

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

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Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-88060-1

Client Project/Site: COGCC -Remediation Project #9678

For:

Colorado Oil&Gas Conservation Commision

1120 Lincoln St.

Suite 801

Denver, Colorado 80203

Attn: Mr. Steven Arauza



Authorized for release by:

9/28/2016 12:21:49 PM

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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.



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Case Narrative

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Job ID: 280-88060-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Colorado Oil&Gas Conservation Commission

Project: COGCC -Remediation Project #9678

Report Number: 280-88060-1

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 9/13/2016 at 1:35 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3°C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample JOLLY PLATTS PRODUCTION PIT (280-88060-1) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 09/18/2016.

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

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample JOLLY PLATTS PRODUCTION PIT (280-88060-1) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 09/15/2016 and analyzed on 09/23/2016.

Sample JOLLY PLATTS PRODUCTION PIT (280-88060-1) required a 4X 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.

TOTAL METALS

Sample JOLLY PLATTS PRODUCTION PIT (280-88060-1) was analyzed for total metals in accordance with EPA SW-846 Method 6010B. The samples were prepared on 09/14/2016 and 09/21/2016 and analyzed on 09/17/2016 and 09/22/2016.

The MS and MSD spike recoveries for Lead and Sodium were outside the recovery criteria low in batch 280-342603. This MS/MSD batch was performed on sample JOLLY PLATTS PRODUCTION PIT (280-88060-1). The associated LCS was in control and provides evidence that operating procedures were in control.

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

SODIUM ABSORPTION RATIO

Sample JOLLY PLATTS PRODUCTION PIT (280-88060-1) was analyzed for Sodium Absorption Ratio in accordance with USDA Handbook 60 - 20B. The samples were analyzed on 09/20/2016.

Case Narrative

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Job ID: 280-88060-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

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

ALKALINITY

Sample JOLLY PLATTS PRODUCTION PIT (280-88060-1) was analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 09/20/2016.

Total Alkalinity was detected in method blank MB 280-342944/5 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 "B". Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

The instrument blank for analytical batch 280-342944 contained alkalinity greater than the reporting limit (RL), and were not reanalyzed because the samples are >10x the instrument 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.

SPECIFIC CONDUCTIVITY

Sample JOLLY PLATTS PRODUCTION PIT (280-88060-1) was analyzed for specific conductivity in accordance with SM20 2510B. The samples were analyzed on 09/16/2016.

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

TOTAL DISSOLVED SOLIDS

Sample JOLLY PLATTS PRODUCTION PIT (280-88060-1) was analyzed for total dissolved solids in accordance with SM20 2540C. The samples were analyzed on 09/17/2016.

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

ANIONS (28 DAYS)

Sample JOLLY PLATTS PRODUCTION PIT (280-88060-1) was analyzed for anions (28 days) in accordance with EPA Method 300.0. The samples were analyzed on 09/19/2016.

Fluoride failed the recovery criteria low for MRL 280-342711/3; however, the MRL isn't required for method 300.0_28D. The associated LCS/LCSD and MS/MSD samples were in control.

Samples JOLLY PLATTS PRODUCTION PIT (280-88060-1)[2X] and JOLLY PLATTS PRODUCTION PIT (280-88060-1)[50X] required dilutions 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.

NITRATE-NITRITE AS NITROGEN

Sample JOLLY PLATTS PRODUCTION PIT (280-88060-1) was analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 09/22/2016.

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

CATION ANION BALANCE

Sample JOLLY PLATTS PRODUCTION PIT (280-88060-1) was analyzed for Cation Anion Balance in accordance with Cation Anion Balance. The samples were analyzed on 09/15/2016.

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

CORROSIVITY (PH)

Sample JOLLY PLATTS PRODUCTION PIT (280-88060-1) was analyzed for corrosivity (pH) in accordance with SM20 4500 H+ B. The samples were analyzed on 09/21/2016.

Case Narrative

Client: Colorado Oil&Gas Conservation Commision
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Job ID: 280-88060-1 (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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Definitions/Glossary

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery 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
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
B	Compound was found in the blank and sample.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

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

Detection Summary

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Client Sample ID: JOLLY PLATTS PRODUCTION PIT

Lab Sample ID: 280-88060-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzene	960		40	ug/L	1		8260B	Total/NA
Ethylbenzene	140		40	ug/L	1		8260B	Total/NA
Toluene	1800		40	ug/L	1		8260B	Total/NA
m-Xylene & p-Xylene	610		80	ug/L	1		8260B	Total/NA
o-Xylene	310		40	ug/L	1		8260B	Total/NA
2,4-Dimethylphenol	130		38	ug/L	4		8270C	Total/NA
2-Methylnaphthalene	89		15	ug/L	4		8270C	Total/NA
2-Methylphenol	250		38	ug/L	4		8270C	Total/NA
3 & 4 Methylphenol	360		38	ug/L	4		8270C	Total/NA
Caprolactam	330		38	ug/L	4		8270C	Total/NA
Cresols, Total	600		38	ug/L	4		8270C	Total/NA
Naphthalene	150		15	ug/L	4		8270C	Total/NA
Phenol	350		38	ug/L	4		8270C	Total/NA
Sodium Adsorption Ratio	180		0.40	No Unit	1		20B	Total/NA
Barium	100		10	ug/L	1		6010B	Total/NA
Calcium	5000		200	ug/L	1		6010B	Total/NA
Iron	150		100	ug/L	1		6010B	Total/NA
Magnesium	1100		200	ug/L	1		6010B	Total/NA
Manganese	27		10	ug/L	1		6010B	Total/NA
Potassium	12000		3000	ug/L	1		6010B	Total/NA
Sodium	1900000		1000	ug/L	1		6010B	Total/NA
Bromide	7.6		0.40	mg/L	2		300.0	Total/NA
Chloride	1100		150	mg/L	50		300.0	Total/NA
Fluoride	12		1.0	mg/L	2		300.0	Total/NA
Sulfate	340		10	mg/L	2		300.0	Total/NA
Total Anions	73			meq/L	1		SM 1030E	Total/NA
Total Cations	83			meq/L	1		SM 1030E	Total/NA
Percent Difference	6.8			%	1		SM 1030E	Total/NA
Anion/Cation Balance	6.8			%	1		SM 1030E	Total/NA
Total Alkalinity	1700	B ^	5.0	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	1700	^	5.0	mg/L	1		SM 2320B	Total/NA
Specific Conductance	6300		2.0	umhos/cm	1		SM 2510B	Total/NA
Total Dissolved Solids	4100		40	mg/L	1		SM 2540C	Total/NA
pH	8.1	HF	0.1	SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Method Summary

Client: Colorado Oil&Gas Conservation Commision
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
20B	Sodium Adsorption Ratio	USDA	TAL DEN
6010B	Metals (ICP)	SW846	TAL DEN
300.0	Anions, Ion Chromatography	MCAWW	TAL DEN
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL DEN
SM 1030E	Cation Anion Balance	SM	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
SM 2510B	Conductivity, Specific Conductance	SM	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 4500 H+ B	pH	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.

USDA = "USDA Agriculture Handbook 60, section 20B".

Laboratory References:

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

Sample Summary

Client: Colorado Oil&Gas Conservation Commision
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Water	09/13/16 11:00	09/13/16 13:35

Client Sample Results

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

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

Client Sample ID: JOLLY PLATTS PRODUCTION PIT

Date Collected: 09/13/16 11:00

Date Received: 09/13/16 13:35

Lab Sample ID: 280-88060-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	960		40	ug/L			09/18/16 19:21	1
Ethylbenzene	140		40	ug/L			09/18/16 19:21	1
Toluene	1800		40	ug/L			09/18/16 19:21	1
m-Xylene & p-Xylene	610		80	ug/L			09/18/16 19:21	1
o-Xylene	310		40	ug/L			09/18/16 19:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 127		09/18/16 19:21	1
Toluene-d8 (Surr)	94		80 - 125		09/18/16 19:21	1
4-Bromofluorobenzene (Surr)	95		78 - 120		09/18/16 19:21	1
Dibromofluoromethane (Surr)	99		77 - 120		09/18/16 19:21	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: JOLLY PLATTS PRODUCTION PIT

Date Collected: 09/13/16 11:00

Date Received: 09/13/16 13:35

Lab Sample ID: 280-88060-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,2'-oxybis[1-chloropropane]	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
2,4,5-Trichlorophenol	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
2,4,6-Trichlorophenol	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
2,4-Dichlorophenol	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
2,4-Dimethylphenol	130		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
2,4-Dinitrophenol	ND		110	ug/L		09/15/16 13:25	09/23/16 20:02	4
2,4-Dinitrotoluene	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
2,6-Dinitrotoluene	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
2-Chloronaphthalene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
2-Chlorophenol	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
2-Methylnaphthalene	89		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
2-Methylphenol	250		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
2-Nitroaniline	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
2-Nitrophenol	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
3 & 4 Methylphenol	360		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
3,3'-Dichlorobenzidine	ND		190	ug/L		09/15/16 13:25	09/23/16 20:02	4
3-Nitroaniline	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
4,6-Dinitro-2-methylphenol	ND		190	ug/L		09/15/16 13:25	09/23/16 20:02	4
4-Bromophenyl phenyl ether	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
4-Chloro-3-methylphenol	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
4-Chloroaniline	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
4-Chlorophenyl phenyl ether	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
4-Nitroaniline	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
4-Nitrophenol	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
Acenaphthene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Acenaphthylene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Acetophenone	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
Anthracene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Atrazine	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
Benzidine	ND		380	ug/L		09/15/16 13:25	09/23/16 20:02	4
Benzo[a]anthracene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Benzo[a]pyrene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4

TestAmerica Denver

Client Sample Results

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: JOLLY PLATTS PRODUCTION PIT

Lab Sample ID: 280-88060-1

Date Collected: 09/13/16 11:00

Matrix: Water

Date Received: 09/13/16 13:35

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Benzo[g,h,i]perylene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Benzo[k]fluoranthene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Bis(2-chloroethoxy)methane	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
Bis(2-chloroethyl)ether	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
Bis(2-ethylhexyl) phthalate	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
Butyl benzyl phthalate	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Caprolactam	330		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
Carbazole	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Chrysene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Cresols, Total	600		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
Dibenz(a,h)anthracene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Dibenzofuran	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Diethyl phthalate	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Dimethyl phthalate	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Di-n-butyl phthalate	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Di-n-octyl phthalate	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Fluoranthene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Fluorene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Hexachlorobenzene	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
Hexachlorobutadiene	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
Hexachlorocyclopentadiene	ND		190	ug/L		09/15/16 13:25	09/23/16 20:02	4
Hexachloroethane	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
Indeno[1,2,3-cd]pyrene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Naphthalene	150		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Nitrobenzene	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
N-Nitrosodi-n-propylamine	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
n-Nitrosodiphenylamine(as diphenylamine)	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
Pentachlorophenol	ND		190	ug/L		09/15/16 13:25	09/23/16 20:02	4
Phenanthrene	ND		15	ug/L		09/15/16 13:25	09/23/16 20:02	4
Phenol	350		38	ug/L		09/15/16 13:25	09/23/16 20:02	4
Pyrene	ND		38	ug/L		09/15/16 13:25	09/23/16 20:02	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	76	D	48 - 135	09/15/16 13:25	09/23/16 20:02	4
2-Fluorobiphenyl	78	D	48 - 135	09/15/16 13:25	09/23/16 20:02	4
2-Fluorophenol	68	D	41 - 135	09/15/16 13:25	09/23/16 20:02	4
Nitrobenzene-d5	74	D	42 - 135	09/15/16 13:25	09/23/16 20:02	4
Phenol-d5	69	D	46 - 135	09/15/16 13:25	09/23/16 20:02	4
Terphenyl-d14	57	D	20 - 135	09/15/16 13:25	09/23/16 20:02	4

Method: 20B - Sodium Adsorption Ratio

Client Sample ID: JOLLY PLATTS PRODUCTION PIT

Lab Sample ID: 280-88060-1

Date Collected: 09/13/16 11:00

Matrix: Water

Date Received: 09/13/16 13:35

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	180		0.40	No Unit			09/20/16 10:54	1

TestAmerica Denver

Client Sample Results

Client: Colorado Oil&Gas Conservation Commision
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Method: 6010B - Metals (ICP)

Client Sample ID: JOLLY PLATTS PRODUCTION PIT

Date Collected: 09/13/16 11:00

Date Received: 09/13/16 13:35

Lab Sample ID: 280-88060-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		15	ug/L		09/14/16 22:41	09/17/16 00:05	1
Barium	100		10	ug/L		09/14/16 22:41	09/17/16 00:05	1
Calcium	5000		200	ug/L		09/14/16 22:41	09/17/16 00:05	1
Chromium	ND		10	ug/L		09/14/16 22:41	09/17/16 00:05	1
Iron	150		100	ug/L		09/21/16 15:00	09/22/16 00:30	1
Lead	ND	F1	9.0	ug/L		09/14/16 22:41	09/17/16 00:05	1
Magnesium	1100		200	ug/L		09/14/16 22:41	09/17/16 00:05	1
Manganese	27		10	ug/L		09/14/16 22:41	09/17/16 00:05	1
Potassium	12000		3000	ug/L		09/14/16 22:41	09/17/16 00:05	1
Selenium	ND		15	ug/L		09/14/16 22:41	09/17/16 00:05	1
Sodium	1900000		1000	ug/L		09/14/16 22:41	09/17/16 00:05	1

General Chemistry

Client Sample ID: JOLLY PLATTS PRODUCTION PIT

Date Collected: 09/13/16 11:00

Date Received: 09/13/16 13:35

Lab Sample ID: 280-88060-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	7.6		0.40	mg/L			09/19/16 15:39	2
Chloride	1100		150	mg/L			09/19/16 15:57	50
Fluoride	12		1.0	mg/L			09/19/16 15:39	2
Sulfate	340		10	mg/L			09/19/16 15:39	2
Nitrate Nitrite as N	ND		0.10	mg/L			09/22/16 21:03	1
Total Anions	73			meq/L			09/15/16 15:04	1
Total Cations	83			meq/L			09/15/16 15:04	1
Percent Difference	6.8			%			09/15/16 15:04	1
Anion/Cation Balance	6.8			%			09/15/16 15:04	1
Total Alkalinity	1700	B ^	5.0	mg/L			09/20/16 11:06	1
Bicarbonate Alkalinity as CaCO3	1700	^	5.0	mg/L			09/20/16 11:06	1
Carbonate Alkalinity as CaCO3	ND		5.0	mg/L			09/20/16 11:06	1
Hydroxide Alkalinity	ND		5.0	mg/L			09/20/16 11:06	1
Specific Conductance	6300		2.0	umhos/cm			09/16/16 00:13	1
Total Dissolved Solids	4100		40	mg/L			09/17/16 11:31	1
pH	8.1	HF	0.1	SU			09/21/16 16:13	1

TestAmerica Denver

Surrogate Summary

Client: Colorado Oil&Gas Conservation Commision
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (70-127)	TOL (80-125)	BFB (78-120)	DBFM (77-120)
280-88060-1	JOLLY PLATTS PRODUCTION	97	94	95	99
550-69494-D-3 MS	Matrix Spike	95	106	103	94
550-69494-D-3 MSD	Matrix Spike Duplicate	108	101	102	104
LCS 280-342612/4	Lab Control Sample	97	101	99	100
MB 280-342612/6	Method Blank	97	93	94	101

Surrogate Legend

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

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (48-135)	FBP (48-135)	2FP (41-135)	NBZ (42-135)	PHL (46-135)	TPH (20-135)
280-88060-1	JOLLY PLATTS PRODUCTION	76 D	78 D	68 D	74 D	69 D	57 D
LCS 280-342328/2-A	Lab Control Sample	90	94	87	90	86	92
LCSD 280-342328/3-A	Lab Control Sample Dup	96	97	88	92	88	97
MB 280-342328/1-A	Method Blank	92	91	90	91	91	101

Surrogate Legend

TBP = 2,4,6-Tribromophenol

FBP = 2-Fluorobiphenyl

2FP = 2-Fluorophenol

NBZ = Nitrobenzene-d5

PHL = Phenol-d5

TPH = Terphenyl-d14

QC Association Summary

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

GC/MS VOA

Analysis Batch: 342612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	8260B	
MB 280-342612/6	Method Blank	Total/NA	Water	8260B	
LCS 280-342612/4	Lab Control Sample	Total/NA	Water	8260B	
550-69494-D-3 MS	Matrix Spike	Total/NA	Water	8260B	
550-69494-D-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 342328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	3520C	
MB 280-342328/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-342328/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-342328/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 343537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	8270C	342328
MB 280-342328/1-A	Method Blank	Total/NA	Water	8270C	342328
LCS 280-342328/2-A	Lab Control Sample	Total/NA	Water	8270C	342328
LCSD 280-342328/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	342328

Metals

Prep Batch: 342202

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	3010A	
MB 280-342202/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-342202/2-A	Lab Control Sample	Total/NA	Water	3010A	
280-88060-1 MS	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	3010A	
280-88060-1 MSD	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	3010A	

Analysis Batch: 342603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	6010B	342202
MB 280-342202/1-A	Method Blank	Total/NA	Water	6010B	342202
LCS 280-342202/2-A	Lab Control Sample	Total/NA	Water	6010B	342202
280-88060-1 MS	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	6010B	342202
280-88060-1 MSD	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	6010B	342202

Prep Batch: 343137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	3010A	
MB 280-343137/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-343137/2-A	Lab Control Sample	Total/NA	Water	3010A	
280-88060-1 MS	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	3010A	
280-88060-1 MSD	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	3010A	

TestAmerica Denver

QC Association Summary

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Metals (Continued)

Analysis Batch: 343171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	20B	
MB 280-343171/1	Method Blank	Total/NA	Water	20B	
280-87897-C-1 DU	Duplicate	Total/NA	Water	20B	

Analysis Batch: 343246

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	6010B	343137
MB 280-343137/1-A	Method Blank	Total/NA	Water	6010B	343137
LCS 280-343137/2-A	Lab Control Sample	Total/NA	Water	6010B	343137
280-88060-1 MS	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	6010B	343137
280-88060-1 MSD	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	6010B	343137

General Chemistry

Analysis Batch: 342361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	SM 1030E	
MB 280-342361/1	Method Blank	Total/NA	Water	SM 1030E	

Analysis Batch: 342442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	SM 2510B	
MB 280-342442/4	Method Blank	Total/NA	Water	SM 2510B	
LCS 280-342442/3	Lab Control Sample	Total/NA	Water	SM 2510B	
280-88060-1 DU	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	SM 2510B	

Analysis Batch: 342591

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	SM 2540C	
MB 280-342591/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 280-342591/2	Lab Control Sample	Total/NA	Water	SM 2540C	
280-88128-C-6 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 342711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	300.0	
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	300.0	
MB 280-342711/6	Method Blank	Total/NA	Water	300.0	
LCS 280-342711/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 280-342711/5	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 280-342711/3	Lab Control Sample	Total/NA	Water	300.0	
280-88079-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
280-88079-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
280-88079-A-1 DU	Duplicate	Total/NA	Water	300.0	

Analysis Batch: 342944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	SM 2320B	
MB 280-342944/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-342944/4	Lab Control Sample	Total/NA	Water	SM 2320B	

TestAmerica Denver

QC Association Summary

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

General Chemistry (Continued)

Analysis Batch: 342944 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1 DU	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	SM 2320B	

Analysis Batch: 343201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	SM 4500 H+ B	
LCS 280-343201/54	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
280-88306-E-1 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 343395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-88060-1	JOLLY PLATTS PRODUCTION PIT	Total/NA	Water	353.2	
MB 280-343395/67	Method Blank	Total/NA	Water	353.2	
MB 280-343395/99	Method Blank	Total/NA	Water	353.2	
LCS 280-343395/66	Lab Control Sample	Total/NA	Water	353.2	
LCS 280-343395/98	Lab Control Sample	Total/NA	Water	353.2	
MRL 280-343395/21	Lab Control Sample	Total/NA	Water	353.2	
280-87845-D-2 MS	Matrix Spike	Total/NA	Water	353.2	
280-87845-D-2 MSD	Matrix Spike Duplicate	Total/NA	Water	353.2	

QC Sample Results

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

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

Lab Sample ID: MB 280-342612/6

Matrix: Water

Analysis Batch: 342612

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	ug/L			09/18/16 10:08	1
Ethylbenzene	ND		1.0	ug/L			09/18/16 10:08	1
Toluene	ND		1.0	ug/L			09/18/16 10:08	1
m-Xylene & p-Xylene	ND		2.0	ug/L			09/18/16 10:08	1
o-Xylene	ND		1.0	ug/L			09/18/16 10:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 127		09/18/16 10:08	1
Toluene-d8 (Surr)	93		80 - 125		09/18/16 10:08	1
4-Bromofluorobenzene (Surr)	94		78 - 120		09/18/16 10:08	1
Dibromofluoromethane (Surr)	101		77 - 120		09/18/16 10:08	1

Lab Sample ID: LCS 280-342612/4

Matrix: Water

Analysis Batch: 342612

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	5.00	5.38		ug/L		108	65 - 135
Ethylbenzene	5.00	4.84		ug/L		97	65 - 135
Toluene	5.00	5.37		ug/L		107	65 - 135
m-Xylene & p-Xylene	5.00	4.91		ug/L		98	65 - 135
o-Xylene	5.00	4.79		ug/L		96	65 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 127
Toluene-d8 (Surr)	101		80 - 125
4-Bromofluorobenzene (Surr)	99		78 - 120
Dibromofluoromethane (Surr)	100		77 - 120

Lab Sample ID: 550-69494-D-3 MS

Matrix: Water

Analysis Batch: 342612

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		5.00	5.23		ug/L		105	65 - 135
Ethylbenzene	ND		5.00	5.02		ug/L		100	65 - 135
Toluene	ND		5.00	5.30		ug/L		106	65 - 135
m-Xylene & p-Xylene	ND		5.00	5.03		ug/L		101	65 - 135
o-Xylene	ND		5.00	4.94		ug/L		99	65 - 135

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		70 - 127
Toluene-d8 (Surr)	106		80 - 125
4-Bromofluorobenzene (Surr)	103		78 - 120
Dibromofluoromethane (Surr)	94		77 - 120

TestAmerica Denver

QC Sample Results

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

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

Lab Sample ID: 550-69494-D-3 MSD

Matrix: Water

Analysis Batch: 342612

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		5.00	5.60		ug/L		112	65 - 135	7	20
Ethylbenzene	ND		5.00	4.83		ug/L		97	65 - 135	4	20
Toluene	ND		5.00	5.37		ug/L		107	65 - 135	1	20
m-Xylene & p-Xylene	ND		5.00	4.98		ug/L		100	65 - 135	1	20
o-Xylene	ND		5.00	4.82		ug/L		96	65 - 135	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	108		70 - 127
Toluene-d8 (Surr)	101		80 - 125
4-Bromofluorobenzene (Surr)	102		78 - 120
Dibromofluoromethane (Surr)	104		77 - 120

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-342328/1-A

Matrix: Water

Analysis Batch: 343537

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 342328

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,2'-oxybis[1-chloropropane]	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
2,4,5-Trichlorophenol	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
2,4,6-Trichlorophenol	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
2,4-Dichlorophenol	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
2,4-Dimethylphenol	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
2,4-Dinitrophenol	ND		30	ug/L		09/15/16 13:25	09/23/16 18:15	1
2,4-Dinitrotoluene	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
2,6-Dinitrotoluene	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
2-Chloronaphthalene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
2-Chlorophenol	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
2-Methylnaphthalene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
2-Methylphenol	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
2-Nitroaniline	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
2-Nitrophenol	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
3 & 4 Methylphenol	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
3,3'-Dichlorobenzidine	ND		50	ug/L		09/15/16 13:25	09/23/16 18:15	1
3-Nitroaniline	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
4,6-Dinitro-2-methylphenol	ND		50	ug/L		09/15/16 13:25	09/23/16 18:15	1
4-Bromophenyl phenyl ether	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
4-Chloro-3-methylphenol	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
4-Chloroaniline	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
4-Chlorophenyl phenyl ether	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
4-Nitroaniline	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
4-Nitrophenol	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
Acenaphthene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Acenaphthylene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Acetophenone	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
Anthracene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1

TestAmerica Denver

QC Sample Results

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-342328/1-A

Matrix: Water

Analysis Batch: 343537

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 342328

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Atrazine	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
Benzidine	ND		100	ug/L		09/15/16 13:25	09/23/16 18:15	1
Benzo[a]anthracene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Benzo[a]pyrene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Benzo[b]fluoranthene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Benzo[g,h,i]perylene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Benzo[k]fluoranthene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Bis(2-chloroethoxy)methane	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
Bis(2-chloroethyl)ether	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
Bis(2-ethylhexyl) phthalate	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
Butyl benzyl phthalate	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Caprolactam	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
Carbazole	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Chrysene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Cresols, Total	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
Dibenz(a,h)anthracene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Dibenzofuran	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Diethyl phthalate	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Dimethyl phthalate	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Di-n-butyl phthalate	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Di-n-octyl phthalate	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Fluoranthene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Fluorene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Hexachlorobenzene	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
Hexachlorobutadiene	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
Hexachlorocyclopentadiene	ND		50	ug/L		09/15/16 13:25	09/23/16 18:15	1
Hexachloroethane	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
Indeno[1,2,3-cd]pyrene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Naphthalene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Nitrobenzene	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
N-Nitrosodi-n-propylamine	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
Pentachlorophenol	ND		50	ug/L		09/15/16 13:25	09/23/16 18:15	1
Phenanthrene	ND		4.0	ug/L		09/15/16 13:25	09/23/16 18:15	1
Phenol	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1
Pyrene	ND		10	ug/L		09/15/16 13:25	09/23/16 18:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	92		48 - 135	09/15/16 13:25	09/23/16 18:15	1
2-Fluorobiphenyl	91		48 - 135	09/15/16 13:25	09/23/16 18:15	1
2-Fluorophenol	90		41 - 135	09/15/16 13:25	09/23/16 18:15	1
Nitrobenzene-d5	91		42 - 135	09/15/16 13:25	09/23/16 18:15	1
Phenol-d5	91		46 - 135	09/15/16 13:25	09/23/16 18:15	1
Terphenyl-d14	101		20 - 135	09/15/16 13:25	09/23/16 18:15	1

TestAmerica Denver

QC Sample Results

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-342328/2-A

Matrix: Water

Analysis Batch: 343537

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 342328

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	80.0	59.4		ug/L		74	44 - 135
1,4-Dichlorobenzene	80.0	58.9		ug/L		74	40 - 135
2,4,5-Trichlorophenol	80.0	77.5		ug/L		97	64 - 135
2,4,6-Trichlorophenol	80.0	81.8		ug/L		102	62 - 135
2,4-Dinitrotoluene	80.0	79.7		ug/L		100	65 - 135
2-Chlorophenol	80.0	75.6		ug/L		94	58 - 135
2-Methylnaphthalene	80.0	67.8		ug/L		85	56 - 135
2-Methylphenol	80.0	73.2		ug/L		91	62 - 135
4-Chloro-3-methylphenol	80.0	77.4		ug/L		97	65 - 135
4-Nitrophenol	160	174		ug/L		109	56 - 135
Acenaphthene	80.0	75.9		ug/L		95	61 - 135
Anthracene	80.0	76.0		ug/L		95	65 - 135
Carbazole	80.0	76.7		ug/L		96	65 - 135
N-Nitrosodi-n-propylamine	80.0	71.5		ug/L		89	65 - 135
Pentachlorophenol	160	152		ug/L		95	52 - 135
Phenol	80.0	70.4		ug/L		88	61 - 135
Pyrene	80.0	78.1		ug/L		98	65 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol	90		48 - 135
2-Fluorobiphenyl	94		48 - 135
2-Fluorophenol	87		41 - 135
Nitrobenzene-d5	90		42 - 135
Phenol-d5	86		46 - 135
Terphenyl-d14	92		20 - 135

Lab Sample ID: LCSD 280-342328/3-A

Matrix: Water

Analysis Batch: 343537

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 342328

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	80.0	66.6		ug/L		83	44 - 135	11	42
1,4-Dichlorobenzene	80.0	66.2		ug/L		83	40 - 135	12	50
2,4,5-Trichlorophenol	80.0	80.7		ug/L		101	64 - 135	4	30
2,4,6-Trichlorophenol	80.0	84.3		ug/L		105	62 - 135	3	30
2,4-Dinitrotoluene	80.0	83.6		ug/L		104	65 - 135	5	32
2-Chlorophenol	80.0	76.6		ug/L		96	58 - 135	1	46
2-Methylnaphthalene	80.0	72.8		ug/L		91	56 - 135	7	32
2-Methylphenol	80.0	74.2		ug/L		93	62 - 135	1	40
4-Chloro-3-methylphenol	80.0	80.3		ug/L		100	65 - 135	4	30
4-Nitrophenol	160	178		ug/L		111	56 - 135	2	50
Acenaphthene	80.0	78.7		ug/L		98	61 - 135	4	30
Anthracene	80.0	79.8		ug/L		100	65 - 135	5	30
Carbazole	80.0	80.6		ug/L		101	65 - 135	5	30
N-Nitrosodi-n-propylamine	80.0	73.8		ug/L		92	65 - 135	3	30
Pentachlorophenol	160	162		ug/L		101	52 - 135	7	30
Phenol	80.0	71.5		ug/L		89	61 - 135	2	37
Pyrene	80.0	82.3		ug/L		103	65 - 135	5	30

TestAmerica Denver

QC Sample Results

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol	96		48 - 135
2-Fluorobiphenyl	97		48 - 135
2-Fluorophenol	88		41 - 135
Nitrobenzene-d5	92		42 - 135
Phenol-d5	88		46 - 135
Terphenyl-d14	97		20 - 135

Method: 20B - Sodium Adsorption Ratio

Lab Sample ID: MB 280-343171/1
Matrix: Water
Analysis Batch: 343171

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	ND		0.40	No Unit			09/20/16 10:44	1

Lab Sample ID: 280-87897-C-1 DU
Matrix: Water
Analysis Batch: 343171

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Sodium Adsorption Ratio	4.8		4.74		No Unit		0.5	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 280-342202/1-A
Matrix: Water
Analysis Batch: 342603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 342202

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		15	ug/L		09/14/16 22:41	09/16/16 23:59	1
Barium	ND		10	ug/L		09/14/16 22:41	09/16/16 23:59	1
Calcium	ND		200	ug/L		09/14/16 22:41	09/16/16 23:59	1
Chromium	ND		10	ug/L		09/14/16 22:41	09/16/16 23:59	1
Lead	ND		9.0	ug/L		09/14/16 22:41	09/16/16 23:59	1
Magnesium	ND		200	ug/L		09/14/16 22:41	09/16/16 23:59	1
Manganese	ND		10	ug/L		09/14/16 22:41	09/16/16 23:59	1
Potassium	ND		3000	ug/L		09/14/16 22:41	09/16/16 23:59	1
Selenium	ND		15	ug/L		09/14/16 22:41	09/16/16 23:59	1
Sodium	ND		1000	ug/L		09/14/16 22:41	09/16/16 23:59	1

Lab Sample ID: LCS 280-342202/2-A
Matrix: Water
Analysis Batch: 342603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 342202

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	1000	988		ug/L		99	88 - 110
Barium	2000	1950		ug/L		98	90 - 112
Calcium	50000	49200		ug/L		98	90 - 111
Chromium	200	184		ug/L		92	90 - 113
Lead	500	464		ug/L		93	89 - 110
Magnesium	50000	53600		ug/L		107	90 - 113
Manganese	500	487		ug/L		97	90 - 110
Potassium	50000	53700		ug/L		107	89 - 114

TestAmerica Denver

QC Sample Results

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

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

Lab Sample ID: LCS 280-342202/2-A

Matrix: Water

Analysis Batch: 342603

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 342202

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	2000	2060		ug/L		103	85 - 112
Sodium	50000	54200		ug/L		108	90 - 115

Lab Sample ID: 280-88060-1 MS

Matrix: Water

Analysis Batch: 342603

Client Sample ID: JOLLY PLATTS PRODUCTION PIT

Prep Type: Total/NA

Prep Batch: 342202

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		1000	1030		ug/L		103	84 - 124
Barium	100		2000	2070		ug/L		98	85 - 120
Calcium	5000		50000	54400		ug/L		99	48 - 153
Chromium	ND		200	182		ug/L		91	73 - 135
Lead	ND	F1	500	438	F1	ug/L		88	89 - 121
Magnesium	1100		50000	52400		ug/L		102	62 - 146
Manganese	27		500	517		ug/L		98	79 - 121
Potassium	12000		50000	69200		ug/L		114	76 - 132
Selenium	ND		2000	1890		ug/L		94	71 - 140
Sodium	1900000		50000	1880000	4	ug/L		-17	70 - 203

Lab Sample ID: 280-88060-1 MSD

Matrix: Water

Analysis Batch: 342603

Client Sample ID: JOLLY PLATTS PRODUCTION PIT

Prep Type: Total/NA

Prep Batch: 342202

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	ND		1000	1040		ug/L		104	84 - 124	1	20
Barium	100		2000	2080		ug/L		99	85 - 120	0	20
Calcium	5000		50000	54700		ug/L		99	48 - 153	0	20
Chromium	ND		200	183		ug/L		92	73 - 135	1	20
Lead	ND	F1	500	442	F1	ug/L		88	89 - 121	1	20
Magnesium	1100		50000	52500		ug/L		103	62 - 146	0	20
Manganese	27		500	518		ug/L		98	79 - 121	0	20
Potassium	12000		50000	69400		ug/L		115	76 - 132	0	20
Selenium	ND		2000	1910		ug/L		96	71 - 140	1	20
Sodium	1900000		50000	1860000	4	ug/L		-52	70 - 203	1	20

Lab Sample ID: MB 280-343137/1-A

Matrix: Water

Analysis Batch: 343246

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 343137

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		100	ug/L		09/21/16 15:00	09/22/16 00:24	1

Lab Sample ID: LCS 280-343137/2-A

Matrix: Water

Analysis Batch: 343246

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 343137

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	1000	989		ug/L		99	89 - 115

TestAmerica Denver

QC Sample Results

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

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

Lab Sample ID: 280-88060-1 MS

Matrix: Water

Analysis Batch: 343246

Client Sample ID: JOLLY PLATTS PRODUCTION PIT

Prep Type: Total/NA

Prep Batch: 343137

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	150		1000	1120		ug/L		96	52 - 155

Lab Sample ID: 280-88060-1 MSD

Matrix: Water

Analysis Batch: 343246

Client Sample ID: JOLLY PLATTS PRODUCTION PIT

Prep Type: Total/NA

Prep Batch: 343137

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	150		1000	1160		ug/L		100	52 - 155	4	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 280-342711/6

Matrix: Water

Analysis Batch: 342711

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.20	mg/L			09/19/16 11:59	1
Chloride	ND		3.0	mg/L			09/19/16 11:59	1
Fluoride	ND		0.50	mg/L			09/19/16 11:59	1
Sulfate	ND		5.0	mg/L			09/19/16 11:59	1

Lab Sample ID: LCS 280-342711/4

Matrix: Water

Analysis Batch: 342711

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	5.00	5.06		mg/L		101	90 - 110
Chloride	100	101		mg/L		101	90 - 110
Fluoride	5.00	5.09		mg/L		102	90 - 110
Sulfate	100	102		mg/L		102	90 - 110

Lab Sample ID: LCSD 280-342711/5

Matrix: Water

Analysis Batch: 342711

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
Bromide	5.00	5.01		mg/L		100	90 - 110	1	10
Chloride	100	101		mg/L		101	90 - 110	0	10
Fluoride	5.00	5.15		mg/L		103	90 - 110	1	10
Sulfate	100	101		mg/L		101	90 - 110	0	10

Lab Sample ID: MRL 280-342711/3

Matrix: Water

Analysis Batch: 342711

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	0.200	0.278		mg/L		139	50 - 150
Chloride	2.50	ND		mg/L		99	50 - 150
Fluoride	0.200	ND	^	mg/L		35	50 - 150

TestAmerica Denver

QC Sample Results

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MRL 280-342711/3

Matrix: Water

Analysis Batch: 342711

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	ND		mg/L		98	50 - 150

Lab Sample ID: 280-88079-A-1 MS

Matrix: Water

Analysis Batch: 342711

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	ND		5.00	5.37		mg/L		107	80 - 120
Chloride	4.6		25.0	31.3		mg/L		107	80 - 120
Fluoride	ND		5.00	5.27		mg/L		103	80 - 120
Sulfate	ND		25.0	28.4		mg/L		108	80 - 120

Lab Sample ID: 280-88079-A-1 MSD

Matrix: Water

Analysis Batch: 342711

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	ND		5.00	5.31		mg/L		106	80 - 120	1	20
Chloride	4.6		25.0	31.0		mg/L		106	80 - 120	1	20
Fluoride	ND		5.00	5.23		mg/L		102	80 - 120	1	20
Sulfate	ND		25.0	28.1		mg/L		107	80 - 120	1	20

Lab Sample ID: 280-88079-A-1 DU

Matrix: Water

Analysis Batch: 342711

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Bromide	ND		ND		mg/L		NC	15
Chloride	4.6		4.56		mg/L		0.06	15
Fluoride	ND		ND		mg/L		NC	15
Sulfate	ND		ND		mg/L		NC	15

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 280-343395/67

Matrix: Water

Analysis Batch: 343395

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.10	mg/L			09/22/16 19:57	1

Lab Sample ID: MB 280-343395/99

Matrix: Water

Analysis Batch: 343395

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.10	mg/L			09/22/16 21:01	1

TestAmerica Denver

QC Sample Results

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

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

Lab Sample ID: LCS 280-343395/66

Matrix: Water

Analysis Batch: 343395

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	5.00	5.10		mg/L		102	90 - 110

Lab Sample ID: LCS 280-343395/98

Matrix: Water

Analysis Batch: 343395

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	5.00	5.10		mg/L		102	90 - 110

Lab Sample ID: MRL 280-343395/21

Matrix: Water

Analysis Batch: 343395

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.100	0.103		mg/L		103	50 - 150

Lab Sample ID: 280-87845-D-2 MS

Matrix: Water

Analysis Batch: 343395

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	ND		4.00	4.14		mg/L		104	90 - 110

Lab Sample ID: 280-87845-D-2 MSD

Matrix: Water

Analysis Batch: 343395

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	ND		4.00	4.12		mg/L		103	90 - 110	0	10

Method: SM 1030E - Cation Anion Balance

Lab Sample ID: MB 280-342361/1

Matrix: Water

Analysis Batch: 342361

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Anions	0.000			meq/L			09/15/16 15:04	1
Total Cations	0.000			meq/L			09/15/16 15:04	1
Percent Difference	0.000			%			09/15/16 15:04	1
Anion/Cation Balance	0.000			%			09/15/16 15:04	1

TestAmerica Denver

QC Sample Results

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-342944/5

Matrix: Water

Analysis Batch: 342944

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity	6.34		5.0	mg/L			09/20/16 11:01	1
Bicarbonate Alkalinity as CaCO3	ND		5.0	mg/L			09/20/16 11:01	1
Carbonate Alkalinity as CaCO3	ND		5.0	mg/L			09/20/16 11:01	1
Hydroxide Alkalinity	ND		5.0	mg/L			09/20/16 11:01	1

Lab Sample ID: LCS 280-342944/4

Matrix: Water

Analysis Batch: 342944

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity	1000	941	B	mg/L		94	90 - 110

Lab Sample ID: 280-88060-1 DU

Matrix: Water

Analysis Batch: 342944

Client Sample ID: JOLLY PLATTS PRODUCTION PIT

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity	1700	B ^	1700		mg/L		0	10

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 280-342442/4

Matrix: Water

Analysis Batch: 342442

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		2.0	umhos/cm			09/16/16 00:13	1

Lab Sample ID: LCS 280-342442/3

Matrix: Water

Analysis Batch: 342442

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	1410	1400		umhos/cm		99	90 - 110

Lab Sample ID: 280-88060-1 DU

Matrix: Water

Analysis Batch: 342442

Client Sample ID: JOLLY PLATTS PRODUCTION PIT

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	6300		6350		umhos/cm		1	10

TestAmerica Denver

QC Sample Results

Client: Colorado Oil&Gas Conservation Commission
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

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

Lab Sample ID: MB 280-342591/1

Matrix: Water

Analysis Batch: 342591

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	mg/L	-		09/17/16 11:31	1

Lab Sample ID: LCS 280-342591/2

Matrix: Water

Analysis Batch: 342591

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	500	488		mg/L	-	98	86 - 110

Lab Sample ID: 280-88128-C-6 DU

Matrix: Water

Analysis Batch: 342591

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	670		689		mg/L	-	3	10

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 280-343201/54

Matrix: Water

Analysis Batch: 343201

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.0		SU	-	100	99 - 101

Lab Sample ID: 280-88306-E-1 DU

Matrix: Water

Analysis Batch: 343201

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.2		7.3		SU	-	0.4	5

TestAmerica Denver

Lab Chronicle

Client: Colorado Oil&Gas Conservation Commision
Project/Site: COGCC -Remediation Project #9678

TestAmerica Job ID: 280-88060-1

Client Sample ID: JOLLY PLATTS PRODUCTION PIT

Lab Sample ID: 280-88060-1

Date Collected: 09/13/16 11:00

Matrix: Water

Date Received: 09/13/16 13:35

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	0.5 mL	20 mL	342612	09/18/16 19:21	MRM	TAL DEN
Total/NA	Prep	3520C			1047.6 mL	1 mL	342328	09/15/16 13:25	GLK	TAL DEN
Total/NA	Analysis	8270C		4			343537	09/23/16 20:02	DCK	TAL DEN
Total/NA	Analysis	20B		1			343171	09/20/16 10:54	CRR	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	342202	09/14/16 22:41	SUR	TAL DEN
Total/NA	Analysis	6010B		1			342603	09/17/16 00:05	LLB	TAL DEN
Total/NA	Prep	3010A			50 mL	50 mL	343137	09/21/16 15:00	MLS	TAL DEN
Total/NA	Analysis	6010B		1			343246	09/22/16 00:30	SJS	TAL DEN
Total/NA	Analysis	300.0		2	5 mL	5 mL	342711	09/19/16 15:39	AFB	TAL DEN
Total/NA	Analysis	300.0		50	5 mL	5 mL	342711	09/19/16 15:57	AFB	TAL DEN
Total/NA	Analysis	353.2		1	100 mL	100 mL	343395	09/22/16 21:03	SVC	TAL DEN
Total/NA	Analysis	SM 1030E		1			342361	09/15/16 15:04	CML	TAL DEN
Total/NA	Analysis	SM 2320B		1			342944	09/20/16 11:06	CCJ	TAL DEN
Total/NA	Analysis	SM 2510B		1			342442	09/16/16 00:13	RSM	TAL DEN
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	342591	09/17/16 11:31	KMS	TAL DEN
Total/NA	Analysis	SM 4500 H+ B		1			343201	09/21/16 16:13	CCJ	TAL DEN

Laboratory References:

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

Login Sample Receipt Checklist

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-88060-1

Login Number: 88060

List Number: 1

Creator: White, Denise E

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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?	N/A	
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Chain of Custody Record

[illegible]

3.3+0.0 IR#5 transferred by DW 9/13/14