

## ANALYTICAL REPORT

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TestAmerica Denver

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TestAmerica Job ID: 280-107459-1

Client Project/Site: Grynberg Petroleum - COGCC Table 910-1

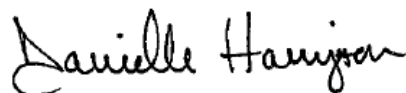
For:

Grynberg Petroleum Company

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Attn: Randy Edelen



Authorized for release by:

4/11/2018 12:32:37 PM

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

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

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# Definitions/Glossary

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

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## Qualifiers

### GC/MS VOA

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

### GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC VOA

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.
H	Sample was prepped or analyzed beyond the specified holding time

### GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
B	Compound was found in the blank and sample.
F2	MS/MSD RPD exceeds control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F4	MS/MSD RPD exceeds control limits due to sample size difference.

## Glossary

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

TestAmerica Denver

## Definitions/Glossary

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

### Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

## Case Narrative

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

**Job ID: 280-107459-1**

**Laboratory: TestAmerica Denver**

### Narrative

## CASE NARRATIVE

**Client: Grynberg Petroleum Company**

**Project: Grynberg Petroleum - COGCC Table 910-1**

**Report Number: 280-107459-1**

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 3/15/2018; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 13.5° C, which is outside the EPA's recommended temperature of 6.0C. However, the samples are considered valid as they were collected and received within hours of collection and did not have time to cool.

Please note, samples E-W 4, E-W 5, and E-W 6 had Method 8260B and Method 8015 GRO requested by client on 03/29/2018.

### **VOLATILE ORGANIC COMPOUNDS (GC-MS)- METHOD 8260B**

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

### **SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS) - METHOD 8270C (SIM)**

Low levels of Acenaphthene, Fluoranthene, Fluorene, Naphthalene, and Pyrene are present in the method blank associated with QC batch 280-408918. 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.

### **GASOLINE RANGE ORGANICS (GRO) - METHOD 8015B**

The analysis for Gasoline Range Organics Method 8015B for samples EW-4, EW-5, and EW- was performed outside of the prescribed hold time due to client request for analysis on the last day of hold time. Please note that the sample results should be considered estimated.

Low levels of Gasoline Range Organics are present in the method blank associated with QC batch 280-408672. 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 samples E-W 4 and BACKGROUND. The MS/MSD for method 8015B exhibited spike compound recoveries outside the QC limits for GASOLINE RANGE ORGANICS (C6-C10). The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Per the analyst, Soil samples E-W 4, E-W 5, and E-W 6 were homogenized before analysis performed. Possible low bias as a result.

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

## Case Narrative

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

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### Job ID: 280-107459-1 (Continued)

#### Laboratory: TestAmerica Denver (Continued)

##### DIESEL RANGE ORGANICS- METHOD 8015B

Low levels of Diesel Range Organics are present in the method blank associated with QC batch 280-409993. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

The method 8015B required MS/MSD could not be reported for this batch. The acceptable LCS analyte recoveries provide evidence that the laboratory is performing the method within acceptable guidelines.

The surrogate o-Terphenyl was biased high in the closing continuing calibration verification (CCV) at 116% (acceptable limits 49-115%R). The associated samples are in 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.

##### SODIUM ABSORPTION RATIO

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

##### TOTAL METALS- METHOD 6010B/6020/7471A

Low levels of Calcium and Magnesium are present in the method blank associated with QC batch 280-409483. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

Nickel is present at a level greater than the reporting limit in the method blank associated with QC batch 280-409467. As the associated sample amounts are ten times greater than the method blank concentration, corrective action is deemed unnecessary.

The accuracy and precision of the Calcium and Silver MS/MSD performed on a sample BACKGROUND could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

MS/MSD analyses were performed on sample BACKGROUND. The MS/MSD for method 6020 exhibited multiple 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.

##### GENERAL CHEMISTRY - VARIOUS

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

# Detection Summary

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

## Client Sample ID: BACKGROUND

## Lab Sample ID: 280-107459-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	0.0028	J	0.0058	0.00070	mg/Kg	1	☼	8260B	Total/NA
Benzo[a]anthracene	0.0055		0.0053	0.0019	mg/Kg	1	☼	8270C SIM	Total/NA
Chrysene	0.011		0.0053	0.0021	mg/Kg	1	☼	8270C SIM	Total/NA
Naphthalene	0.00082	J B	0.0053	0.00069	mg/Kg	1	☼	8270C SIM	Total/NA
Gasoline Range Organics (GRO) -C6-C10	0.38	J B F1	1.3	0.35	mg/Kg	1	☼	8015B	Total/NA
Diesel Range Organics [C10-C28]	6.7	J B	7.8	1.3	mg/Kg	1	☼	8015B	Total/NA
Motor Oil (C20-C38)	13	J	24	7.7	mg/Kg	1	☼	8015B	Total/NA
Barium	110		0.81	0.085	mg/Kg	1	☼	6010B	Total/NA
Boron	2.5	J	8.1	0.80	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.15	J	0.41	0.033	mg/Kg	1	☼	6010B	Total/NA
Calcium	25000	B	41	11	mg/Kg	1	☼	6010B	Total/NA
Magnesium	3200	B	16	3.0	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.6	F1	0.62	0.052	mg/Kg	1	☼	6020	Total/NA
Chromium	7.0		0.21	0.079	mg/Kg	1	☼	6020	Total/NA
Copper	7.0	F1	0.26	0.074	mg/Kg	1	☼	6020	Total/NA
Lead	6.7		0.16	0.019	mg/Kg	1	☼	6020	Total/NA
Nickel	7.2	F1 B	0.16	0.026	mg/Kg	1	☼	6020	Total/NA
Selenium	0.29	J F1	0.52	0.14	mg/Kg	1	☼	6020	Total/NA
Zinc	24	F1	1.0	0.33	mg/Kg	1	☼	6020	Total/NA
Mercury	0.0098	J	0.020	0.0066	mg/Kg	1	☼	7471A	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Trivalent Chromium	7.0		2.0	2.0	mg/Kg	1		7196A	Total/NA
pH	7.0		0.1	0.1	SU	1		9040C	Soluble
Specific Conductance	22000		10	10	umhos/cm	1		9050A	Soluble

## Client Sample ID: E-W 4

## Lab Sample ID: 280-107459-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) -C6-C10	0.47	J H F1 B	1.4	0.38	mg/Kg	1	☼	8015B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Sodium Adsorption Ratio	60		1.2	1.2	No Unit	10		20B	Soluble
pH	7.5		0.1	0.1	SU	1		9040C	Soluble
Specific Conductance	19000		10	10	umhos/cm	1		9050A	Soluble

## Client Sample ID: E-W 5

## Lab Sample ID: 280-107459-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) -C6-C10	0.44	J H B	1.4	0.38	mg/Kg	1	☼	8015B	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Sodium Adsorption Ratio	82		1.2	1.2	No Unit	10		20B	Soluble
pH	7.7		0.1	0.1	SU	1		9040C	Soluble
Specific Conductance	15000		10	10	umhos/cm	1		9050A	Soluble

## Client Sample ID: E-W 6

## Lab Sample ID: 280-107459-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) -C6-C10	0.48	J H B	1.4	0.37	mg/Kg	1	☼	8015B	Total/NA

This Detection Summary does not include radiochemical test results.

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## Detection Summary

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

**Client Sample ID: E-W 6 (Continued)**

**Lab Sample ID: 280-107459-4**

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Sodium Adsorption Ratio	8.8		1.2	1.2	No Unit	10		20B	Soluble
pH	8.0		0.1	0.1	SU	1		9040C	Soluble
Specific Conductance	1700		10	10	umhos/cm	1		9050A	Soluble

This Detection Summary does not include radiochemical test results.

TestAmerica Denver



## Method Summary

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS) - Waste Matrix	SW846	TAL DEN
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	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: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-107459-1	BACKGROUND	Solid	03/15/18 14:33	03/15/18 17:10
280-107459-2	E-W 4	Solid	03/15/18 14:40	03/15/18 17:10
280-107459-3	E-W 5	Solid	03/15/18 14:50	03/15/18 17:10
280-107459-4	E-W 6	Solid	03/15/18 14:55	03/15/18 17:10

# Client Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

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

Client Sample ID: BACKGROUND

Date Collected: 03/15/18 14:33

Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-1

Matrix: Solid

Percent Solids: 93.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0058	0.00054	mg/Kg	☼	03/28/18 20:00	03/28/18 22:50	1
Ethylbenzene	ND		0.0058	0.00077	mg/Kg	☼	03/28/18 20:00	03/28/18 22:50	1
Toluene	ND		0.0058	0.00080	mg/Kg	☼	03/28/18 20:00	03/28/18 22:50	1
Xylenes, Total	0.0028	J	0.0058	0.00070	mg/Kg	☼	03/28/18 20:00	03/28/18 22:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		58 - 140	03/28/18 20:00	03/28/18 22:50	1
4-Bromofluorobenzene (Surr)	113		76 - 127	03/28/18 20:00	03/28/18 22:50	1
Dibromofluoromethane (Surr)	104		75 - 121	03/28/18 20:00	03/28/18 22:50	1
Toluene-d8 (Surr)	98		80 - 126	03/28/18 20:00	03/28/18 22:50	1

Client Sample ID: E-W 4

Date Collected: 03/15/18 14:40

Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-2

Matrix: Solid

Percent Solids: 84.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0062	0.00059	mg/Kg	☼	03/29/18 21:31	03/29/18 22:03	1
Ethylbenzene	ND		0.0062	0.00084	mg/Kg	☼	03/29/18 21:31	03/29/18 22:03	1
Toluene	ND		0.0062	0.00086	mg/Kg	☼	03/29/18 21:31	03/29/18 22:03	1
Xylenes, Total	ND		0.0062	0.00076	mg/Kg	☼	03/29/18 21:31	03/29/18 22:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		58 - 140	03/29/18 21:31	03/29/18 22:03	1
4-Bromofluorobenzene (Surr)	102		76 - 127	03/29/18 21:31	03/29/18 22:03	1
Dibromofluoromethane (Surr)	102		75 - 121	03/29/18 21:31	03/29/18 22:03	1
Toluene-d8 (Surr)	94		80 - 126	03/29/18 21:31	03/29/18 22:03	1

Client Sample ID: E-W 5

Date Collected: 03/15/18 14:50

Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-3

Matrix: Solid

Percent Solids: 84.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0067	0.00063	mg/Kg	☼	03/29/18 21:31	03/29/18 23:24	1
Ethylbenzene	ND		0.0067	0.00090	mg/Kg	☼	03/29/18 21:31	03/29/18 23:24	1
Toluene	ND		0.0067	0.00093	mg/Kg	☼	03/29/18 21:31	03/29/18 23:24	1
Xylenes, Total	ND		0.0067	0.00082	mg/Kg	☼	03/29/18 21:31	03/29/18 23:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		58 - 140	03/29/18 21:31	03/29/18 23:24	1
4-Bromofluorobenzene (Surr)	106		76 - 127	03/29/18 21:31	03/29/18 23:24	1
Dibromofluoromethane (Surr)	101		75 - 121	03/29/18 21:31	03/29/18 23:24	1
Toluene-d8 (Surr)	96		80 - 126	03/29/18 21:31	03/29/18 23:24	1

Client Sample ID: E-W 6

Date Collected: 03/15/18 14:55

Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-4

Matrix: Solid

Percent Solids: 87.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0066	0.00062	mg/Kg	☼	03/29/18 21:31	03/29/18 23:44	1
Ethylbenzene	ND		0.0066	0.00088	mg/Kg	☼	03/29/18 21:31	03/29/18 23:44	1
Toluene	ND		0.0066	0.00091	mg/Kg	☼	03/29/18 21:31	03/29/18 23:44	1
Xylenes, Total	ND		0.0066	0.00080	mg/Kg	☼	03/29/18 21:31	03/29/18 23:44	1

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# Client Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		58 - 140	03/29/18 21:31	03/29/18 23:44	1
4-Bromofluorobenzene (Surr)	108		76 - 127	03/29/18 21:31	03/29/18 23:44	1
Dibromofluoromethane (Surr)	105		75 - 121	03/29/18 21:31	03/29/18 23:44	1
Toluene-d8 (Surr)	98		80 - 126	03/29/18 21:31	03/29/18 23:44	1

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

Client Sample ID: BACKGROUND

Date Collected: 03/15/18 14:33

Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-1

Matrix: Solid

Percent Solids: 93.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0053	0.00034	mg/Kg	☼	03/19/18 12:27	03/23/18 23:58	1
Anthracene	ND		0.0053	0.0015	mg/Kg	☼	03/19/18 12:27	03/23/18 23:58	1
Benzo[a]anthracene	0.0055		0.0053	0.0019	mg/Kg	☼	03/19/18 12:27	03/23/18 23:58	1
Benzo[a]pyrene	ND		0.0053	0.0016	mg/Kg	☼	03/19/18 12:27	03/23/18 23:58	1
Benzo[b]fluoranthene	ND		0.0053	0.0025	mg/Kg	☼	03/19/18 12:27	03/23/18 23:58	1
Benzo[k]fluoranthene	ND		0.0053	0.0021	mg/Kg	☼	03/19/18 12:27	03/23/18 23:58	1
Chrysene	0.011		0.0053	0.0021	mg/Kg	☼	03/19/18 12:27	03/23/18 23:58	1
Dibenz(a,h)anthracene	ND		0.0053	0.0027	mg/Kg	☼	03/19/18 12:27	03/23/18 23:58	1
Fluoranthene	ND		0.0053	0.0021	mg/Kg	☼	03/19/18 12:27	03/23/18 23:58	1
Fluorene	ND		0.0053	0.00099	mg/Kg	☼	03/19/18 12:27	03/23/18 23:58	1
Indeno[1,2,3-cd]pyrene	ND		0.0053	0.0023	mg/Kg	☼	03/19/18 12:27	03/23/18 23:58	1
Naphthalene	0.00082	J B	0.0053	0.00069	mg/Kg	☼	03/19/18 12:27	03/23/18 23:58	1
Pyrene	ND		0.0053	0.0023	mg/Kg	☼	03/19/18 12:27	03/23/18 23:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	81		39 - 120	03/19/18 12:27	03/23/18 23:58	1
Nitrobenzene-d5	89		42 - 120	03/19/18 12:27	03/23/18 23:58	1
Terphenyl-d14	77		35 - 124	03/19/18 12:27	03/23/18 23:58	1

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

Client Sample ID: BACKGROUND

Date Collected: 03/15/18 14:33

Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-1

Matrix: Solid

Percent Solids: 93.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	0.38	J B F1	1.3	0.35	mg/Kg	☼	03/20/18 14:33	03/22/18 03:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	98		77 - 123	03/20/18 14:33	03/22/18 03:02	1

Client Sample ID: E-W 4

Date Collected: 03/15/18 14:40

Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-2

Matrix: Solid

Percent Solids: 84.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	0.47	J H F1 B	1.4	0.38	mg/Kg	☼	04/04/18 12:48	04/10/18 11:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	83		77 - 123	04/04/18 12:48	04/10/18 11:32	1

TestAmerica Denver

# Client Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

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

Client Sample ID: E-W 5  
Date Collected: 03/15/18 14:50  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-3  
Matrix: Solid  
Percent Solids: 84.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	0.44	J H B	1.4	0.38	mg/Kg	☼	04/04/18 12:48	04/10/18 12:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	83		77 - 123				04/04/18 12:48	04/10/18 12:46	1

Client Sample ID: E-W 6  
Date Collected: 03/15/18 14:55  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-4  
Matrix: Solid  
Percent Solids: 87.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	0.48	J H B	1.4	0.37	mg/Kg	☼	04/04/18 12:48	04/10/18 13:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	85		77 - 123				04/04/18 12:48	04/10/18 13:10	1

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

Client Sample ID: BACKGROUND  
Date Collected: 03/15/18 14:33  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-1  
Matrix: Solid  
Percent Solids: 93.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	6.7	J B	7.8	1.3	mg/Kg	☼	03/16/18 08:41	04/03/18 18:38	1
Motor Oil (C20-C38)	13	J	24	7.7	mg/Kg	☼	03/16/18 08:41	04/03/18 18:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	79		49 - 115				03/16/18 08:41	04/03/18 18:38	1

## Method: 20B - Sodium Adsorption Ratio - Soluble

Client Sample ID: BACKGROUND  
Date Collected: 03/15/18 14:33  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-1  
Matrix: Solid  
Percent Solids: 93.3

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	ND		1.2	1.2	No Unit	—	03/29/18 13:03	04/02/18 16:20	10

Client Sample ID: E-W 4  
Date Collected: 03/15/18 14:40  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-2  
Matrix: Solid  
Percent Solids: 84.6

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	60		1.2	1.2	No Unit	—	03/29/18 13:03	04/02/18 16:29	10

Client Sample ID: E-W 5  
Date Collected: 03/15/18 14:50  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-3  
Matrix: Solid  
Percent Solids: 84.5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	82		1.2	1.2	No Unit	—	03/29/18 13:03	04/02/18 16:32	10

TestAmerica Denver

# Client Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

## Method: 20B - Sodium Adsorption Ratio - Soluble

Client Sample ID: E-W 6  
Date Collected: 03/15/18 14:55  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-4  
Matrix: Solid  
Percent Solids: 87.8

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	8.8		1.2	1.2	No Unit		03/29/18 13:03	04/02/18 16:35	10

## Method: 6010B - Metals (ICP)

Client Sample ID: BACKGROUND  
Date Collected: 03/15/18 14:33  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-1  
Matrix: Solid  
Percent Solids: 93.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	110		0.81	0.085	mg/Kg	☼	03/26/18 15:44	03/28/18 20:48	1
Boron	2.5	J	8.1	0.80	mg/Kg	☼	03/26/18 15:44	03/28/18 20:48	1
Cadmium	0.15	J	0.41	0.033	mg/Kg	☼	03/26/18 15:44	03/28/18 20:48	1
Calcium	25000	B	41	11	mg/Kg	☼	03/26/18 15:44	03/28/18 20:48	1
Magnesium	3200	B	16	3.0	mg/Kg	☼	03/26/18 15:44	03/28/18 20:48	1
Silver	ND	F2	0.81	0.13	mg/Kg	☼	03/26/18 15:44	03/28/18 20:48	1

## Method: 6020 - Metals (ICP/MS)

Client Sample ID: BACKGROUND  
Date Collected: 03/15/18 14:33  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-1  
Matrix: Solid  
Percent Solids: 93.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.6	F1	0.62	0.052	mg/Kg	☼	03/26/18 15:49	03/29/18 00:40	1
Chromium	7.0		0.21	0.079	mg/Kg	☼	03/26/18 15:49	03/29/18 00:40	1
Copper	7.0	F1	0.26	0.074	mg/Kg	☼	03/26/18 15:49	03/29/18 00:40	1
Lead	6.7		0.16	0.019	mg/Kg	☼	03/26/18 15:49	03/29/18 00:40	1
Nickel	7.2	F1 B	0.16	0.026	mg/Kg	☼	03/26/18 15:49	03/29/18 00:40	1
Selenium	0.29	J F1	0.52	0.14	mg/Kg	☼	03/26/18 15:49	03/29/18 00:40	1
Zinc	24	F1	1.0	0.33	mg/Kg	☼	03/26/18 15:49	03/29/18 00:40	1

## Method: 7471A - Mercury (CVAA)

Client Sample ID: BACKGROUND  
Date Collected: 03/15/18 14:33  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-1  
Matrix: Solid  
Percent Solids: 93.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0098	J	0.020	0.0066	mg/Kg	☼	03/20/18 12:26	03/20/18 16:52	1

## General Chemistry

Client Sample ID: BACKGROUND  
Date Collected: 03/15/18 14:33  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-1  
Matrix: Solid  
Percent Solids: 93.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexavalent chromium	ND		5.3	2.1	mg/Kg	☼	03/24/18 13:19	03/25/18 15:08	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Trivalent Chromium	7.0		2.0	2.0	mg/Kg			04/03/18 08:18	1
Percent Moisture	6.7		0.1	0.1	%			03/19/18 09:12	1

TestAmerica Denver

# Client Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

## General Chemistry

Client Sample ID: E-W 4  
Date Collected: 03/15/18 14:40  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-2  
Matrix: Solid  
Percent Solids: 84.6

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	15.4		0.1	0.1	%	-		03/19/18 09:12	1

Client Sample ID: E-W 5  
Date Collected: 03/15/18 14:50  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-3  
Matrix: Solid  
Percent Solids: 84.5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	15.5		0.1	0.1	%	-		03/19/18 09:12	1

Client Sample ID: E-W 6  
Date Collected: 03/15/18 14:55  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-4  
Matrix: Solid  
Percent Solids: 87.8

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12.2		0.1	0.1	%	-		03/19/18 09:12	1

## General Chemistry - Soluble

Client Sample ID: BACKGROUND  
Date Collected: 03/15/18 14:33  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-1  
Matrix: Solid  
Percent Solids: 93.3

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.0		0.1	0.1	SU	-	03/25/18 11:49	03/26/18 09:06	1
Specific Conductance	22000		10	10	umhos/cm	-	03/25/18 11:49	03/30/18 13:30	1

Client Sample ID: E-W 4  
Date Collected: 03/15/18 14:40  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-2  
Matrix: Solid  
Percent Solids: 84.6

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.5		0.1	0.1	SU	-	03/25/18 11:49	03/26/18 09:06	1
Specific Conductance	19000		10	10	umhos/cm	-	03/25/18 11:49	03/30/18 13:30	1

Client Sample ID: E-W 5  
Date Collected: 03/15/18 14:50  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-3  
Matrix: Solid  
Percent Solids: 84.5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.7		0.1	0.1	SU	-	03/25/18 11:49	03/26/18 09:06	1
Specific Conductance	15000		10	10	umhos/cm	-	03/25/18 11:49	03/30/18 13:30	1

Client Sample ID: E-W 6  
Date Collected: 03/15/18 14:55  
Date Received: 03/15/18 17:10

Lab Sample ID: 280-107459-4  
Matrix: Solid  
Percent Solids: 87.8

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.0		0.1	0.1	SU	-	03/25/18 11:49	03/26/18 09:06	1
Specific Conductance	1700		10	10	umhos/cm	-	03/25/18 11:49	03/30/18 13:30	1

TestAmerica Denver

# Surrogate Summary

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (58-140)	BFB (76-127)	DBFM (75-121)	TOL (80-126)
280-107459-1	BACKGROUND	109	113	104	98
280-107459-1 MS	BACKGROUND	121	110	111	103
280-107459-1 MSD	BACKGROUND	110	98	102	96
280-107459-2	E-W 4	103	102	102	94
280-107459-2 MS	E-W 4	108	104	103	100
280-107459-2 MSD	E-W 4	100	98	101	97
280-107459-3	E-W 5	102	106	101	96
280-107459-4	E-W 6	110	108	105	98
LCS 280-409452/1-A	Lab Control Sample	111	105	108	103
LCS 280-409583/1-A	Lab Control Sample	99	95	96	92
LCSD 280-409452/2-A	Lab Control Sample Dup	106	99	103	98
LCSD 280-409583/2-A	Lab Control Sample Dup	101	96	98	93
MB 280-409452/3-A	Method Blank	107	105	104	98
MB 280-409583/3-A	Method Blank	101	104	100	94

### Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FBP (39-120)	NBZ (42-120)	TPHL (35-124)
280-107459-1	BACKGROUND	81	89	77
280-107459-1 MS	BACKGROUND	88	85	114
280-107459-1 MSD	BACKGROUND	82	85	81
LCS 280-408323/2-A	Lab Control Sample	77	83	85
MB 280-408323/1-A	Method Blank	88	94	91

### Surrogate Legend

FBP = 2-Fluorobiphenyl  
NBZ = Nitrobenzene-d5  
TPHL = Terphenyl-d14

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TFT1 (77-123)	
280-107459-1	BACKGROUND	98	
280-107459-1 MS	BACKGROUND	114	
280-107459-1 MSD	BACKGROUND	113	
280-107459-2	E-W 4	83	
280-107459-2 MS	E-W 4	84	
280-107459-2 MSD	E-W 4	87	

TestAmerica Denver



## Surrogate Summary

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

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

Matrix: Solid

Prep Type: Total/NA

#### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TFT1 (77-123)
280-107459-3	E-W 5	83
280-107459-4	E-W 6	85
LCS 280-408490/2-A	Lab Control Sample	95
LCS 280-410194/2-A	Lab Control Sample	96
MB 280-408490/1-A	Method Blank	97
MB 280-410194/1-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)

Lab Sample ID	Client Sample ID	OTPH1 (49-115)
280-107459-1	BACKGROUND	79
LCS 280-408095/2-A	Lab Control Sample	83
MB 280-408095/1-A	Method Blank	80

#### Surrogate Legend

OTPH = o-Terphenyl

# QC Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

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

Lab Sample ID: MB 280-409452/3-A

Matrix: Solid

Analysis Batch: 409447

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 409452

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0050	0.00047	mg/Kg		03/28/18 20:00	03/29/18 02:13	1
Ethylbenzene	ND		0.0050	0.00067	mg/Kg		03/28/18 20:00	03/29/18 02:13	1
Toluene	ND		0.0050	0.00069	mg/Kg		03/28/18 20:00	03/29/18 02:13	1
Xylenes, Total	ND		0.0050	0.00061	mg/Kg		03/28/18 20:00	03/29/18 02:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		58 - 140	03/28/18 20:00	03/29/18 02:13	1
4-Bromofluorobenzene (Surr)	105		76 - 127	03/28/18 20:00	03/29/18 02:13	1
Dibromofluoromethane (Surr)	104		75 - 121	03/28/18 20:00	03/29/18 02:13	1
Toluene-d8 (Surr)	98		80 - 126	03/28/18 20:00	03/29/18 02:13	1

Lab Sample ID: LCS 280-409452/1-A

Matrix: Solid

Analysis Batch: 409447

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 409452

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Benzene	0.0500	0.0532		mg/Kg		106	75 - 135
Ethylbenzene	0.0500	0.0497		mg/Kg		99	73 - 125
Toluene	0.0500	0.0543		mg/Kg		109	77 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	111		58 - 140
4-Bromofluorobenzene (Surr)	105		76 - 127
Dibromofluoromethane (Surr)	108		75 - 121
Toluene-d8 (Surr)	103		80 - 126

Lab Sample ID: LCSD 280-409452/2-A

Matrix: Solid

Analysis Batch: 409447

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 409452

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.0500	0.0509		mg/Kg		102	75 - 135	4	20
Ethylbenzene	0.0500	0.0481		mg/Kg		96	73 - 125	3	20
Toluene	0.0500	0.0523		mg/Kg		105	77 - 122	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		58 - 140
4-Bromofluorobenzene (Surr)	99		76 - 127
Dibromofluoromethane (Surr)	103		75 - 121
Toluene-d8 (Surr)	98		80 - 126

Lab Sample ID: 280-107459-1 MS

Matrix: Solid

Analysis Batch: 409447

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 409452

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Benzene	ND		0.0581	0.0593		mg/Kg	☼	102	75 - 135

TestAmerica Denver

# QC Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

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

Lab Sample ID: 280-107459-1 MS

Matrix: Solid

Analysis Batch: 409447

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 409452

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	ND		0.0581	0.0554		mg/Kg	☼	95	73 - 125
Toluene	ND		0.0581	0.0594		mg/Kg	☼	102	77 - 122
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	121		58 - 140						
4-Bromofluorobenzene (Surr)	110		76 - 127						
Dibromofluoromethane (Surr)	111		75 - 121						
Toluene-d8 (Surr)	103		80 - 126						

Lab Sample ID: 280-107459-1 MSD

Matrix: Solid

Analysis Batch: 409447

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 409452

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	ND		0.0582	0.0583		mg/Kg	☼	100	75 - 135	2	20
Ethylbenzene	ND		0.0582	0.0533		mg/Kg	☼	92	73 - 125	4	20
Toluene	ND		0.0582	0.0594		mg/Kg	☼	102	77 - 122	0	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	110		58 - 140								
4-Bromofluorobenzene (Surr)	98		76 - 127								
Dibromofluoromethane (Surr)	102		75 - 121								
Toluene-d8 (Surr)	96		80 - 126								

Lab Sample ID: MB 280-409583/3-A

Matrix: Solid

Analysis Batch: 409572

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 409583

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0050	0.00047	mg/Kg		03/29/18 20:00	03/29/18 21:43	1
Ethylbenzene	ND		0.0050	0.00067	mg/Kg		03/29/18 20:00	03/29/18 21:43	1
Toluene	ND		0.0050	0.00069	mg/Kg		03/29/18 20:00	03/29/18 21:43	1
Xylenes, Total	ND		0.0050	0.00061	mg/Kg		03/29/18 20:00	03/29/18 21:43	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		58 - 140				03/29/18 20:00	03/29/18 21:43	1
4-Bromofluorobenzene (Surr)	104		76 - 127				03/29/18 20:00	03/29/18 21:43	1
Dibromofluoromethane (Surr)	100		75 - 121				03/29/18 20:00	03/29/18 21:43	1
Toluene-d8 (Surr)	94		80 - 126				03/29/18 20:00	03/29/18 21:43	1

Lab Sample ID: LCS 280-409583/1-A

Matrix: Solid

Analysis Batch: 409572

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 409583

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.0529		mg/Kg		106	75 - 135
Ethylbenzene	0.0500	0.0503		mg/Kg		101	73 - 125

TestAmerica Denver

# QC Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

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

Lab Sample ID: LCS 280-409583/1-A

Matrix: Solid

Analysis Batch: 409572

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 409583

			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Toluene			0.0500	0.0542		mg/Kg		108	77 - 122		
Surrogate	LCS	LCS									
	%Recovery	Qualifier	Limits								
	1,2-Dichloroethane-d4 (Surr)	99	58 - 140								
	4-Bromofluorobenzene (Surr)	95	76 - 127								
	Dibromofluoromethane (Surr)	96	75 - 121								
	Toluene-d8 (Surr)	92	80 - 126								

Lab Sample ID: LCSD 280-409583/2-A

Matrix: Solid

Analysis Batch: 409572

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 409583

Top Data: 10000										RPD	
Analyte			Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.		
			Added	Result	Qualifier			Limits	RPD	Limit	
Benzene			0.0500	0.0518		mg/Kg		104	75 - 135	2	20
Ethylbenzene			0.0500	0.0489		mg/Kg		98	73 - 125	3	20
Toluene			0.0500	0.0523		mg/Kg		105	77 - 122	3	20
Surrogate	LCSD	LCSD	Limits								
	%Recovery	Qualifier									
1,2-Dichloroethane-d4 (Surr)	101		58 - 140								
4-Bromofluorobenzene (Surr)	96		76 - 127								
Dibromofluoromethane (Surr)	98		75 - 121								
Toluene-d8 (Surr)	93		80 - 126								

Lab Sample ID: 280-107459-2 MS

Matrix: Solid

Analysis Batch: 409572

Client Sample ID: E-W 4

Prep Type: Total/NA

Prep Batch: 409583

P Data: 1000									
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		0.0630	0.0649		mg/Kg	☼	103	75 - 135
Ethylbenzene	ND		0.0630	0.0630		mg/Kg	☼	100	73 - 125
Toluene	ND		0.0630	0.0670		mg/Kg	☼	106	77 - 122
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	108		58 - 140						
4-Bromofluorobenzene (Surr)	104		76 - 127						
Dibromofluoromethane (Surr)	103		75 - 121						
Toluene-d8 (Surr)	100		80 - 126						

Lab Sample ID: 280-107459-2 MSD

Matrix: Solid

Analysis Batch: 409572

Client Sample ID: E-W 4

Prep Type: Total/NA

Prep Batch: 409583

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	ND		0.0632	0.0624		mg/Kg	☼	99	75 - 135	4	20
Ethylbenzene	ND		0.0632	0.0597		mg/Kg	☼	94	73 - 125	5	20
Toluene	ND		0.0632	0.0647		mg/Kg	☼	102	77 - 122	3	20

TestAmerica Denver

# QC Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

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

Lab Sample ID: 280-107459-2 MSD

Matrix: Solid

Analysis Batch: 409572

Client Sample ID: E-W 4

Prep Type: Total/NA

Prep Batch: 409583

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		58 - 140
4-Bromofluorobenzene (Surr)	98		76 - 127
Dibromofluoromethane (Surr)	101		75 - 121
Toluene-d8 (Surr)	97		80 - 126

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

Lab Sample ID: MB 280-408323/1-A

Matrix: Solid

Analysis Batch: 408918

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 408323

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.000940	J	0.0045	0.00029	mg/Kg		03/19/18 12:27	03/23/18 22:58	1
Anthracene	ND		0.0045	0.0013	mg/Kg		03/19/18 12:27	03/23/18 22:58	1
Benzo[a]anthracene	ND		0.0045	0.0016	mg/Kg		03/19/18 12:27	03/23/18 22:58	1
Benzo[a]pyrene	ND		0.0045	0.0013	mg/Kg		03/19/18 12:27	03/23/18 22:58	1
Benzo[b]fluoranthene	ND		0.0045	0.0021	mg/Kg		03/19/18 12:27	03/23/18 22:58	1
Benzo[k]fluoranthene	ND		0.0045	0.0018	mg/Kg		03/19/18 12:27	03/23/18 22:58	1
Chrysene	ND		0.0045	0.0018	mg/Kg		03/19/18 12:27	03/23/18 22:58	1
Dibenz(a,h)anthracene	ND		0.0045	0.0023	mg/Kg		03/19/18 12:27	03/23/18 22:58	1
Fluoranthene	0.00279	J	0.0045	0.0018	mg/Kg		03/19/18 12:27	03/23/18 22:58	1
Fluorene	0.00107	J	0.0045	0.00084	mg/Kg		03/19/18 12:27	03/23/18 22:58	1
Indeno[1,2,3-cd]pyrene	ND		0.0045	0.0020	mg/Kg		03/19/18 12:27	03/23/18 22:58	1
Naphthalene	0.000893	J	0.0045	0.00058	mg/Kg		03/19/18 12:27	03/23/18 22:58	1
Pyrene	0.00221	J	0.0045	0.0020	mg/Kg		03/19/18 12:27	03/23/18 22:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	88		39 - 120	03/19/18 12:27	03/23/18 22:58	1
Nitrobenzene-d5	94		42 - 120	03/19/18 12:27	03/23/18 22:58	1
Terphenyl-d14	91		35 - 124	03/19/18 12:27	03/23/18 22:58	1

Lab Sample ID: LCS 280-408323/2-A

Matrix: Solid

Analysis Batch: 408918

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 408323

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	0.0600	0.0470		mg/Kg		78	35 - 120
Anthracene	0.0600	0.0472		mg/Kg		79	43 - 120
Benzo[a]anthracene	0.0600	0.0509		mg/Kg		85	36 - 120
Benzo[a]pyrene	0.0600	0.0506		mg/Kg		84	20 - 120
Benzo[b]fluoranthene	0.0600	0.0498		mg/Kg		83	37 - 120
Benzo[k]fluoranthene	0.0600	0.0513		mg/Kg		86	46 - 120
Chrysene	0.0600	0.0528		mg/Kg		88	34 - 120
Dibenz(a,h)anthracene	0.0600	0.0516		mg/Kg		86	20 - 120
Fluoranthene	0.0600	0.0470		mg/Kg		78	45 - 120
Fluorene	0.0600	0.0454		mg/Kg		76	44 - 120
Indeno[1,2,3-cd]pyrene	0.0600	0.0507		mg/Kg		84	20 - 127

TestAmerica Denver

# QC Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

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

Lab Sample ID: LCS 280-408323/2-A

Matrix: Solid

Analysis Batch: 408918

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 408323

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	0.0600	0.0493		mg/Kg		82	44 - 120
Pyrene	0.0600	0.0487		mg/Kg		81	43 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	77		39 - 120
Nitrobenzene-d5	83		42 - 120
Terphenyl-d14	85		35 - 124

Lab Sample ID: 280-107459-1 MS

Matrix: Solid

Analysis Batch: 408918

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 408323

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	ND		0.0603	0.0510		mg/Kg	✱	85	35 - 120
Anthracene	ND		0.0603	0.0503		mg/Kg	✱	83	43 - 120
Benzo[a]anthracene	0.0055		0.0603	0.0506		mg/Kg	✱	75	36 - 120
Benzo[a]pyrene	ND		0.0603	0.0501		mg/Kg	✱	83	20 - 120
Benzo[b]fluoranthene	ND		0.0603	0.0492		mg/Kg	✱	82	37 - 120
Benzo[k]fluoranthene	ND		0.0603	0.0491		mg/Kg	✱	81	46 - 120
Chrysene	0.011		0.0603	0.0525		mg/Kg	✱	69	34 - 120
Dibenz(a,h)anthracene	ND		0.0603	0.0529		mg/Kg	✱	88	20 - 120
Fluoranthene	ND		0.0603	0.0495		mg/Kg	✱	82	45 - 120
Fluorene	ND		0.0603	0.0482		mg/Kg	✱	80	44 - 120
Indeno[1,2,3-cd]pyrene	ND		0.0603	0.0526		mg/Kg	✱	87	20 - 127
Naphthalene	0.00082	J B	0.0603	0.0511		mg/Kg	✱	83	44 - 120
Pyrene	ND		0.0603	0.0517		mg/Kg	✱	86	43 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl	88		39 - 120
Nitrobenzene-d5	85		42 - 120
Terphenyl-d14	114		35 - 124

Lab Sample ID: 280-107459-1 MSD

Matrix: Solid

Analysis Batch: 408918

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 408323

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	ND		0.0599	0.0497		mg/Kg	✱	83	35 - 120	2	50
Anthracene	ND		0.0599	0.0497		mg/Kg	✱	83	43 - 120	1	50
Benzo[a]anthracene	0.0055		0.0599	0.0497		mg/Kg	✱	74	36 - 120	2	40
Benzo[a]pyrene	ND		0.0599	0.0464		mg/Kg	✱	77	20 - 120	8	30
Benzo[b]fluoranthene	ND		0.0599	0.0485		mg/Kg	✱	81	37 - 120	1	28
Benzo[k]fluoranthene	ND		0.0599	0.0466		mg/Kg	✱	78	46 - 120	5	28
Chrysene	0.011		0.0599	0.0498		mg/Kg	✱	65	34 - 120	5	41
Dibenz(a,h)anthracene	ND		0.0599	0.0436		mg/Kg	✱	73	20 - 120	19	25
Fluoranthene	ND		0.0599	0.0477		mg/Kg	✱	80	45 - 120	4	30
Fluorene	ND		0.0599	0.0493		mg/Kg	✱	82	44 - 120	2	50
Indeno[1,2,3-cd]pyrene	ND		0.0599	0.0455		mg/Kg	✱	76	20 - 127	15	50

TestAmerica Denver

# QC Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

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

Lab Sample ID: 280-107459-1 MSD

Matrix: Solid

Analysis Batch: 408918

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 408323

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	0.00082	J B	0.0599	0.0498		mg/Kg	☼	82	44 - 120	2	50
Pyrene	ND		0.0599	0.0485		mg/Kg	☼	81	43 - 120	6	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl	82		39 - 120
Nitrobenzene-d5	85		42 - 120
Terphenyl-d14	81		35 - 124

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

Lab Sample ID: MB 280-408490/1-A

Matrix: Solid

Analysis Batch: 408672

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 408490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)	0.392	J	1.2	0.33	mg/Kg		03/20/18 14:33	03/22/18 02:14	1
-C6-C10									

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	97		77 - 123	03/20/18 14:33	03/22/18 02:14	1

Lab Sample ID: LCS 280-408490/2-A

Matrix: Solid

Analysis Batch: 408672

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 408490

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)	5.49	5.16		mg/Kg		94	85 - 153
-C6-C10							

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	95		77 - 123

Lab Sample ID: 280-107459-1 MS

Matrix: Solid

Analysis Batch: 408672

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 408490

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)	0.38	J B F1	5.93	5.49		mg/Kg	☼	86	85 - 153
-C6-C10									

Surrogate	MS %Recovery	MS Qualifier	Limits
a,a,a-Trifluorotoluene	114		77 - 123

TestAmerica Denver



# QC Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

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

Lab Sample ID: 280-107459-1 MSD

Matrix: Solid

Analysis Batch: 408672

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 408490

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	0.38	J B F1	5.89	5.07	F1	mg/Kg	☼	80	85 - 153	8	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
a,a,a-Trifluorotoluene	113		77 - 123								

Lab Sample ID: MB 280-410194/1-A

Matrix: Solid

Analysis Batch: 410760

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 410194

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	0.488	J	1.2	0.33	mg/Kg		04/04/18 12:48	04/10/18 10:44	1
Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac			
a,a,a-Trifluorotoluene	89		77 - 123	04/04/18 12:48	04/10/18 10:44	1			

Lab Sample ID: LCS 280-410194/2-A

Matrix: Solid

Analysis Batch: 410760

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 410194

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C6-C10		5.50	7.40		mg/Kg		134	85 - 153		
Surrogate	LCS %Recovery	LCS Qualifier	Limits							
a,a,a-Trifluorotoluene	96		77 - 123							

Lab Sample ID: 280-107459-2 MS

Matrix: Solid

Analysis Batch: 410760

Client Sample ID: E-W 4

Prep Type: Total/NA

Prep Batch: 410194

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C6-C10	0.47	J H F1 B	6.45	5.09	F1	mg/Kg	☼	72	85 - 153		
Surrogate	MS %Recovery	MS Qualifier	Limits								
a,a,a-Trifluorotoluene	84		77 - 123								

Lab Sample ID: 280-107459-2 MSD

Matrix: Solid

Analysis Batch: 410760

Client Sample ID: E-W 4

Prep Type: Total/NA

Prep Batch: 410194

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	0.47	J H F1 B	6.51	5.41	F1	mg/Kg	☼	76	85 - 153	6	30

TestAmerica Denver



# QC Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

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

Lab Sample ID: 280-107459-2 MSD

Matrix: Solid

Analysis Batch: 410760

Client Sample ID: E-W 4

Prep Type: Total/NA

Prep Batch: 410194

Surrogate	MSD %Recovery	MSD Qualifier	Limits
a,a,a-Trifluorotoluene	87		77 - 123

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

Lab Sample ID: MB 280-408095/1-A

Matrix: Solid

Analysis Batch: 409993

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 408095

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	3.04	J	7.9	1.3	mg/Kg		03/16/18 08:41	04/03/18 17:48	1
Motor Oil (C20-C38)	ND		24	7.7	mg/Kg		03/16/18 08:41	04/03/18 17:48	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	80		49 - 115				03/16/18 08:41	04/03/18 17:48	1

Lab Sample ID: LCS 280-408095/2-A

Matrix: Solid

Analysis Batch: 409993

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 408095

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	132	86.8		mg/Kg		66	53 - 115
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
o-Terphenyl	83		49 - 115				

## Method: 20B - Sodium Adsorption Ratio

Lab Sample ID: MB 280-408621/1-A

Matrix: Solid

Analysis Batch: 410010

Client Sample ID: Method Blank

Prep Type: Soluble

Prep Batch: 408621

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	ND		1.2	1.2	No Unit		03/29/18 13:03	04/02/18 16:17	10

Lab Sample ID: 280-107459-1 DU

Matrix: Solid

Analysis Batch: 410010

Client Sample ID: BACKGROUND

Prep Type: Soluble

Prep Batch: 408621

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sodium Adsorption Ratio	ND		ND		No Unit		NC	20

TestAmerica Denver

# QC Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 280-409109/1-A

Matrix: Solid

Analysis Batch: 409483

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 409109

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	ND		1.0	0.10	mg/Kg		03/26/18 15:44	03/28/18 20:43	1
Boron	ND		10	0.98	mg/Kg		03/26/18 15:44	03/28/18 20:43	1
Cadmium	ND		0.50	0.041	mg/Kg		03/26/18 15:44	03/28/18 20:43	1
Calcium	18.1	J	50	14	mg/Kg		03/26/18 15:44	03/28/18 20:43	1
Magnesium	3.82	J	20	3.7	mg/Kg		03/26/18 15:44	03/28/18 20:43	1
Silver	ND		1.0	0.16	mg/Kg		03/26/18 15:44	03/28/18 20:43	1

Lab Sample ID: LCS 280-409109/2-A

Matrix: Solid

Analysis Batch: 409483

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 409109

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	200	206		mg/Kg		103	87 - 112
Boron	100	100		mg/Kg		100	80 - 120
Cadmium	10.0	10.0		mg/Kg		100	87 - 110
Calcium	5000	4930		mg/Kg		99	82 - 114
Magnesium	5000	5090		mg/Kg		102	90 - 110
Silver	5.00	4.89		mg/Kg		98	87 - 114

Lab Sample ID: 280-107459-1 MS

Matrix: Solid

Analysis Batch: 409483

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 409109

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	110		164	262		mg/Kg	☼	93	52 - 159
Boron	2.5	J	82.1	73.1		mg/Kg	☼	86	80 - 120
Cadmium	0.15	J	8.21	7.35		mg/Kg	☼	88	40 - 130
Calcium	25000	B	4100	26000	4	mg/Kg	☼	29	43 - 165
Magnesium	3200	B	4100	7460		mg/Kg	☼	104	64 - 145
Silver	ND	F2	4.10	3.46		mg/Kg	☼	84	75 - 141

Lab Sample ID: 280-107459-1 MSD

Matrix: Solid

Analysis Batch: 409483

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 409109

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Barium	110		193	298		mg/Kg	☼	98	52 - 159	13	20
Boron	2.5	J	96.7	89.6		mg/Kg	☼	90	80 - 120	20	20
Cadmium	0.15	J	9.67	8.98		mg/Kg	☼	91	40 - 130	20	20
Calcium	25000	B	4830	28600	4	mg/Kg	☼	77	43 - 165	9	20
Magnesium	3200	B	4830	8720		mg/Kg	☼	114	64 - 145	16	20
Silver	ND	F2	4.83	4.31	F4	mg/Kg	☼	89	75 - 141	22	20

TestAmerica Denver

# QC Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

## Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 280-409111/1-A

Matrix: Solid

Analysis Batch: 409467

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 409111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.60	0.051	mg/Kg		03/26/18 15:49	03/29/18 00:33	1
Chromium	ND		0.20	0.076	mg/Kg		03/26/18 15:49	03/29/18 00:33	1
Copper	ND		0.25	0.071	mg/Kg		03/26/18 15:49	03/29/18 00:33	1
Lead	ND		0.15	0.018	mg/Kg		03/26/18 15:49	03/29/18 00:33	1
Nickel	0.236		0.15	0.025	mg/Kg		03/26/18 15:49	03/29/18 00:33	1
Selenium	ND		0.50	0.13	mg/Kg		03/26/18 15:49	03/29/18 00:33	1
Zinc	ND		1.0	0.32	mg/Kg		03/26/18 15:49	03/29/18 00:33	1

Lab Sample ID: LCS 280-409111/2-A

Matrix: Solid

Analysis Batch: 409467

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 409111

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	20.0	18.1		mg/Kg		91	83 - 111
Chromium	20.0	18.5		mg/Kg		93	87 - 121
Copper	20.0	18.1		mg/Kg		91	87 - 125
Lead	20.0	19.6		mg/Kg		98	81 - 125
Nickel	20.0	19.0		mg/Kg		95	90 - 113
Selenium	20.0	18.1		mg/Kg		91	78 - 108
Zinc	20.0	17.8		mg/Kg		89	85 - 119

Lab Sample ID: 280-107459-1 MS

Matrix: Solid

Analysis Batch: 409467

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 409111

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	3.6	F1	15.4	16.1	F1	mg/Kg	☼	82	83 - 111
Chromium	7.0		15.4	20.7		mg/Kg	☼	89	87 - 121
Copper	7.0	F1	15.4	18.6	F1	mg/Kg	☼	75	87 - 125
Lead	6.7		15.4	19.7		mg/Kg	☼	84	81 - 125
Nickel	7.2	F1 B	15.4	19.5	F1	mg/Kg	☼	80	90 - 113
Selenium	0.29	J F1	15.4	8.39	F1	mg/Kg	☼	53	78 - 108
Zinc	24	F1	15.4	35.4	F1	mg/Kg	☼	76	85 - 119

Lab Sample ID: 280-107459-1 MSD

Matrix: Solid

Analysis Batch: 409467

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 409111

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	3.6	F1	15.4	16.9		mg/Kg	☼	86	83 - 111	4	20
Chromium	7.0		15.4	21.4		mg/Kg	☼	94	87 - 121	4	20
Copper	7.0	F1	15.4	19.8	F1	mg/Kg	☼	84	87 - 125	6	20
Lead	6.7		15.4	20.3		mg/Kg	☼	88	81 - 125	3	20
Nickel	7.2	F1 B	15.4	20.7	F1	mg/Kg	☼	87	90 - 113	6	20
Selenium	0.29	J F1	15.4	10.2	F1	mg/Kg	☼	64	78 - 108	19	20
Zinc	24	F1	15.4	37.8		mg/Kg	☼	92	85 - 119	7	20

TestAmerica Denver

# QC Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

## Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 280-408360/1-A  
Matrix: Solid  
Analysis Batch: 408557

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 408360

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.017	0.0055	mg/Kg		03/20/18 12:26	03/20/18 16:21	1

Lab Sample ID: LCS 280-408360/2-A  
Matrix: Solid  
Analysis Batch: 408557

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 408360

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.333	0.303		mg/Kg		91	87 - 111

Lab Sample ID: 280-107397-A-1-E MS  
Matrix: Solid  
Analysis Batch: 408557

Client Sample ID: Matrix Spike  
Prep Type: Total/NA  
Prep Batch: 408360

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.031		0.444	0.511		mg/Kg	✱	108	87 - 111

Lab Sample ID: 280-107397-A-1-F MSD  
Matrix: Solid  
Analysis Batch: 408557

Client Sample ID: Matrix Spike Duplicate  
Prep Type: Total/NA  
Prep Batch: 408360

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.031		0.461	0.516		mg/Kg	✱	105	87 - 111	1	20

## Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 490-503744/1-A  
Matrix: Solid  
Analysis Batch: 503851

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 503744

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexavalent chromium	ND		4.9	2.0	mg/Kg		03/24/18 13:19	03/25/18 15:08	1

Lab Sample ID: LCS 490-503744/4-A  
Matrix: Solid  
Analysis Batch: 503851

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 503744

Analyte	Spike Added	LCSI Result	LCSI Qualifier	Unit	D	%Rec	%Rec. Limits
Hexavalent chromium	64.9	72.9		mg/Kg		112	80 - 120

Lab Sample ID: LCSS 490-503744/2-A  
Matrix: Solid  
Analysis Batch: 503851

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 503744

Analyte	Spike Added	LCSS Result	LCSS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexavalent chromium	39.8	39.2		mg/Kg		99	80 - 120

TestAmerica Denver

# QC Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

## Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: LCSSD 490-503744/3-A

Matrix: Solid

Analysis Batch: 503851

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 503744

Analyte	Spike Added	LCSSD Result	LCSSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexavalent chromium	39.5	39.5		mg/Kg		100	80 - 120	1	20

Lab Sample ID: 280-107459-1 MSI

Matrix: Solid

Analysis Batch: 503851

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 503744

Analyte	Sample Result	Sample Qualifier	Spike Added	MSI Result	MSI Qualifier	Unit	D	%Rec	%Rec. Limits
Hexavalent chromium	ND		68.8	79.4		mg/Kg	✱	115	75 - 125

Lab Sample ID: 280-107459-1 MSS

Matrix: Solid

Analysis Batch: 503851

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 503744

Analyte	Sample Result	Sample Qualifier	Spike Added	MSS Result	MSS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexavalent chromium	ND		42.7	36.7		mg/Kg	✱	86	75 - 125

Lab Sample ID: 280-107459-1 DU

Matrix: Solid

Analysis Batch: 503851

Client Sample ID: BACKGROUND

Prep Type: Total/NA

Prep Batch: 503744

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Hexavalent chromium	ND		ND		mg/Kg	✱	NC	20

## Method: 7196A - Chromium, Trivalent (Colorimetric)

Lab Sample ID: MB 280-409969/1

Matrix: Solid

Analysis Batch: 409969

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Trivalent Chromium	ND		2.0	2.0	mg/Kg			04/03/18 08:18	1

## Method: 9040C - pH

Lab Sample ID: LCS 490-503913/1

Matrix: Solid

Analysis Batch: 503913

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

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# QC Sample Results

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

## Method: 9050A - Specific Conductance

Lab Sample ID: LCS 490-505143/3

Matrix: Solid

Analysis Batch: 505143

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	1410		umhos/cm		100	90 - 110

Lab Sample ID: LCSD 490-505143/4

Matrix: Solid

Analysis Batch: 505143

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Specific Conductance	1410	1410		umhos/cm		100	90 - 110	0	10

Lab Sample ID: 280-107459-1 DU

Matrix: Solid

Analysis Batch: 505143

Client Sample ID: BACKGROUND

Prep Type: Soluble

Prep Batch: 503072

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	22000		21900		umhos/cm		0.5	10

## Method: Moisture - Percent Moisture

Lab Sample ID: 280-107459-2 DU

Matrix: Solid

Analysis Batch: 408300

Client Sample ID: E-W 4

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	15.4		14.5		%		6	20

# QC Association Summary

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

## GC/MS VOA

### Analysis Batch: 409447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	8260B	409452
MB 280-409452/3-A	Method Blank	Total/NA	Solid	8260B	409452
LCS 280-409452/1-A	Lab Control Sample	Total/NA	Solid	8260B	409452
LCSD 280-409452/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	409452
280-107459-1 MS	BACKGROUND	Total/NA	Solid	8260B	409452
280-107459-1 MSD	BACKGROUND	Total/NA	Solid	8260B	409452

### Prep Batch: 409452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	5030B	
MB 280-409452/3-A	Method Blank	Total/NA	Solid	5030B	
LCS 280-409452/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 280-409452/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
280-107459-1 MS	BACKGROUND	Total/NA	Solid	5030B	
280-107459-1 MSD	BACKGROUND	Total/NA	Solid	5030B	

### Analysis Batch: 409572

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-2	E-W 4	Total/NA	Solid	8260B	409583
280-107459-3	E-W 5	Total/NA	Solid	8260B	409583
280-107459-4	E-W 6	Total/NA	Solid	8260B	409583
MB 280-409583/3-A	Method Blank	Total/NA	Solid	8260B	409583
LCS 280-409583/1-A	Lab Control Sample	Total/NA	Solid	8260B	409583
LCSD 280-409583/2-A	Lab Control Sample Dup	Total/NA	Solid	8260B	409583
280-107459-2 MS	E-W 4	Total/NA	Solid	8260B	409583
280-107459-2 MSD	E-W 4	Total/NA	Solid	8260B	409583

### Prep Batch: 409583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-2	E-W 4	Total/NA	Solid	5030B	
280-107459-3	E-W 5	Total/NA	Solid	5030B	
280-107459-4	E-W 6	Total/NA	Solid	5030B	
MB 280-409583/3-A	Method Blank	Total/NA	Solid	5030B	
LCS 280-409583/1-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 280-409583/2-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
280-107459-2 MS	E-W 4	Total/NA	Solid	5030B	
280-107459-2 MSD	E-W 4	Total/NA	Solid	5030B	

## GC/MS Semi VOA

### Prep Batch: 408323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	3546	
MB 280-408323/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-408323/2-A	Lab Control Sample	Total/NA	Solid	3546	
280-107459-1 MS	BACKGROUND	Total/NA	Solid	3546	
280-107459-1 MSD	BACKGROUND	Total/NA	Solid	3546	

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# QC Association Summary

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

## GC/MS Semi VOA (Continued)

### Analysis Batch: 408918

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	8270C SIM	408323
MB 280-408323/1-A	Method Blank	Total/NA	Solid	8270C SIM	408323
LCS 280-408323/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	408323
280-107459-1 MS	BACKGROUND	Total/NA	Solid	8270C SIM	408323
280-107459-1 MSD	BACKGROUND	Total/NA	Solid	8270C SIM	408323

## GC VOA

### Prep Batch: 408490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	5030B	
MB 280-408490/1-A	Method Blank	Total/NA	Solid	5030B	
LCS 280-408490/2-A	Lab Control Sample	Total/NA	Solid	5030B	
280-107459-1 MS	BACKGROUND	Total/NA	Solid	5030B	
280-107459-1 MSD	BACKGROUND	Total/NA	Solid	5030B	

### Analysis Batch: 408672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	8015B	408490
MB 280-408490/1-A	Method Blank	Total/NA	Solid	8015B	408490
LCS 280-408490/2-A	Lab Control Sample	Total/NA	Solid	8015B	408490
280-107459-1 MS	BACKGROUND	Total/NA	Solid	8015B	408490
280-107459-1 MSD	BACKGROUND	Total/NA	Solid	8015B	408490

### Prep Batch: 410194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-2	E-W 4	Total/NA	Solid	5030B	
280-107459-3	E-W 5	Total/NA	Solid	5030B	
280-107459-4	E-W 6	Total/NA	Solid	5030B	
MB 280-410194/1-A	Method Blank	Total/NA	Solid	5030B	
LCS 280-410194/2-A	Lab Control Sample	Total/NA	Solid	5030B	
280-107459-2 MS	E-W 4	Total/NA	Solid	5030B	
280-107459-2 MSD	E-W 4	Total/NA	Solid	5030B	

### Analysis Batch: 410760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-2	E-W 4	Total/NA	Solid	8015B	410194
280-107459-3	E-W 5	Total/NA	Solid	8015B	410194
280-107459-4	E-W 6	Total/NA	Solid	8015B	410194
MB 280-410194/1-A	Method Blank	Total/NA	Solid	8015B	410194
LCS 280-410194/2-A	Lab Control Sample	Total/NA	Solid	8015B	410194
280-107459-2 MS	E-W 4	Total/NA	Solid	8015B	410194
280-107459-2 MSD	E-W 4	Total/NA	Solid	8015B	410194

## GC Semi VOA

### Prep Batch: 408095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	3546	
MB 280-408095/1-A	Method Blank	Total/NA	Solid	3546	

TestAmerica Denver



# QC Association Summary

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

## GC Semi VOA (Continued)

### Prep Batch: 408095 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-408095/2-A	Lab Control Sample	Total/NA	Solid	3546	

### Analysis Batch: 409993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	8015B	408095
MB 280-408095/1-A	Method Blank	Total/NA	Solid	8015B	408095
LCS 280-408095/2-A	Lab Control Sample	Total/NA	Solid	8015B	408095

## Metals

### Prep Batch: 408360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	7471A	
MB 280-408360/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 280-408360/2-A	Lab Control Sample	Total/NA	Solid	7471A	
280-107397-A-1-E MS	Matrix Spike	Total/NA	Solid	7471A	
280-107397-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	7471A	

### Analysis Batch: 408557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	7471A	408360
MB 280-408360/1-A	Method Blank	Total/NA	Solid	7471A	408360
LCS 280-408360/2-A	Lab Control Sample	Total/NA	Solid	7471A	408360
280-107397-A-1-E MS	Matrix Spike	Total/NA	Solid	7471A	408360
280-107397-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	7471A	408360

### Prep Batch: 408621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Soluble	Solid	20B	
280-107459-2	E-W 4	Soluble	Solid	20B	
280-107459-3	E-W 5	Soluble	Solid	20B	
280-107459-4	E-W 6	Soluble	Solid	20B	
MB 280-408621/1-A	Method Blank	Soluble	Solid	20B	
280-107459-1 DU	BACKGROUND	Soluble	Solid	20B	

### Prep Batch: 409109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	3050B	
MB 280-409109/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-409109/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-107459-1 MS	BACKGROUND	Total/NA	Solid	3050B	
280-107459-1 MSD	BACKGROUND	Total/NA	Solid	3050B	

### Prep Batch: 409111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	3050B	
MB 280-409111/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-409111/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-107459-1 MS	BACKGROUND	Total/NA	Solid	3050B	
280-107459-1 MSD	BACKGROUND	Total/NA	Solid	3050B	

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# QC Association Summary

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

## Metals (Continued)

### Analysis Batch: 409467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	6020	409111
MB 280-409111/1-A	Method Blank	Total/NA	Solid	6020	409111
LCS 280-409111/2-A	Lab Control Sample	Total/NA	Solid	6020	409111
280-107459-1 MS	BACKGROUND	Total/NA	Solid	6020	409111
280-107459-1 MSD	BACKGROUND	Total/NA	Solid	6020	409111

### Analysis Batch: 409483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	6010B	409109
MB 280-409109/1-A	Method Blank	Total/NA	Solid	6010B	409109
LCS 280-409109/2-A	Lab Control Sample	Total/NA	Solid	6010B	409109
280-107459-1 MS	BACKGROUND	Total/NA	Solid	6010B	409109
280-107459-1 MSD	BACKGROUND	Total/NA	Solid	6010B	409109

### Analysis Batch: 410010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Soluble	Solid	20B	408621
280-107459-2	E-W 4	Soluble	Solid	20B	408621
280-107459-3	E-W 5	Soluble	Solid	20B	408621
280-107459-4	E-W 6	Soluble	Solid	20B	408621
MB 280-408621/1-A	Method Blank	Soluble	Solid	20B	408621
280-107459-1 DU	BACKGROUND	Soluble	Solid	20B	408621

## General Chemistry

### Analysis Batch: 408300

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	Moisture	
280-107459-2	E-W 4	Total/NA	Solid	Moisture	
280-107459-3	E-W 5	Total/NA	Solid	Moisture	
280-107459-4	E-W 6	Total/NA	Solid	Moisture	
280-107459-2 DU	E-W 4	Total/NA	Solid	Moisture	

### Analysis Batch: 409969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	7196A	
MB 280-409969/1	Method Blank	Total/NA	Solid	7196A	

### Prep Batch: 503072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Soluble	Solid	Sat Paste Ext	
280-107459-2	E-W 4	Soluble	Solid	Sat Paste Ext	
280-107459-3	E-W 5	Soluble	Solid	Sat Paste Ext	
280-107459-4	E-W 6	Soluble	Solid	Sat Paste Ext	
280-107459-1 DU	BACKGROUND	Soluble	Solid	Sat Paste Ext	

### Prep Batch: 503744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	3060A	
MB 490-503744/1-A	Method Blank	Total/NA	Solid	3060A	

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# QC Association Summary

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

## General Chemistry (Continued)

### Prep Batch: 503744 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSI 490-503744/4-A	Lab Control Sample	Total/NA	Solid	3060A	
LCSS 490-503744/2-A	Lab Control Sample	Total/NA	Solid	3060A	
LCSSD 490-503744/3-A	Lab Control Sample Dup	Total/NA	Solid	3060A	
280-107459-1 MSI	BACKGROUND	Total/NA	Solid	3060A	
280-107459-1 MSS	BACKGROUND	Total/NA	Solid	3060A	
280-107459-1 DU	BACKGROUND	Total/NA	Solid	3060A	

### Analysis Batch: 503851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Total/NA	Solid	7196A	503744
MB 490-503744/1-A	Method Blank	Total/NA	Solid	7196A	503744
LCSI 490-503744/4-A	Lab Control Sample	Total/NA	Solid	7196A	503744
LCSS 490-503744/2-A	Lab Control Sample	Total/NA	Solid	7196A	503744
LCSSD 490-503744/3-A	Lab Control Sample Dup	Total/NA	Solid	7196A	503744
280-107459-1 MSI	BACKGROUND	Total/NA	Solid	7196A	503744
280-107459-1 MSS	BACKGROUND	Total/NA	Solid	7196A	503744
280-107459-1 DU	BACKGROUND	Total/NA	Solid	7196A	503744

### Analysis Batch: 503913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Soluble	Solid	9040C	503072
280-107459-2	E-W 4	Soluble	Solid	9040C	503072
280-107459-3	E-W 5	Soluble	Solid	9040C	503072
280-107459-4	E-W 6	Soluble	Solid	9040C	503072
LCS 490-503913/1	Lab Control Sample	Total/NA	Solid	9040C	

### Analysis Batch: 505143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107459-1	BACKGROUND	Soluble	Solid	9050A	503072
280-107459-2	E-W 4	Soluble	Solid	9050A	503072
280-107459-3	E-W 5	Soluble	Solid	9050A	503072
280-107459-4	E-W 6	Soluble	Solid	9050A	503072
LCS 490-505143/3	Lab Control Sample	Total/NA	Solid	9050A	
LCSD 490-505143/4	Lab Control Sample Dup	Total/NA	Solid	9050A	
280-107459-1 DU	BACKGROUND	Soluble	Solid	9050A	503072

# Lab Chronicle

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

**Client Sample ID: BACKGROUND**

**Date Collected: 03/15/18 14:33**

**Date Received: 03/15/18 17:10**

**Lab Sample ID: 280-107459-1**

**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			100.169 g	50 mL	408621	03/29/18 13:03	TEB	TAL DEN
Soluble	Analysis	20B		10			410010	04/02/18 16:20	CML	TAL DEN
Total/NA	Analysis	7196A		1			409969	04/03/18 08:18	CDH	TAL DEN
Soluble	Prep	Sat Paste Ext			1 g	1 mL	503072	03/25/18 11:49	BAA	TAL NSH
Soluble	Analysis	9040C		1			503913	03/26/18 09:06	AH	TAL NSH
Soluble	Prep	Sat Paste Ext			1 g	1 mL	503072	03/25/18 11:49	BAA	TAL NSH
Soluble	Analysis	9050A		1			505143	03/30/18 13:30	JAB	TAL NSH
Total/NA	Analysis	Moisture		1			408300	03/19/18 09:12	PAH	TAL DEN

**Client Sample ID: BACKGROUND**

**Date Collected: 03/15/18 14:33**

**Date Received: 03/15/18 17:10**

**Lab Sample ID: 280-107459-1**

**Matrix: Solid**

**Percent Solids: 93.3**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.651 g	5 mL	409452	03/28/18 20:00	RSN	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	409447	03/28/18 22:50	RSN	TAL DEN
Total/NA	Prep	3546			15.3 g	1 mL	408323	03/19/18 12:27	TEB	TAL DEN
Total/NA	Analysis	8270C SIM		1			408918	03/23/18 23:58	MKW	TAL DEN
Total/NA	Prep	5030B			5.021 g	5 mL	408490	03/20/18 14:33	JLS	TAL DEN
Total/NA	Analysis	8015B		1	.1 mL	5 mL	408672	03/22/18 03:02	CAS	TAL DEN
Total/NA	Prep	3546			16.4 g	1 mL	408095	03/16/18 08:41	KI	TAL DEN
Total/NA	Analysis	8015B		1			409993	04/03/18 18:38	TDJ	TAL DEN
Total/NA	Prep	3050B			1.318 g	100 mL	409109	03/26/18 15:44	LRD	TAL DEN
Total/NA	Analysis	6010B		1			409483	03/28/18 20:48	SJS	TAL DEN
Total/NA	Prep	3050B			1.036 g	100 mL	409111	03/26/18 15:49	LRD	TAL DEN
Total/NA	Analysis	6020		1			409467	03/29/18 00:40	CRR	TAL DEN
Total/NA	Prep	7471A			0.54 g	50 mL	408360	03/20/18 12:26	CDH	TAL DEN
Total/NA	Analysis	7471A		1			408557	03/20/18 16:52	CDH	TAL DEN
Total/NA	Prep	3060A			2.5178 g	500 mL	503744	03/24/18 13:19	BLM	TAL NSH
Total/NA	Analysis	7196A		1	50 mL	50 mL	503851	03/25/18 15:08	BLM	TAL NSH

**Client Sample ID: E-W 4**

**Date Collected: 03/15/18 14:40**

**Date Received: 03/15/18 17:10**

**Lab Sample ID: 280-107459-2**

**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			100.178 g	50 mL	408621	03/29/18 13:03	TEB	TAL DEN
Soluble	Analysis	20B		10			410010	04/02/18 16:29	CML	TAL DEN
Soluble	Prep	Sat Paste Ext			1 g	1 mL	503072	03/25/18 11:49	BAA	TAL NSH
Soluble	Analysis	9040C		1			503913	03/26/18 09:06	AH	TAL NSH
Soluble	Prep	Sat Paste Ext			1 g	1 mL	503072	03/25/18 11:49	BAA	TAL NSH
Soluble	Analysis	9050A		1			505143	03/30/18 13:30	JAB	TAL NSH
Total/NA	Analysis	Moisture		1			408300	03/19/18 09:12	PAH	TAL DEN

TestAmerica Denver

# Lab Chronicle

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

**Client Sample ID: E-W 4**

**Date Collected: 03/15/18 14:40**

**Date Received: 03/15/18 17:10**

**Lab Sample ID: 280-107459-2**

**Matrix: Solid**

**Percent Solids: 84.6**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.736 g	5 mL	409583	03/29/18 21:31	RSN	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	409572	03/29/18 22:03	RSN	TAL DEN
Total/NA	Prep	5030B			5.036 g	5 mL	410194	04/04/18 12:48	CAS	TAL DEN
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	410760	04/10/18 11:32	CAS	TAL DEN

**Client Sample ID: E-W 5**

**Date Collected: 03/15/18 14:50**

**Date Received: 03/15/18 17:10**

**Lab Sample ID: 280-107459-3**

**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			100.026 g	50 mL	408621	03/29/18 13:03	TEB	TAL DEN
Soluble	Analysis	20B		10			410010	04/02/18 16:32	CML	TAL DEN
Soluble	Prep	Sat Paste Ext			1 g	1 mL	503072	03/25/18 11:49	BAA	TAL NSH
Soluble	Analysis	9040C		1			503913	03/26/18 09:06	AH	TAL NSH
Soluble	Prep	Sat Paste Ext			1 g	1 mL	503072	03/25/18 11:49	BAA	TAL NSH
Soluble	Analysis	9050A		1			505143	03/30/18 13:30	JAB	TAL NSH
Total/NA	Analysis	Moisture		1			408300	03/19/18 09:12	PAH	TAL DEN

**Client Sample ID: E-W 5**

**Date Collected: 03/15/18 14:50**

**Date Received: 03/15/18 17:10**

**Lab Sample ID: 280-107459-3**

**Matrix: Solid**

**Percent Solids: 84.5**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.403 g	5 mL	409583	03/29/18 21:31	RSN	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	409572	03/29/18 23:24	RSN	TAL DEN
Total/NA	Prep	5030B			5.032 g	5 mL	410194	04/04/18 12:48	CAS	TAL DEN
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	410760	04/10/18 12:46	CAS	TAL DEN

**Client Sample ID: E-W 6**

**Date Collected: 03/15/18 14:55**

**Date Received: 03/15/18 17:10**

**Lab Sample ID: 280-107459-4**

**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			100.149 g	50 mL	408621	03/29/18 13:03	TEB	TAL DEN
Soluble	Analysis	20B		10			410010	04/02/18 16:35	CML	TAL DEN
Soluble	Prep	Sat Paste Ext			1 g	1 mL	503072	03/25/18 11:49	BAA	TAL NSH
Soluble	Analysis	9040C		1			503913	03/26/18 09:06	AH	TAL NSH
Soluble	Prep	Sat Paste Ext			1 g	1 mL	503072	03/25/18 11:49	BAA	TAL NSH
Soluble	Analysis	9050A		1			505143	03/30/18 13:30	JAB	TAL NSH
Total/NA	Analysis	Moisture		1			408300	03/19/18 09:12	PAH	TAL DEN

TestAmerica Denver

# Lab Chronicle

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

**Client Sample ID: E-W 6**

**Date Collected: 03/15/18 14:55**

**Date Received: 03/15/18 17:10**

**Lab Sample ID: 280-107459-4**

**Matrix: Solid**

**Percent Solids: 87.8**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			4.340 g	5 mL	409583	03/29/18 21:31	RSN	TAL DEN
Total/NA	Analysis	8260B		1	5 g	5 mL	409572	03/29/18 23:44	RSN	TAL DEN
Total/NA	Prep	5030B			4.967 g	5 mL	410194	04/04/18 12:48	CAS	TAL DEN
Total/NA	Analysis	8015B		1	0.1 mL	5 mL	410760	04/10/18 13:10	CAS	TAL DEN

## 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

# Accreditation/Certification Summary

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

## Laboratory: TestAmerica Denver

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

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-19
A2LA	ISO/IEC 17025		2907.01	10-31-19
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	01-08-19
Arizona	State Program	9	AZ0713	12-20-18
Arkansas DEQ	State Program	6	88-0687	06-01-18
California	State Program	9	2513	01-18-19
Connecticut	State Program	1	PH-0686	09-30-18
Florida	NELAP	4	E87667	06-30-18
Georgia	State Program	4	N/A	01-08-18 *
Illinois	NELAP	5	200017	04-30-18
Iowa	State Program	7	370	12-01-18
Kansas	NELAP	7	E-10166	04-30-18
Louisiana	NELAP	6	02096	06-30-18
Maine	State Program	1	CO0002	03-03-19
Minnesota	NELAP	5	8-999-405	12-31-18
Nevada	State Program	9	CO0026	07-31-18
New Hampshire	NELAP	1	205310	04-28-18
New Jersey	NELAP	2	CO004	06-30-18
New York	NELAP	2	11964	04-01-19
North Carolina (WW/SW)	State Program	4	358	12-31-18
North Dakota	State Program	8	R-034	01-08-19
Oklahoma	State Program	6	8614	08-31-18
Oregon	NELAP	10	4025	01-08-19
Pennsylvania	NELAP	3	68-00664	07-31-18
South Carolina	State Program	4	72002001	01-08-19
Texas	NELAP	6	T104704183-17-14	09-30-18
USDA	Federal		P330-16-00397	12-15-19
Utah	NELAP	8	CO00026	07-31-18
Virginia	NELAP	3	460232	06-14-18
Washington	State Program	10	C583	08-03-18
West Virginia DEP	State Program	3	354	12-31-18
Wisconsin	State Program	5	999615430	08-31-18
Wyoming (UST)	A2LA	8	2907.01	10-31-19

## Laboratory: TestAmerica Nashville

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

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	A2LA		NA: NELAP & A2LA	12-31-19
A2LA	ISO/IEC 17025		0453.07	12-31-19
Alaska (UST)	State Program	10	UST-087	06-30-18
Arizona	State Program	9	AZ0473	05-05-18
Arkansas DEQ	State Program	6	88-0737	04-25-18
California	State Program	9	2938	10-31-18
Connecticut	State Program	1	PH-0220	12-31-19
Florida	NELAP	4	E87358	06-30-18
Georgia	State Program	4	E87358(FL)/453.07(A2LA)	06-30-18
Illinois	NELAP	5	200010	12-09-18
Iowa	State Program	7	131	04-01-18 *

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Denver

## Accreditation/Certification Summary

Client: Grynberg Petroleum Company  
Project/Site: Grynberg Petroleum - COGCC Table 910-1

TestAmerica Job ID: 280-107459-1

### Laboratory: TestAmerica Nashville (Continued)

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Kansas	NELAP	7	E-10229	10-31-18
Kentucky (UST)	State Program	4	19	06-30-18
Kentucky (WW)	State Program	4	90038	12-31-18
Louisiana	NELAP	6	30613	06-30-18
Maine	State Program	1	TN00032	11-03-19
Maryland	State Program	3	316	03-31-19
Massachusetts	State Program	1	M-TN032	06-30-18
Minnesota	NELAP	5	047-999-345	12-31-18
Mississippi	State Program	4	N/A	06-30-18
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-18
New Hampshire	NELAP	1	2963	10-09-18
New Jersey	NELAP	2	TN965	06-30-18
New York	NELAP	2	11342	03-31-18 *
North Carolina (WW/SW)	State Program	4	387	12-31-18
North Dakota	State Program	8	R-146	06-30-18
Ohio VAP	State Program	5	CL0033	07-06-19
Oklahoma	State Program	6	9412	08-31-18
Oregon	NELAP	10	TN200001	04-27-18
Pennsylvania	NELAP	3	68-00585	06-30-18
Rhode Island	State Program	1	LAO00268	12-30-18
South Carolina	State Program	4	84009 (001)	02-28-18 *
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-18
USDA	Federal		P330-13-00306	12-01-19
Utah	NELAP	8	TN00032	07-31-18
Virginia	NELAP	3	460152	06-14-18
Washington	State Program	10	C789	07-19-18
West Virginia DEP	State Program	3	219	02-28-19
Wisconsin	State Program	5	998020430	08-31-18
Wyoming (UST)	A2LA	8	453.07	12-31-19

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Denver



4955 Yarrow Street  
Arvada, CO 80002  
Phone (303) 736-0100

## Chain of Custody Record

# TestAmerica

## THE LEADER IN ENVIRONMENTAL TESTING

[illegible]

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING  
Nashville, TN

280-107459



280-107459 Chain of Custody

COOLER RECEIPT FORM

Cooler Received/Opened On 3/20/2018 @ 0930

Time Samples Removed From Cooler \_\_\_\_\_ Time Samples Placed In Storage \_\_\_\_\_ (2 Hour Window)

1. Tracking # 9489 (last 4 digits, FedEx) Courier: \_\_\_\_\_

IR Gun ID 17960358 pH Strip Lot \_\_\_\_\_ Chlorine Strip Lot \_\_\_\_\_

2. Temperature of rep. sample or temp blank when opened: 3.4 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) es

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA



Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # \_\_\_\_\_

I certify that I unloaded the cooler and answered questions 7-14 (initial) es

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) es

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) es

I certify that I attached a label with the unique LIMS number to each container (initial) es

21. Were there Non-Conformance issues at login? YES NO Was a NCM generated? YES...NO...NA es

## Login Sample Receipt Checklist

Client: Grynberg Petroleum Company

Job Number: 280-107459-1

Login Number: 107459

List Source: TestAmerica Denver

List Number: 1

Creator: Dedio, Michael T

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