Document 2526923

From: gilbert paine
To: Steven Arauza - DNR; dianne fahey
Subject: Pit Remediation Project # 9614 Fahey Oil & Gas
Date: Monday, September 19, 2016 3:27:47 AM
Attachments: Antelope Farms 1-24 daily work log pit closure.rtf
DSCN0196.JPG
DSCN0198.JPG

Mr. Steven Arauza:

The intent of this Email is to inform you & COGCC of the progress in the closure of the pit at the Antelope Farms 1-24, Project # 9614 for Fahey Oil & Gas. After a wetter than normal Spring & Summer we finally got started, I am attaching a log of events to catch you up with our progress, I am also attaching pictures to show the work we have done. As you know by the results of the lab tests from Test America that we just sent you we have more excavating to do & more samples to be tested . If you have any questions please contact us.

thanks
Gilbert Paine
303-709-0148

Fahey Oil & Gas Daily Work Log for Closing of Pit
Antelope Farms 1-24
Remediation Project # 9614

7-27-16 Notify UNCC of line locate
8-8-16 Pit had dried out so no need to empty fluids,Make place to store contaminated soil on location, put down plastic and build berms around it to contain runoff
8-9-16 Dig out pit and put contaminated soil on plastic dig until all obivious signs of contamination are removed
8-11-16 contact Test America to test soil samples they informed us they couldnt give us quote til next week
8-16-16 Notified by Test America that TAT on soil samples would be 10 days, contact
Steven Arauza with COGC and inform him we believe we will have trouble meeting 8-31-16 deadline for closure
8-17-16 Pick up sample kit from Test America
8-18-16 Collect samples out of pit from 5 different locations labeled as follows sample # 1 N. wall
2 E. wall, # 3 S. wall, # 4 W. wall and # 5 bottom of pit.Take the samples to Test America in Arvada, Co
9-6-16 Contact Test America to see why hadn't heard anything
9-9-16 Got back lab results from Test America on soil samples

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-87113-1
Client Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

For:
Fahey Oil & Gas
93 South CR 159
Strasburg, Colorado 80136

Attn: Mr. Gilbert Paine

Danielle Harrington

Authorized for release by:
9/9/2016 3:01:59 PM

Danielle Harrington, Project Manager II
(303)736-0176
danielle.harrington@testamericainc.com

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

GC 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.
X	Surrogate is outside control limits
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
F1	MS and/or MSD Recovery is outside acceptance limits.

GC Semi VOA

Qualifier	Qualifier Description
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
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
X	Surrogate is outside control limits
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
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 280-87113-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Fahey Oil & Gas

Project: Antelope Farms 1-24 - COGCC Table 910-1

Report Number: 280-87113-1

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 08/19/2016; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 13.1º C and 14.1º C, which is above the EPA's recommended temperature of 6.0C. However, these samples were collected and received the same day on ice and did not have time to cool.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Surrogate 4-Bromofluorobenzene for method 8260B was recovered above the QC limits in samples #4 and #5. This is an indicator that data may be biased high. As the sample does not contain any detectable concentrations for constituents associated with this surrogate, corrective action is deemed unnecessary.

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

GASOLINE RANGE ORGANICS (GRO)

Surrogate a,a,a-Trifluorotoluene for method 8015B was recovered below the QC limits in samples #2 and #3. This anomaly is due to obvious matrix interferences; therefore, corrective action is deemed unnecessary. Sample data should be considered biased low.

Samples #4 and #5 required dilution prior to analysis. The reporting limits have been adjusted accordingly. Consequently, the surrogate recovery is based on a diluted result and is not quantifiable

Laboratory generated analysis data have been provided. The MS/MSD for Gasoline Range Organics method 8015B exhibited spike compound recoveries outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

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

DIESEL RANGE ORGANICS

Samples #3 and #4 required dilution prior to analysis. The reporting limits have been adjusted accordingly. Consequently, the surrogate recovery is based on a diluted result and is not quantifiable

MS/MSD analyses were performed on sample #1. The MS/MSD for Diesel Range Organics method 8015B exhibited spike compound recoveries outside the QC limits. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Job ID: 280-87113-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

Diesel Range Organics [C10-C28] was detected in method blank MB 280-339721/1-A at a level that was above the method detection limit but below the reporting limit. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary

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

SODIUM ABSORPTION RATIO

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

TOTAL METALS

Barium and Copper were detected in method blank MB 280-339930/1-A at levels that were above the method detection limit but below the reporting limit. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary

MS/MSD analyses were performed on sample #1. The MS/MSD for method 6010B exhibited spike compound recoveries outside the QC limits for Boron and Zinc. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Mercury was detected in method blank MB 280-340265/1-A at levels that were above the method detection limit but below the reporting limit. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary

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

GENERAL CHEMISTRY -VARIOUS

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

Detection Summary

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

Client Sample ID: #1 — Lab Sample ID: 280-87113-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) -C6-C10	0.57	J	1.3	0.36	mg/Kg	1	☼	8015B	Total/NA
Motor Oil (C20-C38)	120		14	4.4	mg/Kg	1	☼	8015B	Total/NA
Diesel Range Organics [C10-C28]	160	F2 F1 B	4.5	0.77	mg/Kg	1	☼	8015B	Total/NA
Barium	130	B	0.83	0.063	mg/Kg	1	☼	6010B	Total/NA
Boron	19	F1	8.3	0.82	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.27	J	0.42	0.034	mg/Kg	1	☼	6010B	Total/NA
Chromium	16		1.3	0.048	mg/Kg	1	☼	6010B	Total/NA
Copper	14	B	1.7	0.18	mg/Kg	1	☼	6010B	Total/NA
Lead	11		0.75	0.23	mg/Kg	1	☼	6010B	Total/NA
Nickel	12		3.3	0.10	mg/Kg	1	☼	6010B	Total/NA
Zinc	43	F1	2.5	0.33	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.4		0.52	0.044	mg/Kg	1	☼	6020	Total/NA
Mercury	16	J B	20	6.6	ug/Kg	1	☼	7471A	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Sodium Adsorption Ratio	100		1.2	1.2	No Unit	10		20B	Soluble
Cr (III)	16		2.0	2.0	mg/Kg	1		7196A	Total/NA
pH	8.0		0.1	0.1	SU	1		9040C	Soluble
Specific Conductance	5600		10	10	umhos/cm	1		9050A	Soluble

Client Sample ID: #2 — Lab Sample ID: 280-87113-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) -C6-C10	0.40	J	1.4	0.39	mg/Kg	1	☼	8015B	Total/NA
Motor Oil (C20-C38)	28		14	4.6	mg/Kg	1	☼	8015B	Total/NA
Diesel Range Organics [C10-C28]	18	B	4.8	0.81	mg/Kg	1	☼	8015B	Total/NA
Barium	140	B	1.1	0.081	mg/Kg	1	☼	6010B	Total/NA
Boron	23		11	1.0	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.25	J	0.53	0.044	mg/Kg	1	☼	6010B	Total/NA
Chromium	17		1.6	0.062	mg/Kg	1	☼	6010B	Total/NA
Copper	15	B	2.1	0.23	mg/Kg	1	☼	6010B	Total/NA
Lead	11		0.96	0.29	mg/Kg	1	☼	6010B	Total/NA
Nickel	14		4.2	0.13	mg/Kg	1	☼	6010B	Total/NA
Zinc	46		3.2	0.42	mg/Kg	1	☼	6010B	Total/NA
Arsenic	5.0		0.56	0.047	mg/Kg	1	☼	6020	Total/NA
Mercury	15	J B	22	7.0	ug/Kg	1	☼	7471A	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Sodium Adsorption Ratio	130		1.2	1.2	No Unit	10		20B	Soluble
Cr (III)	17		2.0	2.0	mg/Kg	1		7196A	Total/NA
pH	8.4		0.1	0.1	SU	1		9040C	Soluble
Specific Conductance	4100		10	10	umhos/cm	1		9050A	Soluble

Client Sample ID: #3 — Lab Sample ID: 280-87113-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Motor Oil (C20-C38)	600		67	22	mg/Kg	5	☼	8015B	Total/NA
Diesel Range Organics [C10-C28]	2300	B	22	3.8	mg/Kg	5	☼	8015B	Total/NA
Barium	86	B	0.79	0.060	mg/Kg	1	☼	6010B	Total/NA
Boron	16		7.9	0.77	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Client Sample ID: #3 (Continued) — Lab Sample ID: 280-87113-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.13	J	0.40	0.032	mg/Kg	1	☼	6010B	Total/NA
Chromium	16		1.2	0.046	mg/Kg	1	☼	6010B	Total/NA
Copper	14	B	1.6	0.17	mg/Kg	1	☼	6010B	Total/NA
Lead	9.9		0.71	0.21	mg/Kg	1	☼	6010B	Total/NA
Nickel	10		3.2	0.097	mg/Kg	1	☼	6010B	Total/NA
Zinc	43		2.4	0.31	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.4		0.46	0.039	mg/Kg	1	☼	6020	Total/NA
Mercury	12	J B	20	6.5	ug/Kg	1	☼	7471A	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Sodium Adsorption Ratio	110		1.2	1.2	No Unit	10		20B	Soluble
Cr (III)	16		2.0	2.0	mg/Kg	1		7196A	Total/NA
pH	8.1		0.1	0.1	SU	1		9040C	Soluble
Specific Conductance	11000		10	10	umhos/cm	1		9050A	Soluble

Client Sample ID: #4 — Lab Sample ID: 280-87113-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	0.011		0.0062	0.00076	mg/Kg	1	☼	8260B	Total/NA
Gasoline Range Organics (GRO) -C6-C10	85		6.6	1.8	mg/Kg	5	☼	8015B	Total/NA
Motor Oil (C20-C38)	750		66	21	mg/Kg	5	☼	8015B	Total/NA
Diesel Range Organics [C10-C28]	2900	B	22	3.7	mg/Kg	5	☼	8015B	Total/NA
Barium	88	B	0.91	0.069	mg/Kg	1	☼	6010B	Total/NA
Boron	18		9.1	0.90	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.14	J	0.46	0.037	mg/Kg	1	☼	6010B	Total/NA
Chromium	17		1.4	0.053	mg/Kg	1	☼	6010B	Total/NA
Copper	14	B	1.8	0.20	mg/Kg	1	☼	6010B	Total/NA
Lead	9.8		0.82	0.25	mg/Kg	1	☼	6010B	Total/NA
Nickel	10		3.7	0.11	mg/Kg	1	☼	6010B	Total/NA
Zinc	44		2.7	0.36	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.5		0.58	0.049	mg/Kg	1	☼	6020	Total/NA
Mercury	14	J B	21	6.7	ug/Kg	1	☼	7471A	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Sodium Adsorption Ratio	120		1.2	1.2	No Unit	10		20B	Soluble
Cr (III)	17		2.0	2.0	mg/Kg	1		7196A	Total/NA
pH	8.1		0.1	0.1	SU	1		9040C	Soluble
Specific Conductance	9500		10	10	umhos/cm	1		9050A	Soluble

Client Sample ID: #5 — Lab Sample ID: 280-87113-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	0.019		0.0060	0.00073	mg/Kg	1	☼	8260B	Total/NA
Gasoline Range Organics (GRO) -C6-C10	250		7.1	1.9	mg/Kg	5	☼	8015B	Total/NA
Motor Oil (C20-C38)	73		14	4.5	mg/Kg	1	☼	8015B	Total/NA
Diesel Range Organics [C10-C28]	56	B	4.6	0.79	mg/Kg	1	☼	8015B	Total/NA
Barium	120	B	0.81	0.062	mg/Kg	1	☼	6010B	Total/NA
Boron	22		8.1	0.80	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.16	J	0.41	0.033	mg/Kg	1	☼	6010B	Total/NA
Chromium	18		1.2	0.047	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: #5 (Continued)

Lab Sample ID: 280-87113-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	15	B	1.6	0.18	mg/Kg	1	☼	6010B	Total/NA
Lead	11		0.73	0.22	mg/Kg	1	☼	6010B	Total/NA
Nickel	14		3.3	0.10	mg/Kg	1	☼	6010B	Total/NA
Zinc	46		2.4	0.32	mg/Kg	1	☼	6010B	Total/NA
Arsenic	5.0		0.50	0.042	mg/Kg	1	☼	6020	Total/NA
Mercury	8.0	J B	24	7.8	ug/Kg	1	☼	7471A	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Sodium Adsorption Ratio	130		1.2	1.2	No Unit	10		20B	Soluble
Cr (III)	18		2.0	2.0	mg/Kg	1		7196A	Total/NA
pH	8.2		0.1	0.1	SU	1		9040C	Soluble
Specific Conductance	5700		10	10	umhos/cm	1		9050A	Soluble

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8015B	Gasoline Range Organics - (GC)	SW846	TAL DEN
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL DEN
20B	Sodium Adsorption Ratio	USDA	TAL DEN
6010B	Metals (ICP)	SW846	TAL DEN
6020	Metals (ICP/MS)	SW846	TAL DEN
7471A	Mercury (CVAA)	SW846	TAL DEN
7196A	Chromium, Trivalent (Colorimetric)	SW846	TAL DEN
7196A	Chromium, Hexavalent	SW846	TAL NSH
9040C	pH	SW846	TAL NSH
9050A	Specific Conductance	SW846	TAL NSH
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.

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

Laboratory References:

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

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Sample Summary

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-87113-1	#1	Solid	08/18/16 11:00	08/19/16 18:11
280-87113-2	#2	Solid	08/18/16 11:00	08/19/16 18:11
280-87113-3	#3	Solid	08/18/16 11:00	08/19/16 18:11
280-87113-4	#4	Solid	08/18/16 11:00	08/19/16 18:11
280-87113-5	#5	Solid	08/18/16 11:00	08/19/16 18:11

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

Client Sample ID: #1
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-1
Matrix: Solid
Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0068	0.00064	mg/Kg	☼	08/22/16 12:00	08/22/16 23:42	1
Ethylbenzene	ND		0.0068	0.00091	mg/Kg	☼	08/22/16 12:00	08/22/16 23:42	1
Toluene	ND		0.0068	0.00093	mg/Kg	☼	08/22/16 12:00	08/22/16 23:42	1
Xylenes, Total	ND		0.0068	0.00082	mg/Kg	☼	08/22/16 12:00	08/22/16 23:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*76 - 127*	*08/22/16 12:00*	*08/22/16 23:42*	*1*
Dibromofluoromethane (Surr)	*111*		*75 - 121*	*08/22/16 12:00*	*08/22/16 23:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*127*		*58 - 140*	*08/22/16 12:00*	*08/22/16 23:42*	*1*
Toluene-d8 (Surr)	*101*		*80 - 126*	*08/22/16 12:00*	*08/22/16 23:42*	*1*

Client Sample ID: #2
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-2
Matrix: Solid
Percent Solids: 84.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0067	0.00063	mg/Kg	☼	08/22/16 12:00	08/23/16 00:42	1
Ethylbenzene	ND		0.0067	0.00090	mg/Kg	☼	08/22/16 12:00	08/23/16 00:42	1
Toluene	ND		0.0067	0.00093	mg/Kg	☼	08/22/16 12:00	08/23/16 00:42	1
Xylenes, Total	ND		0.0067	0.00082	mg/Kg	☼	08/22/16 12:00	08/23/16 00:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*76 - 127*	*08/22/16 12:00*	*08/23/16 00:42*	*1*
Dibromofluoromethane (Surr)	*108*		*75 - 121*	*08/22/16 12:00*	*08/23/16 00:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*120*		*58 - 140*	*08/22/16 12:00*	*08/23/16 00:42*	*1*
Toluene-d8 (Surr)	*96*		*80 - 126*	*08/22/16 12:00*	*08/23/16 00:42*	*1*

Client Sample ID: #3
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-3
Matrix: Solid
Percent Solids: 89.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0061	0.00057	mg/Kg	☼	08/22/16 12:00	08/23/16 01:02	1
Ethylbenzene	ND		0.0061	0.00082	mg/Kg	☼	08/22/16 12:00	08/23/16 01:02	1
Toluene	ND		0.0061	0.00084	mg/Kg	☼	08/22/16 12:00	08/23/16 01:02	1
Xylenes, Total	ND		0.0061	0.00074	mg/Kg	☼	08/22/16 12:00	08/23/16 01:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*76 - 127*	*08/22/16 12:00*	*08/23/16 01:02*	*1*
Dibromofluoromethane (Surr)	*108*		*75 - 121*	*08/22/16 12:00*	*08/23/16 01:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*119*		*58 - 140*	*08/22/16 12:00*	*08/23/16 01:02*	*1*
Toluene-d8 (Surr)	*101*		*80 - 126*	*08/22/16 12:00*	*08/23/16 01:02*	*1*

Client Sample ID: #4
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-4
Matrix: Solid
Percent Solids: 90.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0062	0.00058	mg/Kg	☼	08/22/16 12:00	08/23/16 01:22	1
Ethylbenzene	ND		0.0062	0.00083	mg/Kg	☼	08/22/16 12:00	08/23/16 01:22	1
Toluene	ND		0.0062	0.00085	mg/Kg	☼	08/22/16 12:00	08/23/16 01:22	1
Xylenes, Total	**0.011**		0.0062	0.00076	mg/Kg	☼	08/22/16 12:00	08/23/16 01:22	1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	149	X	76 - 127	08/22/16 12:00	08/23/16 01:22	1
Dibromofluoromethane (Surr)	111		75 - 121	08/22/16 12:00	08/23/16 01:22	1
1,2-Dichloroethane-d4 (Surr)	124		58 - 140	08/22/16 12:00	08/23/16 01:22	1
Toluene-d8 (Surr)	96		80 - 126	08/22/16 12:00	08/23/16 01:22	1

Client Sample ID: #5 — **Lab Sample ID: 280-87113-5**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 85.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0060	0.00056	mg/Kg	☼	08/22/16 12:00	08/23/16 01:42	1
Ethylbenzene	ND		0.0060	0.00080	mg/Kg	☼	08/22/16 12:00	08/23/16 01:42	1
Toluene	ND		0.0060	0.00083	mg/Kg	☼	08/22/16 12:00	08/23/16 01:42	1
Xylenes, Total	**0.019**		0.0060	0.00073	mg/Kg	☼	08/22/16 12:00	08/23/16 01:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	145	X	76 - 127	08/22/16 12:00	08/23/16 01:42	1
Dibromofluoromethane (Surr)	108		75 - 121	08/22/16 12:00	08/23/16 01:42	1
1,2-Dichloroethane-d4 (Surr)	126		58 - 140	08/22/16 12:00	08/23/16 01:42	1
Toluene-d8 (Surr)	102		80 - 126	08/22/16 12:00	08/23/16 01:42	1

Method: 8015B - Gasoline Range Organics - (GC)

Client Sample ID: #1 — **Lab Sample ID: 280-87113-1**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 88.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	**0.57**	**J**	1.3	0.36	mg/Kg	☼	09/01/16 14:22	09/01/16 18:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	78		77 - 123	09/01/16 14:22	09/01/16 18:20	1

Client Sample ID: #2 — **Lab Sample ID: 280-87113-2**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 84.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	**0.40**	**J**	1.4	0.39	mg/Kg	☼	09/01/16 14:22	09/01/16 19:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	76	X	77 - 123	09/01/16 14:22	09/01/16 19:35	1

Client Sample ID: #3 — **Lab Sample ID: 280-87113-3**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 89.6**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		1.3	0.36	mg/Kg	☼	09/01/16 14:22	09/01/16 20:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	73	X	77 - 123	09/01/16 14:22	09/01/16 20:00	1

Method: 8015B - Gasoline Range Organics - (GC)

Client Sample ID: #4
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-4
Matrix: Solid
Percent Solids: 90.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	85		6.6	1.8	mg/Kg	☼	09/01/16 14:22	09/01/16 20:25	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*83*	*D*	*77 - 123*	*09/01/16 14:22*	*09/01/16 20:25*	*5*

Client Sample ID: #5
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-5
Matrix: Solid
Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	250		7.1	1.9	mg/Kg	☼	09/01/16 14:22	09/01/16 20:50	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*81*	*D*	*77 - 123*	*09/01/16 14:22*	*09/01/16 20:50*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Client Sample ID: #1
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-1
Matrix: Solid
Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (C20-C38)	120		14	4.4	mg/Kg	☼	08/26/16 13:08	08/30/16 16:01	1
Diesel Range Organics [C10-C28]	160	F2 F1 B	4.5	0.77	mg/Kg	☼	08/26/16 13:08	08/30/16 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*49 - 115*	*08/26/16 13:08*	*08/30/16 16:01*	*1*

Client Sample ID: #2
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-2
Matrix: Solid
Percent Solids: 84.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (C20-C38)	28		14	4.6	mg/Kg	☼	08/26/16 13:08	08/30/16 17:27	1
Diesel Range Organics [C10-C28]	18	B	4.8	0.81	mg/Kg	☼	08/26/16 13:08	08/30/16 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*74*		*49 - 115*	*08/26/16 13:08*	*08/30/16 17:27*	*1*

Client Sample ID: #3
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-3
Matrix: Solid
Percent Solids: 89.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (C20-C38)	600		67	22	mg/Kg	☼	08/26/16 13:08	09/01/16 10:56	5
Diesel Range Organics [C10-C28]	2300	B	22	3.8	mg/Kg	☼	08/26/16 13:08	09/01/16 10:56	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*109*	*D*	*49 - 115*	*08/26/16 13:08*	*09/01/16 10:56*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Client Sample ID: #4
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-4
Matrix: Solid
Percent Solids: 90.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (C20-C38)	750		66	21	mg/Kg	☼	08/26/16 13:08	09/01/16 11:24	5
Diesel Range Organics [C10-C28]	2900	B	22	3.7	mg/Kg	☼	08/26/16 13:08	09/01/16 11:24	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*120*	*X D*	*49 - 115*	*08/26/16 13:08*	*09/01/16 11:24*	*5*

Client Sample ID: #5
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-5
Matrix: Solid
Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (C20-C38)	73		14	4.5	mg/Kg	☼	08/26/16 13:08	08/30/16 19:49	1
Diesel Range Organics [C10-C28]	56	B	4.6	0.79	mg/Kg	☼	08/26/16 13:08	08/30/16 19:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*68*		*49 - 115*	*08/26/16 13:08*	*08/30/16 19:49*	*1*

Method: 20B - Sodium Adsorption Ratio - Soluble

Client Sample ID: #1
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-1
Matrix: Solid
Percent Solids: 88.2

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	100		1.2	1.2	No Unit		08/31/16 07:00	09/01/16 14:05	10

Client Sample ID: #2
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-2
Matrix: Solid
Percent Solids: 84.1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	130		1.2	1.2	No Unit		08/31/16 07:00	09/01/16 14:08	10

Client Sample ID: #3
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-3
Matrix: Solid
Percent Solids: 89.6

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	110		1.2	1.2	No Unit		08/31/16 07:00	09/01/16 14:15	10

Client Sample ID: #4
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-4
Matrix: Solid
Percent Solids: 90.2

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	120		1.2	1.2	No Unit		08/31/16 07:00	09/01/16 14:18	10

Client Sample ID: #5
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-5
Matrix: Solid
Percent Solids: 85.4

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	130		1.2	1.2	No Unit		08/31/16 07:00	09/01/16 14:21	10

Method: 6010B - Metals (ICP)

Client Sample ID: #1
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-1
Matrix: Solid
Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	130	B	0.83	0.063	mg/Kg	☼	08/30/16 14:30	09/01/16 04:08	1
Boron	19	F1	8.3	0.82	mg/Kg	☼	08/30/16 14:30	09/01/16 04:08	1
Cadmium	0.27	J	0.42	0.034	mg/Kg	☼	08/30/16 14:30	09/01/16 23:29	1
Chromium	16		1.3	0.048	mg/Kg	☼	08/30/16 14:30	09/01/16 04:08	1
Copper	14	B	1.7	0.18	mg/Kg	☼	08/30/16 14:30	09/01/16 23:29	1
Lead	11		0.75	0.23	mg/Kg	☼	08/30/16 14:30	09/01/16 23:29	1
Nickel	12		3.3	0.10	mg/Kg	☼	08/30/16 14:30	09/01/16 23:29	1
Selenium	ND		1.3	0.72	mg/Kg	☼	08/30/16 14:30	09/01/16 23:29	1
Silver	ND		0.83	0.13	mg/Kg	☼	08/30/16 14:30	09/01/16 23:29	1
Zinc	43	F1	2.5	0.33	mg/Kg	☼	08/30/16 14:30	09/01/16 04:08	1

Client Sample ID: #2
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-2
Matrix: Solid
Percent Solids: 84.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	140	B	1.1	0.081	mg/Kg	☼	08/30/16 14:30	09/01/16 04:19	1
Boron	23		11	1.0	mg/Kg	☼	08/30/16 14:30	09/01/16 04:19	1
Cadmium	0.25	J	0.53	0.044	mg/Kg	☼	08/30/16 14:30	09/01/16 23:40	1
Chromium	17		1.6	0.062	mg/Kg	☼	08/30/16 14:30	09/01/16 04:19	1
Copper	15	B	2.1	0.23	mg/Kg	☼	08/30/16 14:30	09/01/16 23:40	1
Lead	11		0.96	0.29	mg/Kg	☼	08/30/16 14:30	09/01/16 23:40	1
Nickel	14		4.2	0.13	mg/Kg	☼	08/30/16 14:30	09/01/16 23:40	1
Selenium	ND		1.6	0.91	mg/Kg	☼	08/30/16 14:30	09/01/16 23:40	1
Silver	ND		1.1	0.17	mg/Kg	☼	08/30/16 14:30	09/01/16 23:40	1
Zinc	46		3.2	0.42	mg/Kg	☼	08/30/16 14:30	09/01/16 04:19	1

Client Sample ID: #3
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-3
Matrix: Solid
Percent Solids: 89.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	86	B	0.79	0.060	mg/Kg	☼	08/30/16 14:30	09/01/16 04:22	1
Boron	16		7.9	0.77	mg/Kg	☼	08/30/16 14:30	09/01/16 04:22	1
Cadmium	0.13	J	0.40	0.032	mg/Kg	☼	08/30/16 14:30	09/01/16 23:42	1
Chromium	16		1.2	0.046	mg/Kg	☼	08/30/16 14:30	09/01/16 04:22	1
Copper	14	B	1.6	0.17	mg/Kg	☼	08/30/16 14:30	09/01/16 23:42	1
Lead	9.9		0.71	0.21	mg/Kg	☼	08/30/16 14:30	09/01/16 23:42	1
Nickel	10		3.2	0.097	mg/Kg	☼	08/30/16 14:30	09/01/16 23:42	1
Selenium	ND		1.2	0.68	mg/Kg	☼	08/30/16 14:30	09/01/16 23:42	1
Silver	ND		0.79	0.13	mg/Kg	☼	08/30/16 14:30	09/01/16 23:42	1
Zinc	43		2.4	0.31	mg/Kg	☼	08/30/16 14:30	09/01/16 04:22	1

Client Sample ID: #4
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-4
Matrix: Solid
Percent Solids: 90.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	88	B	0.91	0.069	mg/Kg	☼	08/30/16 14:30	09/01/16 04:24	1
Boron	18		9.1	0.90	mg/Kg	☼	08/30/16 14:30	09/01/16 04:24	1
Cadmium	0.14	J	0.46	0.037	mg/Kg	☼	08/30/16 14:30	09/01/16 23:45	1
Chromium	17		1.4	0.053	mg/Kg	☼	08/30/16 14:30	09/01/16 04:24	1
Copper	14	B	1.8	0.20	mg/Kg	☼	08/30/16 14:30	09/01/16 23:45	1

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

Client Sample ID: #4
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-4
Matrix: Solid
Percent Solids: 90.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	9.8		0.82	0.25	mg/Kg	☼	08/30/16 14:30	09/01/16 23:45	1
Nickel	10		3.7	0.11	mg/Kg	☼	08/30/16 14:30	09/01/16 23:45	1
Selenium	ND		1.4	0.79	mg/Kg	☼	08/30/16 14:30	09/01/16 23:45	1
Silver	ND		0.91	0.15	mg/Kg	☼	08/30/16 14:30	09/01/16 23:45	1
Zinc	44		2.7	0.36	mg/Kg	☼	08/30/16 14:30	09/01/16 04:24	1

Client Sample ID: #5
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-5
Matrix: Solid
Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	120	B	0.81	0.062	mg/Kg	☼	08/30/16 14:30	09/01/16 04:27	1
Boron	22		8.1	0.80	mg/Kg	☼	08/30/16 14:30	09/01/16 04:27	1
Cadmium	0.16	J	0.41	0.033	mg/Kg	☼	08/30/16 14:30	09/01/16 23:48	1
Chromium	18		1.2	0.047	mg/Kg	☼	08/30/16 14:30	09/01/16 04:27	1
Copper	15	B	1.6	0.18	mg/Kg	☼	08/30/16 14:30	09/01/16 23:48	1
Lead	11		0.73	0.22	mg/Kg	☼	08/30/16 14:30	09/01/16 23:48	1
Nickel	14		3.3	0.10	mg/Kg	☼	08/30/16 14:30	09/01/16 23:48	1
Selenium	ND		1.2	0.70	mg/Kg	☼	08/30/16 14:30	09/01/16 23:48	1
Silver	ND		0.81	0.13	mg/Kg	☼	08/30/16 14:30	09/01/16 23:48	1
Zinc	46		2.4	0.32	mg/Kg	☼	08/30/16 14:30	09/01/16 04:27	1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: #1
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-1
Matrix: Solid
Percent Solids: 88.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.4		0.52	0.044	mg/Kg	☼	08/26/16 14:45	08/27/16 00:00	1

Client Sample ID: #2
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-2
Matrix: Solid
Percent Solids: 84.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.0		0.56	0.047	mg/Kg	☼	08/26/16 14:45	08/27/16 00:26	1

Client Sample ID: #3
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-3
Matrix: Solid
Percent Solids: 89.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.4		0.46	0.039	mg/Kg	☼	08/26/16 14:45	08/27/16 00:30	1

Client Sample ID: #4
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-4
Matrix: Solid
Percent Solids: 90.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.5		0.58	0.049	mg/Kg	☼	08/26/16 14:45	08/27/16 00:33	1

Method: 6020 - Metals (ICP/MS)

Client Sample ID: #5 — **Lab Sample ID: 280-87113-5**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 85.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.0		0.50	0.042	mg/Kg	☼	08/26/16 14:45	08/27/16 00:37	1

Method: 7471A - Mercury (CVAA)

Client Sample ID: #1 — **Lab Sample ID: 280-87113-1**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 88.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	16	J B	20	6.6	ug/Kg	☼	08/31/16 13:15	08/31/16 18:05	1

Client Sample ID: #2 — **Lab Sample ID: 280-87113-2**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 84.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	15	J B	22	7.0	ug/Kg	☼	08/31/16 13:15	08/31/16 18:11	1

Client Sample ID: #3 — **Lab Sample ID: 280-87113-3**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 89.6**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	12	J B	20	6.5	ug/Kg	☼	08/31/16 13:15	08/31/16 18:13	1

Client Sample ID: #4 — **Lab Sample ID: 280-87113-4**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 90.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	14	J B	21	6.7	ug/Kg	☼	08/31/16 13:15	08/31/16 18:15	1

Client Sample ID: #5 — **Lab Sample ID: 280-87113-5**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 85.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	8.0	J B	24	7.8	ug/Kg	☼	08/31/16 13:15	08/31/16 18:17	1

General Chemistry

Client Sample ID: #1 — **Lab Sample ID: 280-87113-1**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 88.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hex	ND		5.6	2.2	mg/Kg	☼	09/07/16 09:06	09/07/16 16:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III)	16		2.0	2.0	mg/Kg			09/08/16 10:24	1
Percent Moisture	11.7		0.1	0.1	%			08/24/16 09:30	1

Client Sample ID: #2 — **Lab Sample ID: 280-87113-2**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 84.1**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hex	ND		5.8	2.3	mg/Kg	☼	09/07/16 09:06	09/07/16 16:27	1

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III)	17		2.0	2.0	mg/Kg			09/08/16 10:24	1
Percent Moisture	15.9		0.1	0.1	%			08/24/16 09:30	1

Client Sample ID: #3 — **Lab Sample ID: 280-87113-3**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 89.6**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hex	ND		5.5	2.2	mg/Kg	☼	09/07/16 09:06	09/07/16 16:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III)	16		2.0	2.0	mg/Kg			09/08/16 10:24	1
Percent Moisture	10.4		0.1	0.1	%			08/24/16 09:30	1

Client Sample ID: #4 — **Lab Sample ID: 280-87113-4**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 90.2**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hex	ND		5.5	2.2	mg/Kg	☼	09/07/16 09:06	09/07/16 16:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III)	17		2.0	2.0	mg/Kg			09/08/16 10:24	1
Percent Moisture	9.8		0.1	0.1	%			08/24/16 09:30	1

Client Sample ID: #5 — **Lab Sample ID: 280-87113-5**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 85.4**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hex	ND		5.8	2.3	mg/Kg	☼	09/07/16 09:06	09/07/16 16:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III)	18		2.0	2.0	mg/Kg			09/08/16 10:24	1
Percent Moisture	14.6		0.1	0.1	%			08/24/16 09:30	1

General Chemistry - Soluble

Client Sample ID: #1 — **Lab Sample ID: 280-87113-1**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 88.2**

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.0		0.1	0.1	SU		08/23/16 10:52	08/25/16 17:24	1
Specific Conductance	5600		10	10	umhos/cm		08/23/16 10:52	08/26/16 16:26	1

Client Sample ID: #2 — **Lab Sample ID: 280-87113-2**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 84.1**

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.4		0.1	0.1	SU		08/23/16 10:52	08/25/16 17:24	1
Specific Conductance	4100		10	10	umhos/cm		08/23/16 10:52	08/26/16 16:26	1

Client Sample ID: #3 — **Lab Sample ID: 280-87113-3**
Date Collected: 08/18/16 11:00 — **Matrix: Solid**
Date Received: 08/19/16 18:11 — **Percent Solids: 89.6**

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.1		0.1	0.1	SU		08/23/16 10:52	08/25/16 17:24	1
Specific Conductance	11000		10	10	umhos/cm		08/23/16 10:52	08/26/16 16:26	1

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

General Chemistry - Soluble

Client Sample ID: #4
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-4
Matrix: Solid
Percent Solids: 90.2

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.1		0.1	0.1	SU		08/23/16 10:52	08/25/16 17:24	1
Specific Conductance	9500		10	10	umhos/cm		08/23/16 10:52	08/26/16 16:26	1

Client Sample ID: #5
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-5
Matrix: Solid
Percent Solids: 85.4

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.2		0.1	0.1	SU		08/23/16 10:52	08/25/16 17:24	1
Specific Conductance	5700		10	10	umhos/cm		08/23/16 10:52	08/26/16 16:26	1

Surrogate Summary

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

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

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	12DCE	TOL
Lab Sample ID	Client Sample ID	(76-127)	(75-121)	(58-140)	(80-126)
280-87113-1	#1	98	111	127	101
280-87113-1 MS	#1	94	110	125	98
280-87113-1 MSD	#1	100	106	113	97
280-87113-2	#2	93	108	120	96
280-87113-3	#3	93	108	119	101
280-87113-4	#4	149 X	111	124	96
280-87113-5	#5	145 X	108	126	102
LCS 280-338998/2-A	Lab Control Sample	92	108	121	94
MB 280-338998/1-A	Method Blank	91	108	119	98

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8015B - Gasoline Range Organics - (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		TFT1
Lab Sample ID	Client Sample ID	(77-123)
280-87113-1	#1	78
280-87113-2	#2	76 X
280-87113-3	#3	73 X
280-87113-4	#4	83 D
280-87113-5	#5	81 D
280-87113-F-1-H MS	280-87113-F-1-H MS	82
280-87113-F-1-I MSD	280-87113-F-1-I MSD	74 X
LCS 280-340512/2-A	Lab Control Sample	91
MB 280-340512/1-A	Method Blank	89

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		OTPH1
Lab Sample ID	Client Sample ID	(49-115)
280-87113-1	#1	79
280-87113-1 MS	#1	81
280-87113-1 MSD	#1	79
280-87113-2	#2	74
280-87113-3	#3	109 D
280-87113-4	#4	120 X D
280-87113-5	#5	68
LCS 280-339721/2-A	Lab Control Sample	91
MB 280-339721/1-A	Method Blank	87

Surrogate Summary

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

Surrogate Legend

OTPH = o-Terphenyl

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

Lab Sample ID: MB 280-338998/1-A
Matrix: Solid
Analysis Batch: 338999

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 338998

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0050	0.00047	mg/Kg		08/22/16 12:00	08/22/16 19:01	1
Ethylbenzene	ND		0.0050	0.00067	mg/Kg		08/22/16 12:00	08/22/16 19:01	1
Toluene	ND		0.0050	0.00069	mg/Kg		08/22/16 12:00	08/22/16 19:01	1
Xylenes, Total	ND		0.0050	0.00061	mg/Kg		08/22/16 12:00	08/22/16 19:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*76 - 127*	*08/22/16 12:00*	*08/22/16 19:01*	*1*
Dibromofluoromethane (Surr)	*108*		*75 - 121*	*08/22/16 12:00*	*08/22/16 19:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*119*		*58 - 140*	*08/22/16 12:00*	*08/22/16 19:01*	*1*
Toluene-d8 (Surr)	*98*		*80 - 126*	*08/22/16 12:00*	*08/22/16 19:01*	*1*

Lab Sample ID: LCS 280-338998/2-A
Matrix: Solid
Analysis Batch: 338999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 338998

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.0508		mg/Kg		102	75 - 135
Ethylbenzene	0.0500	0.0462		mg/Kg		92	73 - 125
m-Xylene & p-Xylene	0.0500	0.0485		mg/Kg		97	77 - 135
o-Xylene	0.0500	0.0458		mg/Kg		92	75 - 135
Toluene	0.0500	0.0528		mg/Kg		106	77 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*76 - 127*
Dibromofluoromethane (Surr)	*108*		*75 - 121*
1,2-Dichloroethane-d4 (Surr)	*121*		*58 - 140*
Toluene-d8 (Surr)	*94*		*80 - 126*

Lab Sample ID: 280-87113-1 MS
Matrix: Solid
Analysis Batch: 338999

Client Sample ID: #1
Prep Type: Total/NA
Prep Batch: 338998

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		0.0651	0.0572		mg/Kg	☼	88	75 - 135
Ethylbenzene	ND		0.0651	0.0505		mg/Kg	☼	78	73 - 125
m-Xylene & p-Xylene	ND		0.0651	0.0524		mg/Kg	☼	81	77 - 135
o-Xylene	ND		0.0651	0.0505		mg/Kg	☼	78	75 - 135
Toluene	ND		0.0651	0.0579		mg/Kg	☼	89	77 - 122

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*76 - 127*
Dibromofluoromethane (Surr)	*110*		*75 - 121*
1,2-Dichloroethane-d4 (Surr)	*125*		*58 - 140*
Toluene-d8 (Surr)	*98*		*80 - 126*

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

Lab Sample ID: 280-87113-1 MSD
Matrix: Solid
Analysis Batch: 338999

Client Sample ID: #1
Prep Type: Total/NA
Prep Batch: 338998

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		0.0635	0.0631		mg/Kg	☼	99	75 - 135	10	20
Ethylbenzene	ND		0.0635	0.0553		mg/Kg	☼	87	73 - 125	9	20
m-Xylene & p-Xylene	ND		0.0635	0.0552		mg/Kg	☼	87	77 - 135	5	20
o-Xylene	ND		0.0635	0.0547		mg/Kg	☼	86	75 - 135	8	20
Toluene	ND		0.0635	0.0623		mg/Kg	☼	98	77 - 122	7	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*76 - 127*
Dibromofluoromethane (Surr)	*106*		*75 - 121*
1,2-Dichloroethane-d4 (Surr)	*113*		*58 - 140*
Toluene-d8 (Surr)	*97*		*80 - 126*

Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 280-340512/1-A
Matrix: Solid
Analysis Batch: 340491

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 340512

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		1.2	0.33	mg/Kg		09/01/16 14:22	09/01/16 17:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*89*		*77 - 123*	*09/01/16 14:22*	*09/01/16 17:30*	*1*

Lab Sample ID: LCS 280-340512/2-A
Matrix: Solid
Analysis Batch: 340491

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 340512

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C6-C10			5.50	5.24		mg/Kg		95	85 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*91*		*77 - 123*

Lab Sample ID: 280-87113-F-1-H MS
Matrix: Solid
Analysis Batch: 340491

Client Sample ID: 280-87113-F-1-H MS
Prep Type: Total/NA
Prep Batch: 340512

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C6-C10	ND	F1	6.13	5.81		mg/Kg	☼	95	85 - 153		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*82*		*77 - 123*

Method: 8015B - Gasoline Range Organics - (GC) (Continued)

Lab Sample ID: 280-87113-F-1-I MSD — **Client Sample ID: 280-87113-F-1-I MSD**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 340491 — **Prep Batch: 340512**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	ND	F1	6.15	5.07	F1	mg/Kg	☼	82	85 - 153	14	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*74*	*X*	*77 - 123*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 280-339721/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 340070 — **Prep Batch: 339721**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Motor Oil (C20-C38)	ND		12	3.9	mg/Kg		08/26/16 13:08	08/30/16 13:08	1
Diesel Range Organics [C10-C28]	1.46	J	4.0	0.68	mg/Kg		08/26/16 13:08	08/30/16 13:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*87*		*49 - 115*	*08/26/16 13:08*	*08/30/16 13:08*	*1*

Lab Sample ID: LCS 280-339721/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 340070 — **Prep Batch: 339721**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	66.7	65.5		mg/Kg		98	53 - 115

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*91*		*49 - 115*

Lab Sample ID: 280-87113-1 MS — **Client Sample ID: #1**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 340070 — **Prep Batch: 339721**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	160	F2 F1 B	74.8	138	F1	mg/Kg	☼	-35	56 - 115

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl	*81*		*49 - 115*

Lab Sample ID: 280-87113-1 MSD — **Client Sample ID: #1**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 340070 — **Prep Batch: 339721**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	160	F2 F1 B	75.3	187	F1 F2	mg/Kg	☼	30	56 - 115	30	23

Surrogate	MSD %Recovery	MSD Qualifier	Limits
o-Terphenyl	*79*		*49 - 115*

Method: 20B - Sodium Adsorption Ratio

Lab Sample ID: MB 280-339954/1-A
Matrix: Solid
Analysis Batch: 340444

Client Sample ID: Method Blank
Prep Type: Soluble
Prep Batch: 339954

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	ND		1.2	1.2	No Unit		08/31/16 07:00	09/01/16 14:00	10

Lab Sample ID: 280-87113-2 DU
Matrix: Solid
Analysis Batch: 340444

Client Sample ID: #2
Prep Type: Soluble
Prep Batch: 339954

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sodium Adsorption Ratio	130		127		No Unit		4	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 280-339930/1-A
Matrix: Solid
Analysis Batch: 340400

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339930

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.0990	J	1.0	0.076	mg/Kg		08/30/16 14:30	09/01/16 04:03	1
Boron	ND		10	0.98	mg/Kg		08/30/16 14:30	09/01/16 04:03	1
Chromium	ND		1.5	0.058	mg/Kg		08/30/16 14:30	09/01/16 04:03	1
Zinc	ND		3.0	0.40	mg/Kg		08/30/16 14:30	09/01/16 04:03	1

Lab Sample ID: MB 280-339930/1-A
Matrix: Solid
Analysis Batch: 340630

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 339930

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.50	0.041	mg/Kg		08/30/16 14:30	09/01/16 23:23	1
Copper	0.429	J	2.0	0.22	mg/Kg		08/30/16 14:30	09/01/16 23:23	1
Lead	ND		0.90	0.27	mg/Kg		08/30/16 14:30	09/01/16 23:23	1
Nickel	ND		4.0	0.12	mg/Kg		08/30/16 14:30	09/01/16 23:23	1
Selenium	ND		1.5	0.86	mg/Kg		08/30/16 14:30	09/01/16 23:23	1
Silver	ND		1.0	0.16	mg/Kg		08/30/16 14:30	09/01/16 23:23	1

Lab Sample ID: LCS 280-339930/2-A
Matrix: Solid
Analysis Batch: 340400

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339930

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	200	189		mg/Kg		95	87 - 112
Boron	100	88.8		mg/Kg		89	80 - 120
Chromium	20.0	17.5		mg/Kg		87	84 - 114
Zinc	50.0	42.0		mg/Kg		84	76 - 114

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

Lab Sample ID: LCS 280-339930/2-A
Matrix: Solid
Analysis Batch: 340630

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 339930

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	10.0	8.92		mg/Kg		89	87 - 110
Copper	25.0	23.9		mg/Kg		95	88 - 110
Lead	50.0	45.3		mg/Kg		91	86 - 110
Nickel	50.0	45.9		mg/Kg		92	87 - 110
Selenium	200	181		mg/Kg		90	83 - 110
Silver	5.00	5.25		mg/Kg		105	87 - 114

Lab Sample ID: 280-87113-1 MS
Matrix: Solid
Analysis Batch: 340400

Client Sample ID: #1
Prep Type: Total/NA
Prep Batch: 339930

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	130	B	177	251		mg/Kg	☼	69	52 - 159
Boron	19	F1	88.4	84.7	F1	mg/Kg	☼	74	80 - 120
Chromium	16		17.7	30.2		mg/Kg	☼	83	70 - 200
Zinc	43	F1	44.2	71.5	F1	mg/Kg	☼	65	70 - 200

Lab Sample ID: 280-87113-1 MS
Matrix: Solid
Analysis Batch: 340630

Client Sample ID: #1
Prep Type: Total/NA
Prep Batch: 339930

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	0.27	J	8.84	7.04		mg/Kg	☼	77	40 - 130
Copper	14	B	22.1	32.2		mg/Kg	☼	81	37 - 187
Lead	11		44.2	43.2		mg/Kg	☼	74	70 - 200
Nickel	12		44.2	44.1		mg/Kg	☼	72	61 - 126
Selenium	ND		177	139		mg/Kg	☼	79	76 - 104
Silver	ND		4.42	4.40		mg/Kg	☼	100	75 - 141

Lab Sample ID: 280-87113-1 MSD
Matrix: Solid
Analysis Batch: 340400

Client Sample ID: #1
Prep Type: Total/NA
Prep Batch: 339930

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Barium	130	B	184	284		mg/Kg	☼	84	52 - 159	12	20
Boron	19	F1	92.0	96.6		mg/Kg	☼	84	80 - 120	13	20
Chromium	16		18.4	34.0		mg/Kg	☼	100	70 - 200	12	20
Zinc	43	F1	46.0	79.2		mg/Kg	☼	80	70 - 200	10	20

Lab Sample ID: 280-87113-1 MSD
Matrix: Solid
Analysis Batch: 340630

Client Sample ID: #1
Prep Type: Total/NA
Prep Batch: 339930

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	0.27	J	9.20	7.84		mg/Kg	☼	82	40 - 130	11	20
Copper	14	B	23.0	35.9		mg/Kg	☼	94	37 - 187	11	20
Lead	11		46.0	45.9		mg/Kg	☼	77	70 - 200	6	20
Nickel	12		46.0	48.2		mg/Kg	☼	78	61 - 126	9	20
Selenium	ND		184	150		mg/Kg	☼	82	76 - 104	8	20

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

Lab Sample ID: 280-87113-1 MSD — **Client Sample ID: #1**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 340630 — **Prep Batch: 339930**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silver	ND		4.60	4.79		mg/Kg	☼	104	75 - 141	8	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 280-339367/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 339910 — **Prep Batch: 339367**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.60	0.051	mg/Kg		08/26/16 14:45	08/26/16 23:52	1

Lab Sample ID: LCS 280-339367/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 339910 — **Prep Batch: 339367**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	20.0	18.8		mg/Kg		94	83 - 111

Lab Sample ID: 280-87113-1 MS — **Client Sample ID: #1**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 339910 — **Prep Batch: 339367**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.4		15.9	18.8		mg/Kg	☼	91	83 - 111

Lab Sample ID: 280-87113-1 MSD — **Client Sample ID: #1**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 339910 — **Prep Batch: 339367**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	4.4		16.6	20.8		mg/Kg	☼	99	83 - 111	10	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 280-340265/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 340414 — **Prep Batch: 340265**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	5.83	J	17	5.5	ug/Kg		08/31/16 13:15	08/31/16 17:26	1

Lab Sample ID: LCS 280-340265/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 340414 — **Prep Batch: 340265**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	417	426		ug/Kg		102	87 - 111

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 680-129267-A-12-H MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 340414 — **Prep Batch: 340265**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	48	B	1140	1180		ug/Kg	☼	100	87 - 111

Lab Sample ID: 680-129267-A-12-I MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 340414 — **Prep Batch: 340265**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	48	B	1030	1040		ug/Kg	☼	96	87 - 111	13	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 490-368183/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 368433 — **Prep Batch: 368183**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hex	ND		5.0	2.0	mg/Kg		09/07/16 09:06	09/07/16 16:27	1

Lab Sample ID: LCSI 490-368183/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 368433 — **Prep Batch: 368183**

Analyte	Spike Added	LCSI Result	LCSI Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hex	64.7	60.9		mg/Kg		94	80 - 120

Lab Sample ID: LCSS 490-368183/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 368433 — **Prep Batch: 368183**

Analyte	Spike Added	LCSS Result	LCSS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hex	39.2	40.9		mg/Kg		105	80 - 120

Lab Sample ID: LCSSD 490-368183/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 368433 — **Prep Batch: 368183**

Analyte	Spike Added	LCSSD Result	LCSSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium, hex	39.1	40.9		mg/Kg		105	80 - 120	0	20

Lab Sample ID: 280-87113-1 MSI — **Client Sample ID: #1**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 368433 — **Prep Batch: 368183**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSI Result	MSI Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hex	ND		73.3	62.7		mg/Kg	☼	85	75 - 125

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: 280-87113-1 MSS
Matrix: Solid
Analysis Batch: 368433

Client Sample ID: #1
Prep Type: Total/NA
Prep Batch: 368183

Analyte	Sample Result	Sample Qualifier	Spike Added	MSS Result	MSS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hex	ND		44.9	40.5		mg/Kg	☼	90	75 - 125

Lab Sample ID: 280-87113-1 DU
Matrix: Solid
Analysis Batch: 368433

Client Sample ID: #1
Prep Type: Total/NA
Prep Batch: 368183

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chromium, hex	ND		ND		mg/Kg	☼	NC	20

Method: 7196A - Chromium, Trivalent (Colorimetric)

Lab Sample ID: MB 280-341307/1
Matrix: Solid
Analysis Batch: 341307

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (III)	ND		2.0	2.0	mg/Kg			09/08/16 10:24	1

Method: 9040C - pH

Lab Sample ID: LCS 490-365911/1
Matrix: Solid
Analysis Batch: 365911

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	98 - 103

Method: 9050A - Specific Conductance

Lab Sample ID: LCS 490-365878/3
Matrix: Solid
Analysis Batch: 365878

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	1360		umhos/cm		97	90 - 110

Lab Sample ID: 280-87113-1 DU
Matrix: Solid
Analysis Batch: 365878

Client Sample ID: #1
Prep Type: Soluble
Prep Batch: 364805

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	5600		5580		umhos/cm		0.2	10

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

Method: Moisture - Percent Moisture

Lab Sample ID: 280-87174-A-6 DU
Matrix: Solid
Analysis Batch: 339291

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	2.2			2.1		%				4	20

QC Association Summary

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

GC/MS VOA

Prep Batch: 338998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	5030B	
280-87113-2	#2	Total/NA	Solid	5030B	
280-87113-3	#3	Total/NA	Solid	5030B	
280-87113-4	#4	Total/NA	Solid	5030B	
280-87113-5	#5	Total/NA	Solid	5030B	
MB 280-338998/1-A	Method Blank	Total/NA	Solid	5030B	
LCS 280-338998/2-A	Lab Control Sample	Total/NA	Solid	5030B	
280-87113-1 MS	#1	Total/NA	Solid	5030B	
280-87113-1 MSD	#1	Total/NA	Solid	5030B	

Analysis Batch: 338999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	8260B	338998
280-87113-2	#2	Total/NA	Solid	8260B	338998
280-87113-3	#3	Total/NA	Solid	8260B	338998
280-87113-4	#4	Total/NA	Solid	8260B	338998
280-87113-5	#5	Total/NA	Solid	8260B	338998
MB 280-338998/1-A	Method Blank	Total/NA	Solid	8260B	338998
LCS 280-338998/2-A	Lab Control Sample	Total/NA	Solid	8260B	338998
280-87113-1 MS	#1	Total/NA	Solid	8260B	338998
280-87113-1 MSD	#1	Total/NA	Solid	8260B	338998

GC VOA

Analysis Batch: 340491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	8015B	340512
280-87113-2	#2	Total/NA	Solid	8015B	340512
280-87113-3	#3	Total/NA	Solid	8015B	340512
280-87113-4	#4	Total/NA	Solid	8015B	340512
280-87113-5	#5	Total/NA	Solid	8015B	340512
MB 280-340512/1-A	Method Blank	Total/NA	Solid	8015B	340512
LCS 280-340512/2-A	Lab Control Sample	Total/NA	Solid	8015B	340512
280-87113-F-1-H MS	280-87113-F-1-H MS	Total/NA	Solid	8015B	340512
280-87113-F-1-I MSD	280-87113-F-1-I MSD	Total/NA	Solid	8015B	340512

Prep Batch: 340512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	5030B	
280-87113-2	#2	Total/NA	Solid	5030B	
280-87113-3	#3	Total/NA	Solid	5030B	
280-87113-4	#4	Total/NA	Solid	5030B	
280-87113-5	#5	Total/NA	Solid	5030B	
MB 280-340512/1-A	Method Blank	Total/NA	Solid	5030B	
LCS 280-340512/2-A	Lab Control Sample	Total/NA	Solid	5030B	
280-87113-F-1-H MS	280-87113-F-1-H MS	Total/NA	Solid	5030B	
280-87113-F-1-I MSD	280-87113-F-1-I MSD	Total/NA	Solid	5030B	

GC Semi VOA

Prep Batch: 339721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	3546	
280-87113-2	#2	Total/NA	Solid	3546	
280-87113-3	#3	Total/NA	Solid	3546	
280-87113-4	#4	Total/NA	Solid	3546	
280-87113-5	#5	Total/NA	Solid	3546	
MB 280-339721/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-339721/2-A	Lab Control Sample	Total/NA	Solid	3546	
280-87113-1 MS	#1	Total/NA	Solid	3546	
280-87113-1 MSD	#1	Total/NA	Solid	3546	

Analysis Batch: 340070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	8015B	339721
280-87113-2	#2	Total/NA	Solid	8015B	339721
280-87113-5	#5	Total/NA	Solid	8015B	339721
MB 280-339721/1-A	Method Blank	Total/NA	Solid	8015B	339721
LCS 280-339721/2-A	Lab Control Sample	Total/NA	Solid	8015B	339721
280-87113-1 MS	#1	Total/NA	Solid	8015B	339721
280-87113-1 MSD	#1	Total/NA	Solid	8015B	339721

Analysis Batch: 340351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-3	#3	Total/NA	Solid	8015B	339721
280-87113-4	#4	Total/NA	Solid	8015B	339721

Metals

Prep Batch: 339367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	3050B	
280-87113-2	#2	Total/NA	Solid	3050B	
280-87113-3	#3	Total/NA	Solid	3050B	
280-87113-4	#4	Total/NA	Solid	3050B	
280-87113-5	#5	Total/NA	Solid	3050B	
MB 280-339367/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-339367/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-87113-1 MS	#1	Total/NA	Solid	3050B	
280-87113-1 MSD	#1	Total/NA	Solid	3050B	

Analysis Batch: 339910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	6020	339367
280-87113-2	#2	Total/NA	Solid	6020	339367
280-87113-3	#3	Total/NA	Solid	6020	339367
280-87113-4	#4	Total/NA	Solid	6020	339367
280-87113-5	#5	Total/NA	Solid	6020	339367
MB 280-339367/1-A	Method Blank	Total/NA	Solid	6020	339367
LCS 280-339367/2-A	Lab Control Sample	Total/NA	Solid	6020	339367
280-87113-1 MS	#1	Total/NA	Solid	6020	339367
280-87113-1 MSD	#1	Total/NA	Solid	6020	339367

Metals (Continued)

Prep Batch: 339930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	3050B	
280-87113-2	#2	Total/NA	Solid	3050B	
280-87113-3	#3	Total/NA	Solid	3050B	
280-87113-4	#4	Total/NA	Solid	3050B	
280-87113-5	#5	Total/NA	Solid	3050B	
MB 280-339930/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-339930/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-87113-1 MS	#1	Total/NA	Solid	3050B	
280-87113-1 MSD	#1	Total/NA	Solid	3050B	

Prep Batch: 339954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Soluble	Solid	20B	
280-87113-2	#2	Soluble	Solid	20B	
280-87113-3	#3	Soluble	Solid	20B	
280-87113-4	#4	Soluble	Solid	20B	
280-87113-5	#5	Soluble	Solid	20B	
MB 280-339954/1-A	Method Blank	Soluble	Solid	20B	
280-87113-2 DU	#2	Soluble	Solid	20B	

Prep Batch: 340265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	7471A	
280-87113-2	#2	Total/NA	Solid	7471A	
280-87113-3	#3	Total/NA	Solid	7471A	
280-87113-4	#4	Total/NA	Solid	7471A	
280-87113-5	#5	Total/NA	Solid	7471A	
MB 280-340265/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 280-340265/2-A	Lab Control Sample	Total/NA	Solid	7471A	
680-129267-A-12-H MS	Matrix Spike	Total/NA	Solid	7471A	
680-129267-A-12-I MSD	Matrix Spike Duplicate	Total/NA	Solid	7471A	

Analysis Batch: 340400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	6010B	339930
280-87113-2	#2	Total/NA	Solid	6010B	339930
280-87113-3	#3	Total/NA	Solid	6010B	339930
280-87113-4	#4	Total/NA	Solid	6010B	339930
280-87113-5	#5	Total/NA	Solid	6010B	339930
MB 280-339930/1-A	Method Blank	Total/NA	Solid	6010B	339930
LCS 280-339930/2-A	Lab Control Sample	Total/NA	Solid	6010B	339930
280-87113-1 MS	#1	Total/NA	Solid	6010B	339930
280-87113-1 MSD	#1	Total/NA	Solid	6010B	339930

Analysis Batch: 340414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	7471A	340265
280-87113-2	#2	Total/NA	Solid	7471A	340265
280-87113-3	#3	Total/NA	Solid	7471A	340265
280-87113-4	#4	Total/NA	Solid	7471A	340265
280-87113-5	#5	Total/NA	Solid	7471A	340265

Metals (Continued)

Analysis Batch: 340414 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-340265/1-A	Method Blank	Total/NA	Solid	7471A	340265
LCS 280-340265/2-A	Lab Control Sample	Total/NA	Solid	7471A	340265
680-129267-A-12-H MS	Matrix Spike	Total/NA	Solid	7471A	340265
680-129267-A-12-I MSD	Matrix Spike Duplicate	Total/NA	Solid	7471A	340265

Analysis Batch: 340444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Soluble	Solid	20B	339954
280-87113-2	#2	Soluble	Solid	20B	339954
280-87113-3	#3	Soluble	Solid	20B	339954
280-87113-4	#4	Soluble	Solid	20B	339954
280-87113-5	#5	Soluble	Solid	20B	339954
MB 280-339954/1-A	Method Blank	Soluble	Solid	20B	339954
280-87113-2 DU	#2	Soluble	Solid	20B	339954

Analysis Batch: 340630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	6010B	339930
280-87113-2	#2	Total/NA	Solid	6010B	339930
280-87113-3	#3	Total/NA	Solid	6010B	339930
280-87113-4	#4	Total/NA	Solid	6010B	339930
280-87113-5	#5	Total/NA	Solid	6010B	339930
MB 280-339930/1-A	Method Blank	Total/NA	Solid	6010B	339930
LCS 280-339930/2-A	Lab Control Sample	Total/NA	Solid	6010B	339930
280-87113-1 MS	#1	Total/NA	Solid	6010B	339930
280-87113-1 MSD	#1	Total/NA	Solid	6010B	339930

General Chemistry

Analysis Batch: 339291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	Moisture	
280-87113-2	#2	Total/NA	Solid	Moisture	
280-87113-3	#3	Total/NA	Solid	Moisture	
280-87113-4	#4	Total/NA	Solid	Moisture	
280-87113-5	#5	Total/NA	Solid	Moisture	
280-87174-A-6 DU	Duplicate	Total/NA	Solid	Moisture	

Analysis Batch: 341307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	7196A	
280-87113-2	#2	Total/NA	Solid	7196A	
280-87113-3	#3	Total/NA	Solid	7196A	
280-87113-4	#4	Total/NA	Solid	7196A	
280-87113-5	#5	Total/NA	Solid	7196A	
MB 280-341307/1	Method Blank	Total/NA	Solid	7196A	

Prep Batch: 364805

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Soluble	Solid	Sat Paste Ext	

General Chemistry (Continued)

Prep Batch: 364805 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-2	#2	Soluble	Solid	Sat Paste Ext	
280-87113-3	#3	Soluble	Solid	Sat Paste Ext	
280-87113-4	#4	Soluble	Solid	Sat Paste Ext	
280-87113-5	#5	Soluble	Solid	Sat Paste Ext	
280-87113-1 DU	#1	Soluble	Solid	Sat Paste Ext	

Analysis Batch: 365878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Soluble	Solid	9050A	364805
280-87113-2	#2	Soluble	Solid	9050A	364805
280-87113-3	#3	Soluble	Solid	9050A	364805
280-87113-4	#4	Soluble	Solid	9050A	364805
280-87113-5	#5	Soluble	Solid	9050A	364805
LCS 490-365878/3	Lab Control Sample	Total/NA	Solid	9050A	
280-87113-1 DU	#1	Soluble	Solid	9050A	364805

Analysis Batch: 365911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Soluble	Solid	9040C	364805
280-87113-2	#2	Soluble	Solid	9040C	364805
280-87113-3	#3	Soluble	Solid	9040C	364805
280-87113-4	#4	Soluble	Solid	9040C	364805
280-87113-5	#5	Soluble	Solid	9040C	364805
LCS 490-365911/1	Lab Control Sample	Total/NA	Solid	9040C	

Prep Batch: 368183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	3060A	
280-87113-2	#2	Total/NA	Solid	3060A	
280-87113-3	#3	Total/NA	Solid	3060A	
280-87113-4	#4	Total/NA	Solid	3060A	
280-87113-5	#5	Total/NA	Solid	3060A	
MB 490-368183/1-A	Method Blank	Total/NA	Solid	3060A	
LCSI 490-368183/4-A	Lab Control Sample	Total/NA	Solid	3060A	
LCSS 490-368183/2-A	Lab Control Sample	Total/NA	Solid	3060A	
LCSSD 490-368183/3-A	Lab Control Sample Dup	Total/NA	Solid	3060A	
280-87113-1 MSI	#1	Total/NA	Solid	3060A	
280-87113-1 MSS	#1	Total/NA	Solid	3060A	
280-87113-1 DU	#1	Total/NA	Solid	3060A	

Analysis Batch: 368433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1	#1	Total/NA	Solid	7196A	368183
280-87113-2	#2	Total/NA	Solid	7196A	368183
280-87113-3	#3	Total/NA	Solid	7196A	368183
280-87113-4	#4	Total/NA	Solid	7196A	368183
280-87113-5	#5	Total/NA	Solid	7196A	368183
MB 490-368183/1-A	Method Blank	Total/NA	Solid	7196A	368183
LCSI 490-368183/4-A	Lab Control Sample	Total/NA	Solid	7196A	368183
LCSS 490-368183/2-A	Lab Control Sample	Total/NA	Solid	7196A	368183
LCSSD 490-368183/3-A	Lab Control Sample Dup	Total/NA	Solid	7196A	368183

General Chemistry (Continued)

Analysis Batch: 368433 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-87113-1 MSI	#1	Total/NA	Solid	7196A	368183
280-87113-1 MSS	#1	Total/NA	Solid	7196A	368183
280-87113-1 DU	#1	Total/NA	Solid	7196A	368183

Lab Chronicle

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

Client Sample ID: #1

Lab Sample ID: 280-87113-1

Date Collected: 08/18/16 11:00

Matrix: Solid

Date Received: 08/19/16 18:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	20B			1.0 g	1.0 mL	339954	08/31/16 07:00	TEB	TAL DEN
Soluble	Analysis	20B		10			340444	09/01/16 14:05	CRR	TAL DEN
Total/NA	Analysis	7196A		1			341307	09/08/16 10:24	DEG	TAL DEN
Soluble	Prep	Sat Paste Ext			1 g	1 mL	364805	08/23/16 10:52	AAB	TAL NSH
Soluble	Analysis	9040C		1			365911	08/25/16 17:24	AML	TAL NSH
Soluble	Prep	Sat Paste Ext			1 g	1 mL	364805	08/23/16 10:52	AAB	TAL NSH
Soluble	Analysis	9050A		1			365878	08/26/16 16:26	YSJ	TAL NSH
Total/NA	Analysis	Moisture		1			339291	08/24/16 09:30	IEU	TAL DEN

Client Sample ID: #1

Lab Sample ID: 280-87113-1

Date Collected: 08/18/16 11:00

Matrix: Solid

Date Received: 08/19/16 18:11

Percent Solids: 88.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.190 g	5 mL	338998	08/22/16 12:00	ADD	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	338999	08/22/16 23:42	ADD	TAL DEN
Total/NA	Prep	5030B			10.12 g	10 mL	340512	09/01/16 14:22	NAS	TAL DEN
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	340491	09/01/16 18:20	NAS	TAL DEN
Total/NA	Prep	3546			30.1 g	1 mL	339721	08/26/16 13:08	TEB	TAL DEN
Total/NA	Analysis	8015B		1			340070	08/30/16 16:01	TEM	TAL DEN
Total/NA	Prep	3050B			1.359 g	100 mL	339930	08/30/16 14:30	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			340400	09/01/16 04:08	CMK	TAL DEN
Total/NA	Prep	3050B			1.359 g	100 mL	339930	08/30/16 14:30	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			340630	09/01/16 23:29	CMK	TAL DEN
Total/NA	Prep	3050B			1.296 g	100 mL	339367	08/26/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6020		1			339910	08/27/16 00:00	JM	TAL DEN
Total/NA	Prep	7471A			0.57 g	50 mL	340265	08/31/16 13:15	CDH	TAL DEN
Total/NA	Analysis	7471A		1			340414	08/31/16 18:05	CDH	TAL DEN
Total/NA	Prep	3060A			2.5280 g	500 mL	368183	09/07/16 09:06	BLM	TAL NSH
Total/NA	Analysis	7196A		1	50 mL	50 mL	368433	09/07/16 16:27	BLM	TAL NSH

Client Sample ID: #2

Lab Sample ID: 280-87113-2

Date Collected: 08/18/16 11:00

Matrix: Solid

Date Received: 08/19/16 18:11

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	20B			1.0 g	1.0 mL	339954	08/31/16 07:00	TEB	TAL DEN
Soluble	Analysis	20B		10			340444	09/01/16 14:08	CRR	TAL DEN
Total/NA	Analysis	7196A		1			341307	09/08/16 10:24	DEG	TAL DEN
Soluble	Prep	Sat Paste Ext			1 g	1 mL	364805	08/23/16 10:52	AAB	TAL NSH
Soluble	Analysis	9040C		1			365911	08/25/16 17:24	AML	TAL NSH
Soluble	Prep	Sat Paste Ext			1 g	1 mL	364805	08/23/16 10:52	AAB	TAL NSH
Soluble	Analysis	9050A		1			365878	08/26/16 16:26	YSJ	TAL NSH

Lab Chronicle

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

Client Sample ID: #2
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-2
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			339291	08/24/16 09:30	IEU	TAL DEN

Client Sample ID: #2
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-2
Matrix: Solid
Percent Solids: 84.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.430 g	5 mL	338998	08/22/16 12:00	ADD	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	338999	08/23/16 00:42	ADD	TAL DEN
Total/NA	Prep	5030B			9.95 g	10 mL	340512	09/01/16 14:22	NAS	TAL DEN
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	340491	09/01/16 19:35	NAS	TAL DEN
Total/NA	Prep	3546			30.0 g	1 mL	339721	08/26/16 13:08	TEB	TAL DEN
Total/NA	Analysis	8015B		1			340070	08/30/16 17:27	TEM	TAL DEN
Total/NA	Prep	3050B			1.119 g	100 mL	339930	08/30/16 14:30	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			340400	09/01/16 04:19	CMK	TAL DEN
Total/NA	Prep	3050B			1.119 g	100 mL	339930	08/30/16 14:30	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			340630	09/01/16 23:40	CMK	TAL DEN
Total/NA	Prep	3050B			1.271 g	100 mL	339367	08/26/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6020		1			339910	08/27/16 00:26	JM	TAL DEN
Total/NA	Prep	7471A			0.56 g	50 mL	340265	08/31/16 13:15	CDH	TAL DEN
Total/NA	Analysis	7471A		1			340414	08/31/16 18:11	CDH	TAL DEN
Total/NA	Prep	3060A			2.5414 g	500 mL	368183	09/07/16 09:06	BLM	TAL NSH
Total/NA	Analysis	7196A		1	50 mL	50 mL	368433	09/07/16 16:27	BLM	TAL NSH

Client Sample ID: #3
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	20B			1.0 g	1.0 mL	339954	08/31/16 07:00	TEB	TAL DEN
Soluble	Analysis	20B		10			340444	09/01/16 14:15	CRR	TAL DEN
Total/NA	Analysis	7196A		1			341307	09/08/16 10:24	DEG	TAL DEN
Soluble	Prep	Sat Paste Ext			1 g	1 mL	364805	08/23/16 10:52	AAB	TAL NSH
Soluble	Analysis	9040C		1			365911	08/25/16 17:24	AML	TAL NSH
Soluble	Prep	Sat Paste Ext			1 g	1 mL	364805	08/23/16 10:52	AAB	TAL NSH
Soluble	Analysis	9050A		1			365878	08/26/16 16:26	YSJ	TAL NSH
Total/NA	Analysis	Moisture		1			339291	08/24/16 09:30	IEU	TAL DEN

Lab Chronicle

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

Client Sample ID: #3

Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-3

Matrix: Solid
Percent Solids: 89.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.580 g	5 mL	338998	08/22/16 12:00	ADD	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	338999	08/23/16 01:02	ADD	TAL DEN
Total/NA	Prep	5030B			10.21 g	10 mL	340512	09/01/16 14:22	NAS	TAL DEN
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	340491	09/01/16 20:00	NAS	TAL DEN
Total/NA	Prep	3546			30.2 g	1 mL	339721	08/26/16 13:08	TEB	TAL DEN
Total/NA	Analysis	8015B		5			340351	09/01/16 10:56	TEM	TAL DEN
Total/NA	Prep	3050B			1.412 g	100 mL	339930	08/30/16 14:30	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			340400	09/01/16 04:22	CMK	TAL DEN
Total/NA	Prep	3050B			1.412 g	100 mL	339930	08/30/16 14:30	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			340630	09/01/16 23:42	CMK	TAL DEN
Total/NA	Prep	3050B			1.441 g	100 mL	339367	08/26/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6020		1			339910	08/27/16 00:30	JM	TAL DEN
Total/NA	Prep	7471A			0.57 g	50 mL	340265	08/31/16 13:15	CDH	TAL DEN
Total/NA	Analysis	7471A		1			340414	08/31/16 18:13	CDH	TAL DEN
Total/NA	Prep	3060A			2.5263 g	500 mL	368183	09/07/16 09:06	BLM	TAL NSH
Total/NA	Analysis	7196A		1	50 mL	50 mL	368433	09/07/16 16:27	BLM	TAL NSH

Client Sample ID: #4

Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	20B			1.0 g	1.0 mL	339954	08/31/16 07:00	TEB	TAL DEN
Soluble	Analysis	20B		10			340444	09/01/16 14:18	CRR	TAL DEN
Total/NA	Analysis	7196A		1			341307	09/08/16 10:24	DEG	TAL DEN
Soluble	Prep	Sat Paste Ext			1 g	1 mL	364805	08/23/16 10:52	AAB	TAL NSH
Soluble	Analysis	9040C		1			365911	08/25/16 17:24	AML	TAL NSH
Soluble	Prep	Sat Paste Ext			1 g	1 mL	364805	08/23/16 10:52	AAB	TAL NSH
Soluble	Analysis	9050A		1			365878	08/26/16 16:26	YSJ	TAL NSH
Total/NA	Analysis	Moisture		1			339291	08/24/16 09:30	IEU	TAL DEN

Client Sample ID: #4

Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-4

Matrix: Solid
Percent Solids: 90.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.477 g	5 mL	338998	08/22/16 12:00	ADD	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	338999	08/23/16 01:22	ADD	TAL DEN
Total/NA	Prep	5030B			10.02 g	10 mL	340512	09/01/16 14:22	NAS	TAL DEN
Total/NA	Analysis	8015B		5	0.1 mL	5 mL	340491	09/01/16 20:25	NAS	TAL DEN
Total/NA	Prep	3546			30.4 g	1 mL	339721	08/26/16 13:08	TEB	TAL DEN
Total/NA	Analysis	8015B		5			340351	09/01/16 11:24	TEM	TAL DEN
Total/NA	Prep	3050B			1.213 g	100 mL	339930	08/30/16 14:30	SEJ	TAL DEN

Lab Chronicle

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

Client Sample ID: #4

Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-4

Matrix: Solid
Percent Solids: 90.2

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			340400	09/01/16 04:24	CMK	TAL DEN
Total/NA	Prep	3050B			1.213 g	100 mL	339930	08/30/16 14:30	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			340630	09/01/16 23:45	CMK	TAL DEN
Total/NA	Prep	3050B			1.154 g	100 mL	339367	08/26/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6020		1			339910	08/27/16 00:33	JM	TAL DEN
Total/NA	Prep	7471A			0.55 g	50 mL	340265	08/31/16 13:15	CDH	TAL DEN
Total/NA	Analysis	7471A		1			340414	08/31/16 18:15	CDH	TAL DEN
Total/NA	Prep	3060A			2.5379 g	500 mL	368183	09/07/16 09:06	BLM	TAL NSH
Total/NA	Analysis	7196A		1	50 mL	50 mL	368433	09/07/16 16:27	BLM	TAL NSH

Client Sample ID: #5

Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	20B			1.0 g	1.0 mL	339954	08/31/16 07:00	TEB	TAL DEN
Soluble	Analysis	20B		10			340444	09/01/16 14:21	CRR	TAL DEN
Total/NA	Analysis	7196A		1			341307	09/08/16 10:24	DEG	TAL DEN
Soluble	Prep	Sat Paste Ext			1 g	1 mL	364805	08/23/16 10:52	AAB	TAL NSH
Soluble	Analysis	9040C		1			365911	08/25/16 17:24	AML	TAL NSH
Soluble	Prep	Sat Paste Ext			1 g	1 mL	364805	08/23/16 10:52	AAB	TAL NSH
Soluble	Analysis	9050A		1			365878	08/26/16 16:26	YSJ	TAL NSH
Total/NA	Analysis	Moisture		1			339291	08/24/16 09:30	IEU	TAL DEN

Client Sample ID: #5

Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-5

Matrix: Solid
Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.891 g	5 mL	338998	08/22/16 12:00	ADD	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	338999	08/23/16 01:42	ADD	TAL DEN
Total/NA	Prep	5030B			9.96 g	10 mL	340512	09/01/16 14:22	NAS	TAL DEN
Total/NA	Analysis	8015B		5	0.1 mL	5 mL	340491	09/01/16 20:50	NAS	TAL DEN
Total/NA	Prep	3546			30.3 g	1 mL	339721	08/26/16 13:08	TEB	TAL DEN
Total/NA	Analysis	8015B		1			340070	08/30/16 19:49	TEM	TAL DEN
Total/NA	Prep	3050B			1.437 g	100 mL	339930	08/30/16 14:30	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			340400	09/01/16 04:27	CMK	TAL DEN
Total/NA	Prep	3050B			1.437 g	100 mL	339930	08/30/16 14:30	SEJ	TAL DEN
Total/NA	Analysis	6010B		1			340630	09/01/16 23:48	CMK	TAL DEN
Total/NA	Prep	3050B			1.414 g	100 mL	339367	08/26/16 14:45	SEJ	TAL DEN
Total/NA	Analysis	6020		1			339910	08/27/16 00:37	JM	TAL DEN
Total/NA	Prep	7471A			0.50 g	50 mL	340265	08/31/16 13:15	CDH	TAL DEN
Total/NA	Analysis	7471A		1			340414	08/31/16 18:17	CDH	TAL DEN

Lab Chronicle

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

Client Sample ID: #5
Date Collected: 08/18/16 11:00
Date Received: 08/19/16 18:11

Lab Sample ID: 280-87113-5
Matrix: Solid
Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3060A			2.5366 g	500 mL	368183	09/07/16 09:06	BLM	TAL NSH
Total/NA	Analysis	7196A		1	50 mL	50 mL	368433	09/07/16 16:27	BLM	TAL NSH

Laboratory References:

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

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

Laboratory: TestAmerica Denver

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

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-17
A2LA	ISO/IEC 17025		2907.01	10-31-17
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-17
Arizona	State Program	9	AZ0713	12-19-16
Arkansas DEQ	State Program	6	88-0687	06-01-17
California	State Program	9	2513	08-31-16 *
Connecticut	State Program	1	PH-0686	09-30-16
Florida	NELAP	4	E87667	06-30-17
Georgia	State Program	4	N/A	01-09-17
Illinois	NELAP	5	200017	04-30-17
Iowa	State Program	7	370	11-30-16
Kansas	NELAP	7	E-10166	04-30-17
Louisiana	NELAP	6	02096	06-30-17
Maine	State Program	1	CO0002	03-03-17
Minnesota	NELAP	5	8-999-405	12-31-16
Nevada	State Program	9	CO0026	07-31-17
New Hampshire	NELAP	1	205310	04-28-17
New Jersey	NELAP	2	CO004	06-30-17
New York	NELAP	2	11964	04-01-17
North Carolina (WW/SW)	State Program	4	358	12-31-16
North Dakota	State Program	8	R-034	01-09-17
Oklahoma	State Program	6	8614	08-31-16 *
Oregon	NELAP	10	4025	01-09-17
Pennsylvania	NELAP	3	68-00664	07-31-17
South Carolina	State Program	4	72002001	01-09-17
Texas	NELAP	6	T104704183-15-11	09-30-16
USDA	Federal		P330-13-00369	12-17-16
Utah	NELAP	8	CO00026	07-31-16 *
Virginia	NELAP	3	460232	06-14-17
Washington	State Program	10	C583	08-03-17
West Virginia DEP	State Program	3	354	11-30-16
Wisconsin	State Program	5	999615430	08-31-16 *
Wyoming (UST)	A2LA	8	2907.01	10-31-17

Laboratory: TestAmerica Nashville

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

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	A2LA		NA: NELAP & A2LA	12-31-17
A2LA	ISO/IEC 17025		0453.07	12-31-17
Alaska (UST)	State Program	10	UST-087	07-24-17
Arizona	State Program	9	AZ0473	05-05-17
Arkansas DEQ	State Program	6	88-0737	04-25-17
California	State Program	9	2938	10-31-16
Connecticut	State Program	1	PH-0220	12-31-17
Florida	NELAP	4	E87358	06-30-17
Georgia	State Program	4	N/A	12-31-17
Illinois	NELAP	5	200010	12-09-16 *
Iowa	State Program	7	131	04-01-18

* Certification renewal pending - certification considered valid.

Certification Summary

Client: Fahey Oil & Gas
Project/Site: Antelope Farms 1-24 - COGCC Table 910-1

TestAmerica Job ID: 280-87113-1

Laboratory: TestAmerica Nashville (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Kansas	NELAP	7	E-10229	10-31-16 *
Kentucky (UST)	State Program	4	19	06-30-17
Kentucky (WW)	State Program	4	90038	12-31-16
Louisiana	NELAP	6	30613	06-30-17
Maine	State Program	1	TN00032	11-03-17
Maryland	State Program	3	316	03-31-17
Massachusetts	State Program	1	M-TN032	06-30-17
Minnesota	NELAP	5	047-999-345	12-31-16 *
Mississippi	State Program	4	N/A	06-30-16 *
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-17
New Hampshire	NELAP	1	2963	10-09-16 *
New Jersey	NELAP	2	TN965	06-30-17
New York	NELAP	2	11342	03-31-17
North Carolina (WW/SW)	State Program	4	387	12-31-16
North Dakota	State Program	8	R-146	06-30-17
Ohio VAP	State Program	5	CL0033	07-10-17
Oklahoma	State Program	6	9412	08-31-17
Oregon	NELAP	10	TN200001	04-27-17
Pennsylvania	NELAP	3	68-00585	06-30-17
Rhode Island	State Program	1	LAO00268	12-30-16
South Carolina	State Program	4	84009 (001)	02-28-16 *
South Carolina (Do Not Use - DW)	State Program	4	84009 (002)	12-16-17
Tennessee	State Program	4	2008	02-23-17
Texas	NELAP	6	T104704077	08-31-17
USDA	Federal		S-48469	10-30-16
Utah	NELAP	8	TN00032	07-31-17
Virginia	NELAP	3	460152	06-14-17
Washington	State Program	10	C789	07-19-16 *
West Virginia DEP	State Program	3	219	02-28-17
Wisconsin	State Program	5	998020430	08-31-17
Wyoming (UST)	A2LA	8	453.07	12-31-17

* Certification renewal pending - certification considered valid.

TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Fax (303) 431-7171

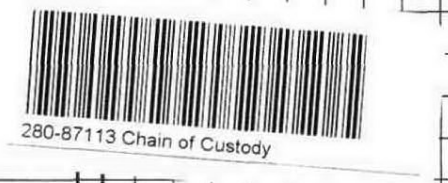
Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Dave Fahey	Lab PM: Harrington, Danielle M	Carrier Tracking No(s):	COC No: 280-56239-19953.1
Client Contact: Mr. Gilbert Paine	Phone: 303-709-0148	E-Mail: danielle.harrington@testamericainc.com		Page: Page 1 of 1
Company: Fahey Oil & Gas				Job #:

Address: 93 South CR 159	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Strasburg	TAT Requested (days):		A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, 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 Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: CO, 80136			
Phone: 303-709-0148(Tel)	PO #: Advance Payment Required		
Email: cherokeeequipment@hotmail.com	WO #:		Other:
Project Name: Antelope Farms 1-24 - COGCC Table 910-1	Project #: 28015728		
Site:	SSOW#:		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010B, 6020, 7471A Total Metals	20B_SAR, Moisture	8260B - BTEX	8015B_DRO - (MOD) Local Method	9050 Conductivity/pH/7196A Hexavalent subbed to Nashville	8015B GRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N	N	N		
#1	8-18-16	11:00		Solid	2	2	✓	✓	✓	✓	✓	✓	7	
#2	8-18-16	11:00		Solid	2	2	✓	✓	✓	✓	✓	✓	7	
#3	8-18-16	11:00		Solid	2	2	✓	✓	✓	✓	✓	✓	7	
#4	8-18-16	11:00		Solid	2	2	✓	✓	✓	✓	✓	✓	7	
#5	8-18-16	11:00		Solid	2	2	✓	✓	✓	✓	✓	✓	7	



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:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Dave Fahey	8-18-16	14:05	Se	8-18-16 1705	TAD
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		14.6, 13.1 +0.0 IR#5 transferred 6/JT 8/18/16

Login Sample Receipt Checklist

Client: Fahey Oil & Gas

Job Number: 280-87113-1

Login Number: 87113
List Number: 1
Creator: True, Joshua A

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?	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 <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Fahey Oil & Gas

Job Number: 280-87113-1

Login Number: 87113
List Number: 2
Creator: McBride, Mike

List Source: TestAmerica Nashville
List Creation: 08/23/16 10:37 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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.	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	