2
Matrix: Solid
Percent Solids: 95.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.5		0.1	0.1	%			08/01/16 16:07	1

Client Sample ID: NRSF-4
Date Collected: 07/26/16 08:46
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-3
Matrix: Solid
Percent Solids: 97.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.8		0.1	0.1	%			08/01/16 16:07	1

Client Sample ID: NRSF-5
Date Collected: 07/26/16 08:12
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-4
Matrix: Solid
Percent Solids: 99.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.0		0.1	0.1	%			08/01/16 16:07	1

Client Sample ID: NRSF-7
Date Collected: 07/26/16 07:17
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-5
Matrix: Solid
Percent Solids: 98.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.9		0.1	0.1	%			08/01/16 16:07	1

Client Sample ID: NRSF-10
Date Collected: 07/26/16 07:27
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-6
Matrix: Solid
Percent Solids: 97.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.2		0.1	0.1	%			08/01/16 16:07	1

Client Sample ID: NRSF-11
Date Collected: 07/26/16 07:38
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-7
Matrix: Solid
Percent Solids: 99.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	0.7		0.1	0.1	%			08/01/16 16:07	1

Client Sample ID: NRSF-6
Date Collected: 07/26/16 07:54
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-8
Matrix: Solid
Percent Solids: 98.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1.7		0.1	0.1	%			08/01/16 16:07	1

Client Sample ID: NRSF-12
Date Collected: 07/26/16 08:28
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-9
Matrix: Solid
Percent Solids: 99.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	1		0.1	0.1	%			08/01/16 16:07	1

Client Sample ID: NRSF-13
Date Collected: 07/26/16 08:36
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-10
Matrix: Solid
Percent Solids: 97.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.2		0.1	0.1	%			08/01/16 16:07	1

TestAmerica Denver

Client Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

General Chemistry

Client Sample ID: DUPE-9
Date Collected: 07/26/16 00:00
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-11
Matrix: Solid
Percent Solids: 95.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	4.1		0.1	0.1	%			08/01/16 16:07	1

Client Sample ID: DUPE-10
Date Collected: 07/26/16 00:00
Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-12
Matrix: Solid
Percent Solids: 98.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	2.0		0.1	0.1	%			08/01/16 16:07	1

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 280-335803/1-A

Matrix: Water

Analysis Batch: 336225

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 335803

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		5.0	0.45	ug/L		08/02/16 08:15	08/03/16 02:35	1
Antimony	ND		20	3.1	ug/L		08/02/16 08:15	08/03/16 02:35	1
Arsenic	ND		15	4.4	ug/L		08/02/16 08:15	08/03/16 02:35	1
Copper	ND		15	4.2	ug/L		08/02/16 08:15	08/03/16 02:35	1
Lead	ND		9.0	2.6	ug/L		08/02/16 08:15	08/03/16 02:35	1
Zinc	ND		20	4.5	ug/L		08/02/16 08:15	08/03/16 02:35	1
Tin	ND		0.10	0.0058	mg/L		08/02/16 08:15	08/03/16 02:35	1

Lab Sample ID: LCS 280-335803/2-A

Matrix: Water

Analysis Batch: 336225

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 335803

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	100	102		ug/L		102	88 - 111
Antimony	500	522		ug/L		104	88 - 110
Arsenic	1000	1020		ug/L		102	88 - 110
Copper	250	254		ug/L		102	86 - 112
Lead	500	495		ug/L		99	89 - 110
Zinc	500	478		ug/L		96	85 - 111
Tin	2.00	2.01		mg/L		100	85 - 113

Lab Sample ID: 280-86094-20 MS

Matrix: Water

Analysis Batch: 336225

Client Sample ID: RINSE-10

Prep Type: Total/NA

Prep Batch: 335803

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		100	102		ug/L		102	82 - 119
Antimony	ND		500	526		ug/L		105	81 - 124
Arsenic	ND		1000	1030		ug/L		103	84 - 124
Copper	ND		250	255		ug/L		102	82 - 129
Lead	ND		500	493		ug/L		99	89 - 121
Zinc	ND		500	474		ug/L		95	60 - 137
Tin	ND		2.00	2.00		mg/L		100	77 - 126

Lab Sample ID: 280-86094-20 MSD

Matrix: Water

Analysis Batch: 336225

Client Sample ID: RINSE-10

Prep Type: Total/NA

Prep Batch: 335803

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND		100	103		ug/L		103	82 - 119	1	20
Antimony	ND		500	526		ug/L		105	81 - 124	0	20
Arsenic	ND		1000	1040		ug/L		104	84 - 124	1	20
Copper	ND		250	259		ug/L		104	82 - 129	1	20
Lead	ND		500	497		ug/L		99	89 - 121	1	20
Zinc	ND		500	479		ug/L		96	60 - 137	1	20
Tin	ND		2.00	2.01		mg/L		101	77 - 126	1	20

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-335905/1-A

Matrix: Solid

Analysis Batch: 336679

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 335905

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		1.5	0.38	mg/Kg		08/02/16 08:15	08/04/16 18:53	1
Arsenic	ND		2.0	0.66	mg/Kg		08/02/16 08:15	08/04/16 18:53	1
Copper	ND		2.0	0.22	mg/Kg		08/02/16 08:15	08/04/16 18:53	1
Lead	ND		0.90	0.27	mg/Kg		08/02/16 08:15	08/04/16 18:53	1
Tin	1.04	J	10	0.91	mg/Kg		08/02/16 08:15	08/04/16 18:53	1
Zinc	ND		3.0	0.40	mg/Kg		08/02/16 08:15	08/04/16 18:53	1
Cadmium	ND		0.50	0.041	mg/Kg		08/02/16 08:15	08/04/16 18:53	1

Lab Sample ID: LCS 280-335905/2-A

Matrix: Solid

Analysis Batch: 336679

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 335905

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	50.4		mg/Kg		101	82 - 110
Arsenic	100	99.6		mg/Kg		100	85 - 110
Copper	25.0	24.7		mg/Kg		99	88 - 110
Lead	50.0	48.8		mg/Kg		98	86 - 110
Tin	200	201		mg/Kg		101	84 - 110
Zinc	50.0	47.2		mg/Kg		94	76 - 114
Cadmium	10.0	9.98		mg/Kg		100	87 - 110

Lab Sample ID: 280-86094-1 MS

Matrix: Solid

Analysis Batch: 336679

Client Sample ID: NRSF-2

Prep Type: Total/NA

Prep Batch: 335905

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		40.2	11.9		mg/Kg	✱	30	20 - 200
Arsenic	2.6		80.3	75.5		mg/Kg	✱	91	76 - 111
Copper	11		20.1	32.0		mg/Kg	✱	102	37 - 187
Lead	14		40.2	49.2		mg/Kg	✱	89	70 - 200
Tin	1.4	J B	161	132		mg/Kg	✱	81	77 - 126
Zinc	34		40.2	75.0		mg/Kg	✱	103	70 - 200
Cadmium	0.26	J	8.03	7.69		mg/Kg	✱	92	40 - 130

Lab Sample ID: 280-86094-1 MSD

Matrix: Solid

Analysis Batch: 336679

Client Sample ID: NRSF-2

Prep Type: Total/NA

Prep Batch: 335905

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		44.0	13.0		mg/Kg	✱	30	20 - 200	10	20
Arsenic	2.6		88.0	86.2		mg/Kg	✱	95	76 - 111	13	20
Copper	11		22.0	35.9		mg/Kg	✱	111	37 - 187	11	20
Lead	14		44.0	53.8		mg/Kg	✱	91	70 - 200	9	20
Tin	1.4	J B	176	143		mg/Kg	✱	81	77 - 126	8	20
Zinc	34		44.0	84.4		mg/Kg	✱	116	70 - 200	12	20
Cadmium	0.26	J	8.80	8.44		mg/Kg	✱	93	40 - 130	9	20

TestAmerica Denver

QC Sample Results

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LB 280-336177/1-B

Matrix: Solid

Analysis Batch: 336680

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 336372

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.20	0.016	mg/L		08/04/16 08:30	08/05/16 00:53	1
Tin	ND		0.20	0.029	mg/L		08/04/16 08:30	08/05/16 00:53	1
Cadmium	ND		0.10	0.0020	mg/L		08/04/16 08:30	08/05/16 00:53	1

Lab Sample ID: LB 280-336177/1-B

Matrix: Solid

Analysis Batch: 336882

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 336372

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0513	J	0.50	0.022	mg/L		08/04/16 08:30	08/06/16 15:53	1
Copper	0.0732	J	2.0	0.021	mg/L		08/04/16 08:30	08/06/16 15:53	1
Lead	0.0555	J	0.50	0.013	mg/L		08/04/16 08:30	08/06/16 15:53	1
Zinc	ND		2.0	0.022	mg/L		08/04/16 08:30	08/06/16 15:53	1

Lab Sample ID: LCS 280-336177/2-B

Matrix: Solid

Analysis Batch: 336680

Client Sample ID: Lab Control Sample

Prep Type: TCLP

Prep Batch: 336372

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.500	0.557		mg/L		111	80 - 120
Tin	2.00	2.16		mg/L		108	80 - 120
Cadmium	1.10	1.31		mg/L		119	80 - 120

Lab Sample ID: LCS 280-336177/2-B

Matrix: Solid

Analysis Batch: 336882

Client Sample ID: Lab Control Sample

Prep Type: TCLP

Prep Batch: 336372

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.00	4.64		mg/L		116	80 - 120
Copper	2.25	2.61		mg/L		116	80 - 120
Lead	5.50	6.11		mg/L		111	80 - 120
Zinc	2.50	2.69		mg/L		108	80 - 120

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Metals

Prep Batch: 335803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86094-19	RINSE-9	Total/NA	Water	3010A	
280-86094-20	RINSE-10	Total/NA	Water	3010A	
MB 280-335803/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-335803/2-A	Lab Control Sample	Total/NA	Water	3010A	
280-86094-20 MS	RINSE-10	Total/NA	Water	3010A	
280-86094-20 MSD	RINSE-10	Total/NA	Water	3010A	

Prep Batch: 335905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86094-1	NRSF-2	Total/NA	Solid	3050B	
280-86094-2	NRSF-3	Total/NA	Solid	3050B	
280-86094-3	NRSF-4	Total/NA	Solid	3050B	
280-86094-4	NRSF-5	Total/NA	Solid	3050B	
280-86094-5	NRSF-7	Total/NA	Solid	3050B	
280-86094-6	NRSF-10	Total/NA	Solid	3050B	
280-86094-7	NRSF-11	Total/NA	Solid	3050B	
280-86094-8	NRSF-6	Total/NA	Solid	3050B	
280-86094-9	NRSF-12	Total/NA	Solid	3050B	
280-86094-10	NRSF-13	Total/NA	Solid	3050B	
280-86094-11	DUPE-9	Total/NA	Solid	3050B	
280-86094-12	DUPE-10	Total/NA	Solid	3050B	
MB 280-335905/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-335905/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-86094-1 MS	NRSF-2	Total/NA	Solid	3050B	
280-86094-1 MSD	NRSF-2	Total/NA	Solid	3050B	

Leach Batch: 336177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86094-13	SRIB-7 (0)	TCLP	Solid	1311	
280-86094-14	SRIB-8 (0)	TCLP	Solid	1311	
280-86094-15	SRIB-12 (0)	TCLP	Solid	1311	
280-86094-16	NRIB-1 (0)	TCLP	Solid	1311	
280-86094-17	NRIB-2 (0)	TCLP	Solid	1311	
280-86094-18	SRRF-PAH	TCLP	Solid	1311	
LB 280-336177/1-B	Method Blank	TCLP	Solid	1311	
LCS 280-336177/2-B	Lab Control Sample	TCLP	Solid	1311	

Analysis Batch: 336225

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86094-19	RINSE-9	Total/NA	Water	6010B	335803
280-86094-20	RINSE-10	Total/NA	Water	6010B	335803
MB 280-335803/1-A	Method Blank	Total/NA	Water	6010B	335803
LCS 280-335803/2-A	Lab Control Sample	Total/NA	Water	6010B	335803
280-86094-20 MS	RINSE-10	Total/NA	Water	6010B	335803
280-86094-20 MSD	RINSE-10	Total/NA	Water	6010B	335803

Prep Batch: 336372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86094-13	SRIB-7 (0)	TCLP	Solid	3010A	336177
280-86094-14	SRIB-8 (0)	TCLP	Solid	3010A	336177
280-86094-15	SRIB-12 (0)	TCLP	Solid	3010A	336177

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Metals (Continued)

Prep Batch: 336372 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86094-16	NRIB-1 (0)	TCLP	Solid	3010A	336177
280-86094-17	NRIB-2 (0)	TCLP	Solid	3010A	336177
280-86094-18	SRRF-PAH	TCLP	Solid	3010A	336177
LB 280-336177/1-B	Method Blank	TCLP	Solid	3010A	336177
LCS 280-336177/2-B	Lab Control Sample	TCLP	Solid	3010A	336177

Analysis Batch: 336679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86094-1	NRSF-2	Total/NA	Solid	6010C	335905
280-86094-2	NRSF-3	Total/NA	Solid	6010C	335905
280-86094-3	NRSF-4	Total/NA	Solid	6010C	335905
280-86094-4	NRSF-5	Total/NA	Solid	6010C	335905
280-86094-5	NRSF-7	Total/NA	Solid	6010C	335905
280-86094-6	NRSF-10	Total/NA	Solid	6010C	335905
280-86094-7	NRSF-11	Total/NA	Solid	6010C	335905
280-86094-8	NRSF-6	Total/NA	Solid	6010C	335905
280-86094-9	NRSF-12	Total/NA	Solid	6010C	335905
280-86094-10	NRSF-13	Total/NA	Solid	6010C	335905
280-86094-11	DUPE-9	Total/NA	Solid	6010C	335905
280-86094-12	DUPE-10	Total/NA	Solid	6010C	335905
MB 280-335905/1-A	Method Blank	Total/NA	Solid	6010C	335905
LCS 280-335905/2-A	Lab Control Sample	Total/NA	Solid	6010C	335905
280-86094-1 MS	NRSF-2	Total/NA	Solid	6010C	335905
280-86094-1 MSD	NRSF-2	Total/NA	Solid	6010C	335905

Analysis Batch: 336680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86094-13	SRIB-7 (0)	TCLP	Solid	6010C	336372
280-86094-14	SRIB-8 (0)	TCLP	Solid	6010C	336372
280-86094-15	SRIB-12 (0)	TCLP	Solid	6010C	336372
280-86094-16	NRIB-1 (0)	TCLP	Solid	6010C	336372
280-86094-17	NRIB-2 (0)	TCLP	Solid	6010C	336372
280-86094-18	SRRF-PAH	TCLP	Solid	6010C	336372
LB 280-336177/1-B	Method Blank	TCLP	Solid	6010C	336372
LCS 280-336177/2-B	Lab Control Sample	TCLP	Solid	6010C	336372

Analysis Batch: 336882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86094-13	SRIB-7 (0)	TCLP	Solid	6010C	336372
280-86094-14	SRIB-8 (0)	TCLP	Solid	6010C	336372
280-86094-15	SRIB-12 (0)	TCLP	Solid	6010C	336372
280-86094-16	NRIB-1 (0)	TCLP	Solid	6010C	336372
280-86094-17	NRIB-2 (0)	TCLP	Solid	6010C	336372
280-86094-18	SRRF-PAH	TCLP	Solid	6010C	336372
LB 280-336177/1-B	Method Blank	TCLP	Solid	6010C	336372
LCS 280-336177/2-B	Lab Control Sample	TCLP	Solid	6010C	336372

Analysis Batch: 337049

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86094-13	SRIB-7 (0)	TCLP	Solid	6010C	336372
280-86094-14	SRIB-8 (0)	TCLP	Solid	6010C	336372

TestAmerica Denver

QC Association Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

General Chemistry

Analysis Batch: 336035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-86094-1	NRSF-2	Total/NA	Solid	Moisture	
280-86094-2	NRSF-3	Total/NA	Solid	Moisture	
280-86094-3	NRSF-4	Total/NA	Solid	Moisture	
280-86094-4	NRSF-5	Total/NA	Solid	Moisture	
280-86094-5	NRSF-7	Total/NA	Solid	Moisture	
280-86094-6	NRSF-10	Total/NA	Solid	Moisture	
280-86094-7	NRSF-11	Total/NA	Solid	Moisture	
280-86094-8	NRSF-6	Total/NA	Solid	Moisture	
280-86094-9	NRSF-12	Total/NA	Solid	Moisture	
280-86094-10	NRSF-13	Total/NA	Solid	Moisture	
280-86094-11	DUPE-9	Total/NA	Solid	Moisture	
280-86094-12	DUPE-10	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Client Sample ID: NRSF-2

Date Collected: 07/26/16 09:00

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			336035	08/01/16 16:07	MNG	TAL DEN

Client Sample ID: NRSF-2

Date Collected: 07/26/16 09:00

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-1

Matrix: Solid

Percent Solids: 98.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.245 g	100 mL	335905	08/02/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336679	08/04/16 18:58	CMK	TAL DEN

Client Sample ID: NRSF-3

Date Collected: 07/26/16 08:52

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			336035	08/01/16 16:07	MNG	TAL DEN

Client Sample ID: NRSF-3

Date Collected: 07/26/16 08:52

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-2

Matrix: Solid

Percent Solids: 95.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.135 g	100 mL	335905	08/02/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336679	08/04/16 19:12	CMK	TAL DEN

Client Sample ID: NRSF-4

Date Collected: 07/26/16 08:46

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			336035	08/01/16 16:07	MNG	TAL DEN

Client Sample ID: NRSF-4

Date Collected: 07/26/16 08:46

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-3

Matrix: Solid

Percent Solids: 97.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.240 g	100 mL	335905	08/02/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336679	08/04/16 19:14	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Client Sample ID: NRSF-5

Date Collected: 07/26/16 08:12

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			336035	08/01/16 16:07	MNG	TAL DEN

Client Sample ID: NRSF-5

Date Collected: 07/26/16 08:12

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-4

Matrix: Solid

Percent Solids: 99.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.233 g	100 mL	335905	08/02/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336679	08/04/16 19:28	CMK	TAL DEN

Client Sample ID: NRSF-7

Date Collected: 07/26/16 07:17

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			336035	08/01/16 16:07	MNG	TAL DEN

Client Sample ID: NRSF-7

Date Collected: 07/26/16 07:17

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-5

Matrix: Solid

Percent Solids: 98.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.200 g	100 mL	335905	08/02/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336679	08/04/16 19:30	CMK	TAL DEN

Client Sample ID: NRSF-10

Date Collected: 07/26/16 07:27

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			336035	08/01/16 16:07	MNG	TAL DEN

Client Sample ID: NRSF-10

Date Collected: 07/26/16 07:27

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-6

Matrix: Solid

Percent Solids: 97.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.147 g	100 mL	335905	08/02/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336679	08/04/16 19:33	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Client Sample ID: NRSF-11

Date Collected: 07/26/16 07:38

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			336035	08/01/16 16:07	MNG	TAL DEN

Client Sample ID: NRSF-11

Date Collected: 07/26/16 07:38

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-7

Matrix: Solid

Percent Solids: 99.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.209 g	100 mL	335905	08/02/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336679	08/04/16 19:36	CMK	TAL DEN

Client Sample ID: NRSF-6

Date Collected: 07/26/16 07:54

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			336035	08/01/16 16:07	MNG	TAL DEN

Client Sample ID: NRSF-6

Date Collected: 07/26/16 07:54

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-8

Matrix: Solid

Percent Solids: 98.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.219 g	100 mL	335905	08/02/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336679	08/04/16 19:38	CMK	TAL DEN

Client Sample ID: NRSF-12

Date Collected: 07/26/16 08:28

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-9

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			336035	08/01/16 16:07	MNG	TAL DEN

Client Sample ID: NRSF-12

Date Collected: 07/26/16 08:28

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-9

Matrix: Solid

Percent Solids: 99.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.244 g	100 mL	335905	08/02/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336679	08/04/16 19:41	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Client Sample ID: NRSF-13

Date Collected: 07/26/16 08:36

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			336035	08/01/16 16:07	MNG	TAL DEN

Client Sample ID: NRSF-13

Date Collected: 07/26/16 08:36

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-10

Matrix: Solid

Percent Solids: 97.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.164 g	100 mL	335905	08/02/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336679	08/04/16 19:43	CMK	TAL DEN

Client Sample ID: DUPE-9

Date Collected: 07/26/16 00:00

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			336035	08/01/16 16:07	MNG	TAL DEN

Client Sample ID: DUPE-9

Date Collected: 07/26/16 00:00

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-11

Matrix: Solid

Percent Solids: 95.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.079 g	100 mL	335905	08/02/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336679	08/04/16 19:46	CMK	TAL DEN

Client Sample ID: DUPE-10

Date Collected: 07/26/16 00:00

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			336035	08/01/16 16:07	MNG	TAL DEN

Client Sample ID: DUPE-10

Date Collected: 07/26/16 00:00

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-12

Matrix: Solid

Percent Solids: 98.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.029 g	100 mL	335905	08/02/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010C		1			336679	08/04/16 19:49	CMK	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Client Sample ID: SRIB-7 (0)

Date Collected: 07/26/16 10:20

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336680	08/05/16 01:28	CMK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336882	08/06/16 16:17	CMK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		5			337049	08/08/16 13:34	CMK	TAL DEN

Client Sample ID: SRIB-8 (0)

Date Collected: 07/26/16 10:25

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-14

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336680	08/05/16 01:31	CMK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336882	08/06/16 16:31	CMK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		5			337049	08/08/16 13:37	CMK	TAL DEN

Client Sample ID: SRIB-12 (0)

Date Collected: 07/26/16 10:25

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-15

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336680	08/05/16 01:34	CMK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336882	08/06/16 16:34	CMK	TAL DEN

Client Sample ID: NRIB-1 (0)

Date Collected: 07/26/16 10:30

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-16

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Client Sample ID: NRIB-1 (0)

Date Collected: 07/26/16 10:30

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-16

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Analysis	6010C		1			336680	08/05/16 01:37	CMK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336882	08/06/16 16:36	CMK	TAL DEN

Client Sample ID: NRIB-2 (0)

Date Collected: 07/26/16 10:35

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-17

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336680	08/05/16 01:39	CMK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336882	08/06/16 16:39	CMK	TAL DEN

Client Sample ID: SRRF-PAH

Date Collected: 07/26/16 10:20

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-18

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336680	08/05/16 01:42	CMK	TAL DEN
TCLP	Leach	1311			1.0 g	1.0 mL	336177	08/02/16 16:38	DFB1	TAL DEN
TCLP	Prep	3010A			10 mL	50 mL	336372	08/04/16 08:30	SEJ	TAL DEN
TCLP	Analysis	6010C		1			336882	08/06/16 16:42	CMK	TAL DEN

Client Sample ID: RINSE-9

Date Collected: 07/26/16 10:40

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	335803	08/02/16 08:15	TEB	TAL DEN
Total/NA	Analysis	6010B		1			336225	08/03/16 02:39	CRR	TAL DEN

Client Sample ID: RINSE-10

Date Collected: 07/26/16 10:40

Date Received: 07/26/16 11:50

Lab Sample ID: 280-86094-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			50 mL	50 mL	335803	08/02/16 08:15	TEB	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Client Sample ID: RINSE-10

Lab Sample ID: 280-86094-20

Date Collected: 07/26/16 10:40

Matrix: Water

Date Received: 07/26/16 11:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010B		1			336225	08/03/16 02:42	CRR	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Quantum Water & Environment
Project/Site: Adams County Shooting Range

TestAmerica Job ID: 280-86094-1

Laboratory: TestAmerica Denver

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	4025	01-09-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture

Chain of Custody Record

TAL-4124-280 (0508)

Client Quantum Water and Environment		Project Manager John Dellaport		Date 7.26.16	Chain of Custody Number 193085
Address 1746 Cole Blvd, Suite 340		Telephone Number (Area Code)/Fax Number 720-524-4294		Lab Number	
City Lakewood	State CO	Zip Code 80401	Site Contact J. Dellaport	Analysis (Attach list if more space is needed)	Page 1 of 1
Project Name and Location (State) Adams County Shooting Range		Carrier/Waybill Number			
Contract/Purchase Order/Quote No.					

Special Instructions/
ditions of Receipt



280-86094 Chain of Custody

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives				
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH
NRSF-2	7.26.16	0900				X	X					
NRSF-3		0852				X	X					
NRSF-4		0846				X	X					
NRSF-5	0812	0812				X	X					
NRSF-7	0717	0717				X	X					
NRSF-10	0727	0727				X	X					
NRSF-11	0739	0739				X	X					
NRSF-6	0754	0754				X	X					
NRSF-12	0828	0828				X	X					
NRSF-13	0830	0830				X	X					
DUPE-9						X	X					
DUPE-10	7.26.16					X	X					

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown
 Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other: **Standard**

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

QC Requirements (Specify)

1. Relinquished By	Date	Time
<i>[Signature]</i>	7.26.16	1150
2. Relinquished By	Date	Time
3. Relinquished By	Date	Time

Comments
23.6 IRS (60.0 transferred) SPL 7-27-16

Sampler ID JAL
 Temperature on Receipt _____
 Drinking Water? Yes ☐ No ☒

TAL-4124-280 (0508)

Client Quantum		Project Manager John Dellaport		Date 7.26.16	Chain of Custody Number 193086
Address 1746 Cole Blvd, Suite 340		Telephone Number (Area Code)/Fax Number 720-524-4294		Lab Number	
City Leukewood	State CO	Zip Code 80401	Site Contact J. Dellaport	Lab Contact	Page 2 of 2
Project Name and Location (State) Adams Co. Shooting Range		Analysis (Attach list if more space is needed)			
Contract/Purchase Order/Quote No.		Special Instructions/ Conditions of Receipt			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix					Containers & Preservatives				
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH
SRIB-7(0)	7.26.16	1020				X						
SRIB-8(0)		1025				X						
SRIB-12(0)		1025				X						
NRIB-1(0)		1030				X						
NRIB-2(0)		1035				X						
SRRF-PAH		1020				X						
RINSE-9		1040	X									
RINSE-10	7.26.16	1040	X									

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown
 Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days
 1. Relinquished By _____ Date **7.26.16** Time **1150**
 2. Relinquished By _____ Date _____ Time _____
 3. Relinquished By _____ Date _____ Time _____

QC Requirements (Specify)
 Disposal By Lab ☒ Archive For _____ Months
 (A fee may be assessed if samples are retained longer than 1 month)

1. Received By **Paul** Date **7-26-16** Time **1150**
 2. Received By _____ Date _____ Time _____
 3. Received By _____ Date _____ Time _____

Comments

Login Sample Receipt Checklist

Client: Quantum Water & Environment

Job Number: 280-86094-1

Login Number: 86094

List Source: TestAmerica Denver

List Number: 1

Creator: Woodworth, Sean P

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	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.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	