



11-Aug-2021

Mike Gardner  
Terra Energy Partners, LLC  
1058 Country Rd 215  
Parachute, CO 81635

Re: **Terra Energy - Gov 26-1 - Excavation**

Work Order: **21080449**

Dear Mike,

ALS Environmental received 4 samples on 05-Aug-2021 08:50 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 29.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA  
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

A handwritten signature in black ink, appearing to read "Chad Whelton".

Electronically approved by: Chad Whelton

Chad Whelton  
Project Manager

## Report of Laboratory Analysis

Certificate No: MN 026-999-449

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 

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**Client:** Terra Energy Partners, LLC  
**Project:** Terra Energy - Gov 26-1 - Excavation  
**Work Order:** 21080449

**Work Order Sample Summary**

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<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
21080449-01	North Half - West Wall	Soil		8/4/2021 10:00	8/5/2021 08:50	<input type="checkbox"/>
21080449-02	North Half - North Wall	Soil		8/4/2021 11:00	8/5/2021 08:50	<input type="checkbox"/>
21080449-03	North Half - East Wall	Soil		8/4/2021 10:30	8/5/2021 08:50	<input type="checkbox"/>
21080449-04	North Half - Bottom	Soil		8/4/2021 11:45	8/5/2021 08:50	<input type="checkbox"/>

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**Client:** Terra Energy Partners, LLC  
**Project:** Terra Energy - Gov 26-1 - Excavation  
**Work Order:** 21080449

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**Case Narrative**

Batch 181553, Method SW6020B, Sample 21080449-01B MS/MSD: The MS/MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Arsenic, Cadmium, Copper, Nickel.

Batch 181553, Method SW6020B, Sample 21080449-01B MS/MSD: The MS/MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Barium.

Batch 181553, Method SW6020B, Sample 21080449-01B MSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Zinc.

Batch 181553, Method SW6020B, Sample 21080449-01B MSD: The MSD recovery was outside of the control limit. However, the MS recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte: Selenium.

Batch 181553, Method SW6020B, Sample 21080449-01B MSD: The RPD between the MS and MSD was outside of the control limit. The corresponding result should be considered estimated for this compound: Silver.

Batch 181674, Method SW7196A, Sample 21080449-01B MSD: The MSD recovery was outside of the control limit. However, the MS recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte: hexavalent chromium.

<b><u>Qualifier</u></b>	<b><u>Description</u></b>
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

<b><u>Acronym</u></b>	<b><u>Description</u></b>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<b><u>Units Reported</u></b>	<b><u>Description</u></b>
% of sample	Percent of Sample
°C	Degrees Celcius
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
mmhos/cm @25°C	Millimhos-Centimeter at 25 Degrees Celcius
none	
s.u.	Standard Units

# ALS Group, USA

Date: 11-Aug-21

**Client:** Terra Energy Partners, LLC  
**Project:** Terra Energy - Gov 26-1 - Excavation  
**Sample ID:** North Half - West Wall  
**Collection Date:** 8/4/2021 10:00 AM

**Work Order:** 21080449  
**Lab ID:** 21080449-01  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>		Prep: SW3550 / 8/6/21		Analyst: <b>SJB</b>
<b>DRO (C10-C28)</b>	<b>9.1</b>	J	<b>3.3</b>	<b>12</b>	<b>mg/Kg-dry</b>	1	8/8/2021 08:27
Surr: 4-Terphenyl-d14	59.2			33-111	%REC	1	8/8/2021 08:27
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>		Prep: SW5035A / 8/6/21		Analyst: <b>SJB</b>
<b>GRO (C6-C10)</b>	U		5.0	12	mg/Kg-dry	1	8/7/2021 05:23
Surr: Toluene-d8	90.3			71-123	%REC	1	8/7/2021 05:23
<b>MERCURY BY CVAA</b>							
			Method: <b>SW7471B</b>		Prep: SW7471 / 8/6/21		Analyst: <b>MTW</b>
<b>Mercury</b>	<b>0.022</b>		<b>0.015</b>	<b>0.022</b>	<b>mg/Kg-dry</b>	1	8/6/2021 14:07
<b>METALS BY ICP-MS</b>							
			Method: <b>SW6020B</b>		Prep: SW3050B / 8/6/21		Analyst: <b>STP</b>
<b>Arsenic</b>	<b>5.1</b>		<b>0.053</b>	<b>0.44</b>	<b>mg/Kg-dry</b>	1	8/6/2021 20:58
<b>Barium</b>	<b>150</b>		<b>0.40</b>	<b>0.44</b>	<b>mg/Kg-dry</b>	1	8/6/2021 20:58
Cadmium	U		0.026	0.18	mg/Kg-dry	1	8/9/2021 12:48
<b>Chromium</b>	<b>30</b>		<b>0.19</b>	<b>0.44</b>	<b>mg/Kg-dry</b>	1	8/6/2021 20:58
<b>Copper</b>	<b>5.2</b>		<b>0.44</b>	<b>0.44</b>	<b>mg/Kg-dry</b>	1	8/9/2021 12:48
<b>Lead</b>	<b>14</b>		<b>0.21</b>	<b>0.44</b>	<b>mg/Kg-dry</b>	1	8/6/2021 20:58
<b>Nickel</b>	<b>10</b>		<b>0.23</b>	<b>0.44</b>	<b>mg/Kg-dry</b>	1	8/6/2021 20:58
Selenium	U		0.40	0.44	mg/Kg-dry	1	8/9/2021 12:48
Silver	U		0.058	0.44	mg/Kg-dry	1	8/10/2021 13:59
<b>Zinc</b>	<b>36</b>		<b>0.86</b>	<b>0.88</b>	<b>mg/Kg-dry</b>	1	8/6/2021 20:58
<b>SOLUBLE CATIONS FOR SAR</b>							
			Method: <b>SW6020B</b>		Prep: USDA Method 20B / 8/10/21		Analyst: <b>DSC</b>
<b>Calcium</b>	<b>8.0</b>		<b>2.5</b>	<b>5.0</b>	<b>mg/L</b>	10	8/10/2021 16:19
<b>Magnesium</b>	<b>6.1</b>		<b>0.50</b>	<b>2.0</b>	<b>mg/L</b>	10	8/10/2021 16:19
<b>Sodium</b>	<b>280</b>		<b>1.8</b>	<b>2.0</b>	<b>mg/L</b>	10	8/10/2021 16:19
<b>SODIUM ADSORPTION RATIO</b>							
			Method: <b>USDA H60 METHOD 20B</b>		Prep: USDA Method 20B / 8/10/21		Analyst: <b>DSC</b>
<b>Sodium Adsorption Ratio</b>	<b>18</b>		<b>0.010</b>	<b>0.010</b>	<b>none</b>	1	8/10/2021
<b>POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)</b>							
			Method: <b>SW8270E</b>		Prep: SW3546 / 8/9/21		Analyst: <b>EEW</b>
Acenaphthene	U		0.0041	0.0048	mg/Kg-dry	1	8/9/2021 23:19
Anthracene	U		0.0043	0.0048	mg/Kg-dry	1	8/9/2021 23:19
Benzo(a)anthracene	U		0.0047	0.0048	mg/Kg-dry	1	8/9/2021 23:19
Benzo(a)pyrene	U		0.0039	0.0048	mg/Kg-dry	1	8/9/2021 23:19
Benzo(b)fluoranthene	U		0.0041	0.0048	mg/Kg-dry	1	8/9/2021 23:19
Benzo(k)fluoranthene	U		0.0039	0.0048	mg/Kg-dry	1	8/9/2021 23:19
Chrysene	U		0.0044	0.0048	mg/Kg-dry	1	8/9/2021 23:19
Dibenzo(a,h)anthracene	U		0.0039	0.0048	mg/Kg-dry	1	8/9/2021 23:19

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group, USA

Date: 11-Aug-21

**Client:** Terra Energy Partners, LLC  
**Project:** Terra Energy - Gov 26-1 - Excavation  
**Sample ID:** North Half - West Wall  
**Collection Date:** 8/4/2021 10:00 AM

**Work Order:** 21080449  
**Lab ID:** 21080449-01  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	U		0.0038	0.0048	mg/Kg-dry	1	8/9/2021 23:19
Fluorene	U		0.0038	0.0048	mg/Kg-dry	1	8/9/2021 23:19
Indeno(1,2,3-cd)pyrene	U		0.0042	0.0048	mg/Kg-dry	1	8/9/2021 23:19
Naphthalene	U		0.0047	0.0048	mg/Kg-dry	1	8/9/2021 23:19
Pyrene	U		0.0046	0.0048	mg/Kg-dry	1	8/9/2021 23:19
Surr: 2-Fluorobiphenyl	82.8			20-140	%REC	1	8/9/2021 23:19
Surr: 4-Terphenyl-d14	58.3			22-172	%REC	1	8/9/2021 23:19
Surr: Nitrobenzene-d5	72.7			28-140	%REC	1	8/9/2021 23:19
<b>VOLATILE ORGANIC COMPOUNDS</b>			Method: <b>SW8260C</b>		Prep: SW5035A / 8/6/21		Analyst: <b>JNS</b>
Benzene	U		0.034	0.071	mg/Kg-dry	1	8/7/2021 03:55
Ethylbenzene	U		0.015	0.071	mg/Kg-dry	1	8/7/2021 03:55
m,p-Xylene	U		0.095	0.14	mg/Kg-dry	1	8/7/2021 03:55
o-Xylene	U		0.027	0.071	mg/Kg-dry	1	8/7/2021 03:55
Toluene	U		0.019	0.071	mg/Kg-dry	1	8/7/2021 03:55
Xylenes, Total	U		0.095	0.21	mg/Kg-dry	1	8/7/2021 03:55
Surr: 1,2-Dichloroethane-d4	108			70-130	%REC	1	8/7/2021 03:55
Surr: 4-Bromofluorobenzene	100			70-130	%REC	1	8/7/2021 03:55
Surr: Dibromofluoromethane	94.8			70-130	%REC	1	8/7/2021 03:55
Surr: Toluene-d8	99.7			70-130	%REC	1	8/7/2021 03:55
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			Method: <b>USDA H60 METHOD 20B</b>		Prep: USDA Method 20B / 8/10/21		Analyst: <b>KNC</b>
Electrical Conductivity @ Saturation	1.6		0.011	0.10	mmhos/cm @25°C	20	8/10/2021 12:01
<b>CHROMIUM, TRIVALENT</b>			Method: <b>CALCULATION</b>				Analyst: <b>JB</b>
Chromium, Trivalent	30		1.0	1.2	mg/Kg-dry	1	8/10/2021 09:00
<b>CHROMIUM, HEXAVALENT</b>			Method: <b>SW7196A</b>		Prep: SW3060A / 8/7/21		Analyst: <b>RZM</b>
Chromium, Hexavalent	U		1.0	1.2	mg/Kg-dry	1	8/9/2021 16:52
<b>MOISTURE</b>			Method: <b>SW3550C</b>				Analyst: <b>ALG</b>
Moisture	16		0.10	0.10	% of sample	1	8/6/2021 11:09
<b>SOIL PH MEASURED IN WATER AT NOTED TEMP.</b>			Method: <b>SW9045D</b>		Prep: SW9045D / 8/6/21		Analyst: <b>QTN</b>
pH	9.59		0.10	0.10	s.u.	1	8/6/2021 09:39
Temperature	21.1		0.10	0.10	°C	1	8/6/2021 09:39

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group, USA

Date: 11-Aug-21

**Client:** Terra Energy Partners, LLC  
**Project:** Terra Energy - Gov 26-1 - Excavation  
**Sample ID:** North Half - North Wall  
**Collection Date:** 8/4/2021 11:00 AM

**Work Order:** 21080449  
**Lab ID:** 21080449-02  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>		Prep: SW3550 / 8/6/21		Analyst: <b>SJB</b>
<b>DRO (C10-C28)</b>	<b>7.4</b>	<b>J</b>	<b>3.2</b>	<b>11</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/8/2021 09:04
Surr: 4-Terphenyl-d14	56.8			33-111	%REC	1	8/8/2021 09:04
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>		Prep: SW5035A / 8/6/21		Analyst: <b>SJB</b>
<b>GRO (C6-C10)</b>	<b>U</b>		<b>3.5</b>	<b>8.3</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/7/2021 05:45
Surr: Toluene-d8	89.3			71-123	%REC	1	8/7/2021 05:45
<b>MERCURY BY CVAA</b>							
			Method: <b>SW7471B</b>		Prep: SW7471 / 8/6/21		Analyst: <b>MTW</b>
<b>Mercury</b>	<b>0.022</b>		<b>0.015</b>	<b>0.022</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/6/2021 14:09
<b>METALS BY ICP-MS</b>							
			Method: <b>SW6020B</b>		Prep: SW3050B / 8/6/21		Analyst: <b>DSC</b>
<b>Arsenic</b>	<b>4.0</b>		<b>0.055</b>	<b>0.46</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/9/2021 13:30
<b>Barium</b>	<b>330</b>		<b>4.2</b>	<b>4.6</b>	<b>mg/Kg-dry</b>	<b>10</b>	8/9/2021 13:29
<b>Cadmium</b>	<b>0.18</b>	<b>J</b>	<b>0.028</b>	<b>0.18</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/9/2021 13:30
<b>Chromium</b>	<b>23</b>		<b>0.20</b>	<b>0.46</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/9/2021 13:30
<b>Copper</b>	<b>9.4</b>		<b>0.46</b>	<b>0.46</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/9/2021 13:30
<b>Lead</b>	<b>17</b>		<b>0.22</b>	<b>0.46</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/6/2021 21:04
<b>Nickel</b>	<b>11</b>		<b>0.24</b>	<b>0.46</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/9/2021 13:30
Selenium	U		0.42	0.46	mg/Kg-dry	1	8/9/2021 13:30
Silver	U		0.061	0.46	mg/Kg-dry	1	8/9/2021 13:30
<b>Zinc</b>	<b>41</b>		<b>0.91</b>	<b>0.92</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/9/2021 13:30
<b>SOLUBLE CATIONS FOR SAR</b>							
			Method: <b>SW6020B</b>		Prep: USDA Method 20B / 8/10/21		Analyst: <b>DSC</b>
<b>Calcium</b>	<b>18</b>		<b>2.5</b>	<b>5.0</b>	<b>mg/L</b>	<b>10</b>	8/10/2021 16:21
<b>Magnesium</b>	<b>5.9</b>		<b>0.50</b>	<b>2.0</b>	<b>mg/L</b>	<b>10</b>	8/10/2021 16:21
<b>Sodium</b>	<b>160</b>		<b>1.8</b>	<b>2.0</b>	<b>mg/L</b>	<b>10</b>	8/10/2021 16:21
<b>SODIUM ADSORPTION RATIO</b>							
			Method: <b>USDA H60 METHOD 20B</b>		Prep: USDA Method 20B / 8/10/21		Analyst: <b>DSC</b>
<b>Sodium Adsorption Ratio</b>	<b>8.6</b>		<b>0.010</b>	<b>0.010</b>	<b>none</b>	<b>1</b>	8/10/2021
<b>POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)</b>							
			Method: <b>SW8270E</b>		Prep: SW3546 / 8/9/21		Analyst: <b>EEW</b>
Acenaphthene	U		0.0041	0.0048	mg/Kg-dry	1	8/9/2021 23:34
Anthracene	U		0.0043	0.0048	mg/Kg-dry	1	8/9/2021 23:34
Benzo(a)anthracene	U		0.0046	0.0048	mg/Kg-dry	1	8/9/2021 23:34
Benzo(a)pyrene	U		0.0038	0.0048	mg/Kg-dry	1	8/9/2021 23:34
Benzo(b)fluoranthene	U		0.0040	0.0048	mg/Kg-dry	1	8/9/2021 23:34
Benzo(k)fluoranthene	U		0.0039	0.0048	mg/Kg-dry	1	8/9/2021 23:34
Chrysene	U		0.0044	0.0048	mg/Kg-dry	1	8/9/2021 23:34
Dibenzo(a,h)anthracene	U		0.0039	0.0048	mg/Kg-dry	1	8/9/2021 23:34

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group, USA

Date: 11-Aug-21

**Client:** Terra Energy Partners, LLC  
**Project:** Terra Energy - Gov 26-1 - Excavation  
**Sample ID:** North Half - North Wall  
**Collection Date:** 8/4/2021 11:00 AM

**Work Order:** 21080449  
**Lab ID:** 21080449-02  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	U		0.0038	0.0048	mg/Kg-dry	1	8/9/2021 23:34
Fluorene	U		0.0037	0.0048	mg/Kg-dry	1	8/9/2021 23:34
Indeno(1,2,3-cd)pyrene	U		0.0042	0.0048	mg/Kg-dry	1	8/9/2021 23:34
Naphthalene	U		0.0046	0.0048	mg/Kg-dry	1	8/9/2021 23:34
Pyrene	U		0.0046	0.0048	mg/Kg-dry	1	8/9/2021 23:34
Surr: 2-Fluorobiphenyl	75.6			20-140	%REC	1	8/9/2021 23:34
Surr: 4-Terphenyl-d14	48.8			22-172	%REC	1	8/9/2021 23:34
Surr: Nitrobenzene-d5	81.2			28-140	%REC	1	8/9/2021 23:34
<b>VOLATILE ORGANIC COMPOUNDS</b>			Method: <b>SW8260C</b>		Prep: SW5035A / 8/6/21		Analyst: <b>JNS</b>
Benzene	U		0.024	0.050	mg/Kg-dry	1	8/7/2021 04:12
Ethylbenzene	U		0.011	0.050	mg/Kg-dry	1	8/7/2021 04:12
m,p-Xylene	U		0.066	0.10	mg/Kg-dry	1	8/7/2021 04:12
o-Xylene	U		0.019	0.050	mg/Kg-dry	1	8/7/2021 04:12
Toluene	U		0.014	0.050	mg/Kg-dry	1	8/7/2021 04:12
Xylenes, Total	U		0.066	0.15	mg/Kg-dry	1	8/7/2021 04:12
Surr: 1,2-Dichloroethane-d4	107			70-130	%REC	1	8/7/2021 04:12
Surr: 4-Bromofluorobenzene	99.3			70-130	%REC	1	8/7/2021 04:12
Surr: Dibromofluoromethane	92.7			70-130	%REC	1	8/7/2021 04:12
Surr: Toluene-d8	98.2			70-130	%REC	1	8/7/2021 04:12
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			Method: <b>USDA H60 METHOD 20B</b>		Prep: USDA Method 20B / 8/10/21		Analyst: <b>KNC</b>
Electrical Conductivity @ Saturation	0.98		0.011	0.10	mmhos/cm @25°C	20	8/10/2021 12:01
<b>CHROMIUM, TRIVALENT</b>			Method: <b>CALCULATION</b>				Analyst: <b>JB</b>
Chromium, Trivalent	23		0.99	1.2	mg/Kg-dry	1	8/10/2021 09:00
<b>CHROMIUM, HEXAVALENT</b>			Method: <b>SW7196A</b>		Prep: SW3060A / 8/7/21		Analyst: <b>RZM</b>
Chromium, Hexavalent	U		0.99	1.2	mg/Kg-dry	1	8/9/2021 16:52
<b>MOISTURE</b>			Method: <b>SW3550C</b>				Analyst: <b>ALG</b>
Moisture	15		0.10	0.10	% of sample	1	8/6/2021 11:09
<b>SOIL PH MEASURED IN WATER AT NOTED TEMP.</b>			Method: <b>SW9045D</b>		Prep: SW9045D / 8/6/21		Analyst: <b>QTN</b>
pH	9.42		0.10	0.10	s.u.	1	8/6/2021 09:39
Temperature	20.7		0.10	0.10	°C	1	8/6/2021 09:39

**Note:** See Qualifiers page for a list of qualifiers and their definitions.



# ALS Group, USA

Date: 11-Aug-21

**Client:** Terra Energy Partners, LLC  
**Project:** Terra Energy - Gov 26-1 - Excavation  
**Sample ID:** North Half - East Wall  
**Collection Date:** 8/4/2021 10:30 AM

**Work Order:** 21080449  
**Lab ID:** 21080449-03  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>			Prep: SW3550 / 8/6/21	Analyst: <b>SJB</b>
<b>DRO (C10-C28)</b>	<b>11</b>	<b>J</b>	<b>3.2</b>	<b>11</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/8/2021 09:42
Surr: 4-Terphenyl-d14	61.9			33-111	%REC	1	8/8/2021 09:42
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>			Prep: SW5035A / 8/6/21	Analyst: <b>SJB</b>
<b>GRO (C6-C10)</b>	<b>U</b>		<b>4.1</b>	<b>9.8</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/7/2021 06:07
Surr: Toluene-d8	90.7			71-123	%REC	1	8/7/2021 06:07
<b>MERCURY BY CVAA</b>							
			Method: <b>SW7471B</b>			Prep: SW7471 / 8/6/21	Analyst: <b>MTW</b>
<b>Mercury</b>	<b>0.022</b>		<b>0.013</b>	<b>0.020</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/6/2021 14:16
<b>METALS BY ICP-MS</b>							
			Method: <b>SW6020B</b>			Prep: SW3050B / 8/6/21	Analyst: <b>DSC</b>
<b>Arsenic</b>	<b>3.8</b>		<b>0.051</b>	<b>0.42</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/9/2021 13:34
<b>Barium</b>	<b>230</b>		<b>3.9</b>	<b>4.2</b>	<b>mg/Kg-dry</b>	<b>10</b>	8/9/2021 13:32
<b>Cadmium</b>	<b>0.16</b>	<b>J</b>	<b>0.025</b>	<b>0.17</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/10/2021 14:05
<b>Chromium</b>	<b>17</b>		<b>0.19</b>	<b>0.42</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/9/2021 13:34
<b>Copper</b>	<b>11</b>		<b>0.42</b>	<b>0.42</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/9/2021 13:34
<b>Lead</b>	<b>19</b>		<b>0.20</b>	<b>0.42</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/6/2021 21:06
<b>Nickel</b>	<b>10</b>		<b>0.22</b>	<b>0.42</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/9/2021 13:34
Selenium	U		0.39	0.42	mg/Kg-dry	1	8/9/2021 13:34
Silver	U		0.056	0.42	mg/Kg-dry	1	8/9/2021 13:34
<b>Zinc</b>	<b>37</b>		<b>0.83</b>	<b>0.85</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/9/2021 13:34
<b>SOLUBLE CATIONS FOR SAR</b>							
			Method: <b>SW6020B</b>			Prep: USDA Method 20B / 8/10/21	Analyst: <b>DSC</b>
<b>Calcium</b>	<b>23</b>		<b>2.5</b>	<b>5.0</b>	<b>mg/L</b>	<b>10</b>	8/10/2021 16:22
<b>Magnesium</b>	<b>5.8</b>		<b>0.50</b>	<b>2.0</b>	<b>mg/L</b>	<b>10</b>	8/10/2021 16:22
<b>Sodium</b>	<b>73</b>		<b>1.8</b>	<b>2.0</b>	<b>mg/L</b>	<b>10</b>	8/10/2021 16:22
<b>SODIUM ADSORPTION RATIO</b>							
			Method: <b>USDA H60 METHOD 20B</b>			Prep: USDA Method 20B / 8/10/21	Analyst: <b>DSC</b>
<b>Sodium Adsorption Ratio</b>	<b>3.5</b>		<b>0.010</b>	<b>0.010</b>	<b>none</b>	<b>1</b>	8/10/2021
<b>POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)</b>							
			Method: <b>SW8270E</b>			Prep: SW3546 / 8/9/21	Analyst: <b>EEW</b>
Acenaphthene	U		0.0040	0.0047	mg/Kg-dry	1	8/9/2021 23:50
Anthracene	U		0.0042	0.0047	mg/Kg-dry	1	8/9/2021 23:50
Benzo(a)anthracene	U		0.0045	0.0047	mg/Kg-dry	1	8/9/2021 23:50
Benzo(a)pyrene	U		0.0038	0.0047	mg/Kg-dry	1	8/9/2021 23:50
Benzo(b)fluoranthene	U		0.0040	0.0047	mg/Kg-dry	1	8/9/2021 23:50
Benzo(k)fluoranthene	U		0.0038	0.0047	mg/Kg-dry	1	8/9/2021 23:50
Chrysene	U		0.0043	0.0047	mg/Kg-dry	1	8/9/2021 23:50
Dibenzo(a,h)anthracene	U		0.0038	0.0047	mg/Kg-dry	1	8/9/2021 23:50

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group, USA

Date: 11-Aug-21

**Client:** Terra Energy Partners, LLC  
**Project:** Terra Energy - Gov 26-1 - Excavation  
**Sample ID:** North Half - East Wall  
**Collection Date:** 8/4/2021 10:30 AM

**Work Order:** 21080449  
**Lab ID:** 21080449-03  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	U		0.0037	0.0047	mg/Kg-dry	1	8/9/2021 23:50
Fluorene	U		0.0037	0.0047	mg/Kg-dry	1	8/9/2021 23:50
Indeno(1,2,3-cd)pyrene	U		0.0041	0.0047	mg/Kg-dry	1	8/9/2021 23:50
Naphthalene	U		0.0045	0.0047	mg/Kg-dry	1	8/9/2021 23:50
Pyrene	U		0.0045	0.0047	mg/Kg-dry	1	8/9/2021 23:50
Surr: 2-Fluorobiphenyl	73.2			20-140	%REC	1	8/9/2021 23:50
Surr: 4-Terphenyl-d14	38.5			22-172	%REC	1	8/9/2021 23:50
Surr: Nitrobenzene-d5	50.6			28-140	%REC	1	8/9/2021 23:50
<b>VOLATILE ORGANIC COMPOUNDS</b>			Method: <b>SW8260C</b>		Prep: SW5035A / 8/6/21		Analyst: <b>JNS</b>
Benzene	U		0.028	0.059	mg/Kg-dry	1	8/7/2021 04:28
Ethylbenzene	U		0.012	0.059	mg/Kg-dry	1	8/7/2021 04:28
m,p-Xylene	U		0.078	0.12	mg/Kg-dry	1	8/7/2021 04:28
o-Xylene	U		0.023	0.059	mg/Kg-dry	1	8/7/2021 04:28
Toluene	U		0.016	0.059	mg/Kg-dry	1	8/7/2021 04:28
Xylenes, Total	U		0.078	0.18	mg/Kg-dry	1	8/7/2021 04:28
Surr: 1,2-Dichloroethane-d4	108			70-130	%REC	1	8/7/2021 04:28
Surr: 4-Bromofluorobenzene	100			70-130	%REC	1	8/7/2021 04:28
Surr: Dibromofluoromethane	96.9			70-130	%REC	1	8/7/2021 04:28
Surr: Toluene-d8	97.5			70-130	%REC	1	8/7/2021 04:28
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			Method: <b>USDA H60 METHOD 20B</b>		Prep: USDA Method 20B / 8/10/21		Analyst: <b>KNC</b>
Electrical Conductivity @ Saturation	0.51		0.011	0.10	mmhos/cm @25°C	20	8/10/2021 12:01
<b>CHROMIUM, TRIVALENT</b>			Method: <b>CALCULATION</b>				Analyst: <b>JB</b>
Chromium, Trivalent	17		0.98	1.2	mg/Kg-dry	1	8/10/2021 09:00
<b>CHROMIUM, HEXAVALENT</b>			Method: <b>SW7196A</b>		Prep: SW3060A / 8/7/21		Analyst: <b>RZM</b>
Chromium, Hexavalent	U		0.98	1.2	mg/Kg-dry	1	8/9/2021 16:52
<b>MOISTURE</b>			Method: <b>SW3550C</b>				Analyst: <b>ALG</b>
Moisture	13		0.10	0.10	% of sample	1	8/6/2021 11:09
<b>SOIL PH MEASURED IN WATER AT NOTED TEMP.</b>			Method: <b>SW9045D</b>		Prep: SW9045D / 8/6/21		Analyst: <b>QTN</b>
pH	9.31		0.10	0.10	s.u.	1	8/6/2021 09:39
Temperature	20.8		0.10	0.10	°C	1	8/6/2021 09:39

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group, USA

Date: 11-Aug-21

**Client:** Terra Energy Partners, LLC  
**Project:** Terra Energy - Gov 26-1 - Excavation  
**Sample ID:** North Half - Bottom  
**Collection Date:** 8/4/2021 11:45 AM

**Work Order:** 21080449  
**Lab ID:** 21080449-04  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>		Prep: SW3550 / 8/6/21		Analyst: <b>SJB</b>
<b>DRO (C10-C28)</b>	<b>50</b>		<b>3.2</b>	<b>11</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/8/2021 10:19
<i>Surr: 4-Terphenyl-d14</i>	<i>61.0</i>			<i>33-111</i>	<i>%REC</i>	<i>1</i>	8/8/2021 10:19
<b>GASOLINE RANGE ORGANICS BY GC-FID</b>							
			Method: <b>SW8015D</b>		Prep: SW5035A / 8/6/21		Analyst: <b>SJB</b>
<b>GRO (C6-C10)</b>	<b>230</b>		<b>3.2</b>	<b>7.6</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/7/2021 06:29
<i>Surr: Toluene-d8</i>	<i>95.6</i>			<i>71-123</i>	<i>%REC</i>	<i>1</i>	8/7/2021 06:29
<b>MERCURY BY CVAA</b>							
			Method: <b>SW7471B</b>		Prep: SW7471 / 8/6/21		Analyst: <b>MTW</b>
<b>Mercury</b>	<b>0.023</b>		<b>0.015</b>	<b>0.022</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/6/2021 14:18
<b>METALS BY ICP-MS</b>							
			Method: <b>SW6020B</b>		Prep: SW3050B / 8/6/21		Analyst: <b>STP</b>
<b>Arsenic</b>	<b>4.2</b>		<b>0.047</b>	<b>0.39</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/6/2021 21:08
<b>Barium</b>	<b>180</b>		<b>3.6</b>	<b>3.9</b>	<b>mg/Kg-dry</b>	<b>10</b>	8/9/2021 13:36
<b>Cadmium</b>	<b>0.092</b>	J	<b>0.024</b>	<b>0.16</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/9/2021 13:38
<b>Chromium</b>	<b>21</b>		<b>0.17</b>	<b>0.39</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/6/2021 21:08
<b>Copper</b>	<b>7.4</b>		<b>0.39</b>	<b>0.39</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/9/2021 13:38
<b>Lead</b>	<b>17</b>		<b>0.19</b>	<b>0.39</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/6/2021 21:08
<b>Nickel</b>	<b>8.6</b>		<b>0.20</b>	<b>0.39</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/6/2021 21:08
<b>Selenium</b>	U		0.36	0.39	mg/Kg-dry	1	8/6/2021 21:08
<b>Silver</b>	U		0.052	0.39	mg/Kg-dry	1	8/9/2021 13:38
<b>Zinc</b>	<b>33</b>		<b>0.77</b>	<b>0.78</b>	<b>mg/Kg-dry</b>	<b>1</b>	8/6/2021 21:08
<b>SOLUBLE CATIONS FOR SAR</b>							
			Method: <b>SW6020B</b>		Prep: USDA Method 20B / 8/10/21		Analyst: <b>DSC</b>
<b>Calcium</b>	<b>19</b>		<b>2.5</b>	<b>5.0</b>	<b>mg/L</b>	<b>10</b>	8/10/2021 16:24
<b>Magnesium</b>	<b>7.0</b>		<b>0.50</b>	<b>2.0</b>	<b>mg/L</b>	<b>10</b>	8/10/2021 16:24
<b>Sodium</b>	<b>220</b>		<b>1.8</b>	<b>2.0</b>	<b>mg/L</b>	<b>10</b>	8/10/2021 16:24
<b>SODIUM ADSORPTION RATIO</b>							
			Method: <b>USDA H60 METHOD 20B</b>		Prep: USDA Method 20B / 8/10/21		Analyst: <b>DSC</b>
<b>Sodium Adsorption Ratio</b>	<b>11</b>		<b>0.010</b>	<b>0.010</b>	<b>none</b>	<b>1</b>	8/10/2021
<b>POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)</b>							
			Method: <b>SW8270E</b>		Prep: SW3546 / 8/9/21		Analyst: <b>EEW</b>
<b>Acenaphthene</b>	U		0.0040	0.0047	mg/Kg-dry	1	8/10/2021 00:05
<b>Anthracene</b>	U		0.0043	0.0047	mg/Kg-dry	1	8/10/2021 00:05
<b>Benzo(a)anthracene</b>	U		0.0046	0.0047	mg/Kg-dry	1	8/10/2021 00:05
<b>Benzo(a)pyrene</b>	U		0.0038	0.0047	mg/Kg-dry	1	8/10/2021 00:05
<b>Benzo(b)fluoranthene</b>	U		0.0040	0.0047	mg/Kg-dry	1	8/10/2021 00:05
<b>Benzo(k)fluoranthene</b>	U		0.0039	0.0047	mg/Kg-dry	1	8/10/2021 00:05
<b>Chrysene</b>	U		0.0043	0.0047	mg/Kg-dry	1	8/10/2021 00:05
<b>Dibenzo(a,h)anthracene</b>	U		0.0038	0.0047	mg/Kg-dry	1	8/10/2021 00:05

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

# ALS Group, USA

Date: 11-Aug-21

**Client:** Terra Energy Partners, LLC  
**Project:** Terra Energy - Gov 26-1 - Excavation  
**Sample ID:** North Half - Bottom  
**Collection Date:** 8/4/2021 11:45 AM

**Work Order:** 21080449  
**Lab ID:** 21080449-04  
**Matrix:** SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluoranthene	U		0.0037	0.0047	mg/Kg-dry	1	8/10/2021 00:05
Fluorene	U		0.0037	0.0047	mg/Kg-dry	1	8/10/2021 00:05
Indeno(1,2,3-cd)pyrene	U		0.0041	0.0047	mg/Kg-dry	1	8/10/2021 00:05
Naphthalene	U		0.0046	0.0047	mg/Kg-dry	1	8/10/2021 00:05
Pyrene	U		0.0045	0.0047	mg/Kg-dry	1	8/10/2021 00:05
Surr: 2-Fluorobiphenyl	63.3			20-140	%REC	1	8/10/2021 00:05
Surr: 4-Terphenyl-d14	28.4			22-172	%REC	1	8/10/2021 00:05
Surr: Nitrobenzene-d5	50.8			28-140	%REC	1	8/10/2021 00:05
<b>VOLATILE ORGANIC COMPOUNDS</b>			Method: <b>SW8260C</b>		Prep: SW5035A / 8/6/21		Analyst: <b>JNS</b>
Benzene	U		0.022	0.046	mg/Kg-dry	1	8/7/2021 04:45
Ethylbenzene	U		0.0097	0.046	mg/Kg-dry	1	8/7/2021 04:45
m,p-Xylene	U		0.061	0.092	mg/Kg-dry	1	8/7/2021 04:45
o-Xylene	U		0.018	0.046	mg/Kg-dry	1	8/7/2021 04:45
Toluene	U		0.013	0.046	mg/Kg-dry	1	8/7/2021 04:45
Xylenes, Total	U		0.061	0.14	mg/Kg-dry	1	8/7/2021 04:45
Surr: 1,2-Dichloroethane-d4	108			70-130	%REC	1	8/7/2021 04:45
Surr: 4-Bromofluorobenzene	107			70-130	%REC	1	8/7/2021 04:45
Surr: Dibromofluoromethane	95.0			70-130	%REC	1	8/7/2021 04:45
Surr: Toluene-d8	97.6			70-130	%REC	1	8/7/2021 04:45
<b>ELECTRICAL CONDUCTIVITY (SAR)</b>			Method: <b>USDA H60 METHOD 20B</b>		Prep: USDA Method 20B / 8/10/21		Analyst: <b>KNC</b>
Electrical Conductivity @ Saturation	1.2		0.011	0.10	mmhos/cm @25°C	20	8/10/2021 12:01
<b>CHROMIUM, TRIVALENT</b>			Method: <b>CALCULATION</b>				Analyst: <b>JB</b>
Chromium, Trivalent	21		1.0	1.2	mg/Kg-dry	1	8/10/2021 09:00
<b>CHROMIUM, HEXAVALENT</b>			Method: <b>SW7196A</b>		Prep: SW3060A / 8/7/21		Analyst: <b>RZM</b>
Chromium, Hexavalent	U		1.0	1.2	mg/Kg-dry	1	8/9/2021 16:52
<b>MOISTURE</b>			Method: <b>SW3550C</b>				Analyst: <b>ALG</b>
Moisture	15		0.10	0.10	% of sample	1	8/6/2021 11:09
<b>SOIL PH MEASURED IN WATER AT NOTED TEMP.</b>			Method: <b>SW9045D</b>		Prep: SW9045D / 8/6/21		Analyst: <b>QTN</b>
pH	9.50		0.10	0.10	s.u.	1	8/6/2021 09:39
Temperature	20.8		0.10	0.10	°C	1	8/6/2021 09:39

**Note:** See Qualifiers page for a list of qualifiers and their definitions.

Client: Terra Energy Partners, LLC

## QC BATCH REPORT

Work Order: 21080449

Project: Terra Energy - Gov 26-1 - Excavation

Batch ID: 181540

Instrument ID GC8

Method: SW8015D

<b>MBLK</b>		Sample ID: <b>DBLKS1-181540-181540</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/6/2021 07:43 PM</b>		
Client ID:		Run ID: <b>GC8_210806A</b>				SeqNo: <b>7648801</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)

U 10

Surr: 4-Terphenyl-d14

2.263 0 3.33 0 67.9 33-111 0

<b>LCS</b>		Sample ID: <b>DLCSS1-181540-181540</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/6/2021 08:20 PM</b>		
Client ID:		Run ID: <b>GC8_210806A</b>				SeqNo: <b>7648802</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)

316.7 10 333 0 95.1 64-130 0

Surr: 4-Terphenyl-d14

2.237 0 3.33 0 67.2 33-111 0

<b>MS</b>		Sample ID: <b>21072405-03B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/6/2021 08:57 PM</b>		
Client ID:		Run ID: <b>GC8_210806A</b>				SeqNo: <b>7648803</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)

230.4 9.6 318.8 1.351 71.9 64-130 0

Surr: 4-Terphenyl-d14

1.528 0 3.188 0 47.9 33-111 0

<b>MSD</b>		Sample ID: <b>21072405-03B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/6/2021 09:35 PM</b>		
Client ID:		Run ID: <b>GC8_210806A</b>				SeqNo: <b>7648804</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

DRO (C10-C28)

273.9 9.9 328.4 1.351 83 64-130 230.4 17.3 30

Surr: 4-Terphenyl-d14

1.901 0 3.284 0 57.9 33-111 1.528 21.8 30

The following samples were analyzed in this batch:

21080449-01B	21080449-02B	21080449-03B
21080449-04B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Terra Energy Partners, LLC  
 Work Order: 21080449  
 Project: Terra Energy - Gov 26-1 - Excavation

## QC BATCH REPORT

Batch ID: **181546** Instrument ID **GC9** Method: **SW8015D**

<b>MBLK</b>		Sample ID: <b>MBLK-181546-181546</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>8/7/2021 05:01 AM</b>		
Client ID:		Run ID: <b>GC9_210806B</b>				SeqNo: <b>7648228</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	U	5,000								
<i>Surr: Toluene-d8</i>	<i>4606</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>92.1</i>	<i>71-123</i>	<i>0</i>			

<b>LCS</b>		Sample ID: <b>LCS-181546-181546</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>8/7/2021 04:18 AM</b>		
Client ID:		Run ID: <b>GC9_210806B</b>				SeqNo: <b>7648227</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	219300	5,000	250000	0	87.7	71-123	0			
<i>Surr: Toluene-d8</i>	<i>4502</i>	<i>0</i>	<i>5000</i>	<i>0</i>	<i>90</i>	<i>71-123</i>	<i>0</i>			

<b>MS</b>		Sample ID: <b>21080449-01A MS</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>8/7/2021 07:34 AM</b>		
Client ID: <b>North Half - West Wall</b>		Run ID: <b>GC9_210806B</b>				SeqNo: <b>7648172</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	561000	12,000	591700	0	94.8	71-123	0			
<i>Surr: Toluene-d8</i>	<i>10760</i>	<i>0</i>	<i>11830</i>	<i>0</i>	<i>90.9</i>	<i>71-123</i>	<i>0</i>			

<b>MSD</b>		Sample ID: <b>21080449-01A MSD</b>				Units: <b>µg/Kg-dry</b>		Analysis Date: <b>8/7/2021 07:56 AM</b>		
Client ID: <b>North Half - West Wall</b>		Run ID: <b>GC9_210806B</b>				SeqNo: <b>7648173</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	567100	12,000	591700	0	95.8	71-123	561000	1.09	30	
<i>Surr: Toluene-d8</i>	<i>10810</i>	<i>0</i>	<i>11830</i>	<i>0</i>	<i>91.4</i>	<i>71-123</i>	<i>10760</i>	<i>0.527</i>	<i>30</i>	

The following samples were analyzed in this batch:

21080449-01A	21080449-02A	21080449-03A
21080449-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Terra Energy Partners, LLC  
 Work Order: 21080449  
 Project: Terra Energy - Gov 26-1 - Excavation

## QC BATCH REPORT

Batch ID: **181529** Instrument ID **HG4** Method: **SW7471B**

<b>MBLK</b>		Sample ID: <b>MBLK-181529-181529</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/6/2021 01:24 PM</b>		
Client ID:		Run ID: <b>HG4_210806A</b>				SeqNo: <b>7645787</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.020								

<b>LCS</b>		Sample ID: <b>LCS-181529-181529</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/6/2021 01:25 PM</b>		
Client ID:		Run ID: <b>HG4_210806A</b>				SeqNo: <b>7645788</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1783	0.020	0.1665	0	107	80-120	0			

<b>MS</b>		Sample ID: <b>21080449-04BMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/6/2021 02:20 PM</b>		
Client ID: <b>North Half - Bottom</b>		Run ID: <b>HG4_210806A</b>				SeqNo: <b>7645816</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1844	0.019	0.1561	0.01917	106	75-125	0			

<b>MSD</b>		Sample ID: <b>21080449-04BMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/6/2021 02:21 PM</b>		
Client ID: <b>North Half - Bottom</b>		Run ID: <b>HG4_210806A</b>				SeqNo: <b>7645817</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.183	0.019	0.1556	0.01917	105	75-125	0.1844	0.737	35	

The following samples were analyzed in this batch:

21080449-01B	21080449-02B	21080449-03B
21080449-04B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Terra Energy Partners, LLC  
 Work Order: 21080449  
 Project: Terra Energy - Gov 26-1 - Excavation

## QC BATCH REPORT

Batch ID: **181553** Instrument ID **ICPMS3** Method: **SW6020B**

MBLK				Sample ID: MBLK-181553-181553				Units: mg/Kg			Analysis Date: 8/6/2021 08:44 PM		
Client ID:			Run ID: ICPMS3_210806B				SeqNo: 7646083		Prep Date: 8/6/2021		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Arsenic	U	0.25											
Barium	U	0.25											
Cadmium	U	0.10											
Chromium	U	0.25											
Copper	U	0.25											
Lead	U	0.25											
Nickel	U	0.25											
Silver	U	0.25											
Zinc	U	0.50											

MBLK				Sample ID: MBLK-181553-181553				Units: mg/Kg		Analysis Date: 8/9/2021 12:37 PM		
Client ID:			Run ID: ICPMS3_210809B			SeqNo: 7648755		Prep Date: 8/6/2021		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Selenium	U	0.25										

LCS				Sample ID: LCS-181553-181553				Units: mg/Kg		Analysis Date: 8/6/2021 08:46 PM		
Client ID:			Run ID: ICPMS3_210806B			SeqNo: 7646084		Prep Date: 8/6/2021		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Arsenic	4.784	0.25	5	0	95.7	80-120	0					
Barium	5.18	0.25	5	0	104	80-120	0					
Cadmium	5.045	0.10	5	0	101	80-120	0					
Chromium	4.727	0.25	5	0	94.5	80-120	0					
Copper	4.696	0.25	5	0	93.9	80-120	0					
Lead	4.977	0.25	5	0	99.5	80-120	0					
Nickel	4.665	0.25	5	0	93.3	80-120	0					
Silver	4.761	0.25	5	0	95.2	80-120	0					
Zinc	4.839	0.50	5	0	96.8	80-120	0					

LCS				Sample ID: LCS-181553-181553			Units: mg/Kg		Analysis Date: 8/9/2021 12:39 PM		
Client ID:		Run ID: ICPMS3_210809B			SeqNo: 7648756		Prep Date: 8/6/2021		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Selenium	4.969	0.25	5	0	99.4	80-120	0				

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



**Client:** Terra Energy Partners, LLC  
**Work Order:** 21080449  
**Project:** Terra Energy - Gov 26-1 - Excavation

## QC BATCH REPORT

Batch ID: **181553** Instrument ID **ICPMS3** Method: **SW6020B**

MS Sample ID: <b>21080449-01BMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/6/2021 09:00 PM</b>				
Client ID: <b>North Half - West Wall</b>		Run ID: <b>ICPMS3_210806B</b>		SeqNo: <b>7646092</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.707	0.38	7.599	4.263	71.6	75-125	0			S
Barium	144.6	0.38	7.599	128.1	218	75-125	0			SEO
Chromium	31.86	0.38	7.599	24.92	91.3	75-125	0			
Lead	17.94	0.38	7.599	11.63	83	75-125	0			
Nickel	13.96	0.38	7.599	8.408	73	75-125	0			S
Selenium	7.284	0.38	7.599	1.136	80.9	75-125	0			B
Zinc	35.53	0.76	7.599	29.91	73.9	75-125	0			S

MS Sample ID: <b>21080449-01BMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/9/2021 12:49 PM</b>				
Client ID: <b>North Half - West Wall</b>		Run ID: <b>ICPMS3_210809B</b>		SeqNo: <b>7648762</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	5.488	0.15	7.599	0.01642	72	75-125	0			S
Copper	10.03	0.38	7.599	4.391	74.2	75-125	0			S

MS Sample ID: <b>21080449-01BMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/10/2021 02:01 PM</b>				
Client ID: <b>North Half - West Wall</b>		Run ID: <b>ICPMS3_210810B</b>		SeqNo: <b>7652630</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Silver	5.629	0.38	7.599	0.03579	73.6	75-125	0			S

MSD Sample ID: <b>21080449-01BMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/6/2021 09:02 PM</b>				
Client ID: <b>North Half - West Wall</b>		Run ID: <b>ICPMS3_210806B</b>		SeqNo: <b>7646093</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	9.509	0.36	7.289	4.263	72	75-125	9.707	2.06	20	S
Barium	121.5	0.36	7.289	128.1	-89.9	75-125	144.6	17.4	20	SO
Chromium	31.7	0.36	7.289	24.92	93.1	75-125	31.86	0.492	20	
Lead	17.88	0.36	7.289	11.63	85.7	75-125	17.94	0.329	20	
Nickel	13.56	0.36	7.289	8.408	70.7	75-125	13.96	2.88	20	S
Selenium	6.401	0.36	7.289	1.136	72.2	75-125	7.284	12.9	20	BS
Zinc	34.3	0.73	7.289	29.91	60.1	75-125	35.53	3.54	20	SO

MSD Sample ID: <b>21080449-01BMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/9/2021 12:51 PM</b>				
Client ID: <b>North Half - West Wall</b>		Run ID: <b>ICPMS3_210809B</b>		SeqNo: <b>7648763</b>		Prep Date: <b>8/6/2021</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	5.17	0.15	7.289	0.01642	70.7	75-125	5.488	5.98	20	S
Copper	9.586	0.36	7.289	4.391	71.3	75-125	10.03	4.5	20	S

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Terra Energy Partners, LLC  
**Work Order:** 21080449  
**Project:** Terra Energy - Gov 26-1 - Excavation

## QC BATCH REPORT

Batch ID: **181553** Instrument ID **ICPMS3** Method: **SW6020B**

MSD				Sample ID: 21080449-01BMSD				Units: mg/Kg		Analysis Date: 8/10/2021 02:03 PM			
Client ID: North Half - West Wall				Run ID: ICPMS3_210810B				SeqNo: 7652631		Prep Date: 8/6/2021		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Silver	4.513	0.36	7.289	0.03579	61.4	75-125	5.629	22	20	SR			

The following samples were analyzed in this batch:

21080449-01B	21080449-02B	21080449-03B
21080449-04B		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Terra Energy Partners, LLC  
**Work Order:** 21080449  
**Project:** Terra Energy - Gov 26-1 - Excavation

## QC BATCH REPORT

Batch ID: **181702** Instrument ID **ICPMS3** Method: **SW6020B**

DUP				Sample ID: <b>21080449-04BDUP</b>			Units: <b>mg/L</b>		Analysis Date: <b>8/10/2021 04:25 PM</b>	
Client ID: <b>North Half - Bottom</b>				Run ID: <b>ICPMS3_210810A</b>			SeqNo: <b>7654039</b>		Prep Date: <b>8/10/2021</b>	
									DF: <b>10</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	18.51	5.0	0	0	0	0-0	19.15	3.42		
Magnesium	6.387	2.0	0	0	0	0-0	6.996	9.09		
Sodium	216.6	2.0	0	0	0	0-0	218.8	1.02		

The following samples were analyzed in this batch:

21080449-01B 21080449-02B 21080449-03B  
 21080449-04B

Batch ID: **181702** Instrument ID **SAR** Method: **USDA H60 Method**

DUP				Sample ID: <b>21080449-04BDUP</b>			Units: <b>none</b>		Analysis Date: <b>8/10/2021</b>	
Client ID: <b>North Half - Bottom</b>				Run ID: <b>SAR_210810A</b>			SeqNo: <b>7654192</b>		Prep Date: <b>8/10/2021</b>	
									DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	11.07	0.010	0	0	0			0		

The following samples were analyzed in this batch:

21080449-01B 21080449-02B 21080449-03B  
 21080449-04B

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Terra Energy Partners, LLC  
 Work Order: 21080449  
 Project: Terra Energy - Gov 26-1 - Excavation

## QC BATCH REPORT

Batch ID: **181634** Instrument ID **SVMS6** Method: **SW8270E**

MBLK				Sample ID: SBLKS1-181634-181634				Units: µg/Kg			Analysis Date: 8/9/2021 10:48 PM		
Client ID:			Run ID: SVMS6_210809A				SeqNo: 7651202			Prep Date: 8/9/2021		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Acenaphthene	U	4.2											
Anthracene	U	4.2											
Benzo(a)anthracene	U	4.2											
Benzo(a)pyrene	U	4.2											
Benzo(b)fluoranthene	U	4.2											
Benzo(k)fluoranthene	U	4.2											
Chrysene	U	4.2											
Dibenzo(a,h)anthracene	U	4.2											
Fluoranthene	U	4.2											
Fluorene	U	4.2											
Indeno(1,2,3-cd)pyrene	U	4.2											
Naphthalene	U	4.2											
Pyrene	U	4.2											
Surr: 2-Fluorobiphenyl	3172	0	3333	0	95.2	20-140	0						
Surr: 4-Terphenyl-d14	3464	0	3333	0	104	22-172	0						
Surr: Nitrobenzene-d5	3431	0	3333	0	103	28-140	0						

LCS				Sample ID: SLCSS1-181634-181634			Units: µg/Kg		Analysis Date: 8/9/2021 11:03 PM		
Client ID:			Run ID: SVMS6_210809A			SeqNo: 7651203		Prep Date: 8/9/2021		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	1100	4.2	1333	0	82.5	40-140	0				
Anthracene	1153	4.2	1333	0	86.5	40-140	0				
Benzo(a)anthracene	1203	4.2	1333	0	90.2	40-140	0				
Benzo(a)pyrene	1238	4.2	1333	0	92.9	40-140	0				
Benzo(b)fluoranthene	980.5	4.2	1333	0	73.6	40-140	0				
Benzo(k)fluoranthene	1186	4.2	1333	0	89	40-140	0				
Chrysene	1081	4.2	1333	0	81.1	40-140	0				
Dibenzo(a,h)anthracene	1546	4.2	1333	0	116	40-140	0				
Fluoranthene	1086	4.2	1333	0	81.5	40-140	0				
Fluorene	1100	4.2	1333	0	82.6	40-140	0				
Indeno(1,2,3-cd)pyrene	1610	4.2	1333	0	121	40-140	0				
Naphthalene	1211	4.2	1333	0	90.8	40-140	0				
Pyrene	1017	4.2	1333	0	76.3	40-140	0				
Surr: 2-Fluorobiphenyl	3096	0	3333	0	92.9	20-140	0				
Surr: 4-Terphenyl-d14	3352	0	3333	0	101	22-172	0				
Surr: Nitrobenzene-d5	2813	0	3333	0	84.4	28-140	0				

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Terra Energy Partners, LLC  
 Work Order: 21080449  
 Project: Terra Energy - Gov 26-1 - Excavation

## QC BATCH REPORT

Batch ID: **181634** Instrument ID **SVMS6** Method: **SW8270E**

MS				Sample ID: <b>21072419-03B MS</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>8/10/2021 03:40 PM</b>	
Client ID:		Run ID: <b>SVMS6_210810A</b>			SeqNo: <b>7655334</b>		Prep Date: <b>8/9/2021</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1096	4.1	1306	24.97	82	40-140	0			
Anthracene	1208	4.1	1306	90.53	85.6	40-140	0			
Benzo(a)anthracene	1414	4.1	1306	239.1	89.9	40-140	0			
Benzo(a)pyrene	1296	4.1	1306	221	82.3	40-140	0			
Benzo(b)fluoranthene	1220	4.1	1306	251	74.1	40-140	0			
Benzo(k)fluoranthene	1001	4.1	1306	115.8	67.8	40-140	0			
Chrysene	1276	4.1	1306	238.4	79.5	40-140	0			
Dibenzo(a,h)anthracene	1410	4.1	1306	41.14	105	40-140	0			
Fluoranthene	1462	4.1	1306	438.2	78.4	40-140	0			
Fluorene	1085	4.1	1306	28.26	80.9	40-140	0			
Indeno(1,2,3-cd)pyrene	1636	4.1	1306	245.4	106	40-140	0			
Naphthalene	1176	4.1	1306	6.08	89.6	40-140	0			
Pyrene	1560	4.1	1306	466.4	83.7	40-140	0			
Surr: 2-Fluorobiphenyl	2974	0	3266	0	91	20-140	0			
Surr: 4-Terphenyl-d14	3384	0	3266	0	104	22-172	0			
Surr: Nitrobenzene-d5	2931	0	3266	0	89.7	28-140	0			

MSD				Sample ID: <b>21072419-03B MSD</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>8/10/2021 03:56 PM</b>	
Client ID:		Run ID: <b>SVMS6_210810A</b>			SeqNo: <b>7655335</b>		Prep Date: <b>8/9/2021</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1157	4.1	1301	24.97	87	40-140	1096	5.45	30	
Anthracene	1297	4.1	1301	90.53	92.7	40-140	1208	7.04	30	
Benzo(a)anthracene	1515	4.1	1301	239.1	98.1	40-140	1414	6.92	30	
Benzo(a)pyrene	1394	4.1	1301	221	90.2	40-140	1296	7.3	30	
Benzo(b)fluoranthene	1333	4.1	1301	251	83.2	40-140	1220	8.9	30	
Benzo(k)fluoranthene	1055	4.1	1301	115.8	72.2	40-140	1001	5.23	30	
Chrysene	1351	4.1	1301	238.4	85.5	40-140	1276	5.7	30	
Dibenzo(a,h)anthracene	1393	4.1	1301	41.14	104	40-140	1410	1.22	30	
Fluoranthene	1594	4.1	1301	438.2	88.8	40-140	1462	8.64	30	
Fluorene	1150	4.1	1301	28.26	86.2	40-140	1085	5.8	30	
Indeno(1,2,3-cd)pyrene	1773	4.1	1301	245.4	117	40-140	1636	8.03	30	
Naphthalene	1244	4.1	1301	6.08	95.1	40-140	1176	5.61	30	
Pyrene	1647	4.1	1301	466.4	90.8	40-140	1560	5.44	30	
Surr: 2-Fluorobiphenyl	3142	0	3253	0	96.6	20-140	2974	5.5	30	
Surr: 4-Terphenyl-d14	3492	0	3253	0	107	22-172	3384	3.15	30	
Surr: Nitrobenzene-d5	3053	0	3253	0	93.9	28-140	2931	4.1	30	

The following samples were analyzed in this batch:

21080449-01B	21080449-02B	21080449-03B
21080449-04B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Terra Energy Partners, LLC  
 Work Order: 21080449  
 Project: Terra Energy - Gov 26-1 - Excavation

## QC BATCH REPORT

Batch ID: **181543** Instrument ID **VMS10** Method: **SW8260C**

MBLK				Sample ID: MBLK-181543-181543				Units: µg/Kg-dry			Analysis Date: 8/7/2021 03:38 AM		
Client ID:			Run ID: VMS10_210806B				SeqNo: 7647658			Prep Date: 8/6/2021		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Benzene	U	30											
Ethylbenzene	U	30											
m,p-Xylene	U	60											
o-Xylene	U	30											
Toluene	U	30											
Xylenes, Total	U	90											
Surr: 1,2-Dichloroethane-d4	1068	0	1000	0	107	70-130	0						
Surr: 4-Bromofluorobenzene	983.5	0	1000	0	98.4	70-130	0						
Surr: Dibromofluoromethane	939.5	0	1000	0	94	70-130	0						
Surr: Toluene-d8	958.5	0	1000	0	95.8	70-130	0						

LCS				Sample ID: LCS-181543-181543			Units: µg/Kg-dry		Analysis Date: 8/7/2021 02:48 AM		
Client ID:			Run ID: VMS10_210806B			SeqNo: 7647656		Prep Date: 8/6/2021		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	989	30	1000	0	98.9	75-125	0				
Ethylbenzene	994.5	30	1000	0	99.4	75-125	0				
m,p-Xylene	2072	60	2000	0	104	80-125	0				
o-Xylene	1026	30	1000	0	103	75-125	0				
Toluene	984.5	30	1000	0	98.4	70-125	0				
Xylenes, Total	3099	90	3000	0	103	75-125	0				
Surr: 1,2-Dichloroethane-d4	1060	0	1000	0	106	70-130	0				
Surr: 4-Bromofluorobenzene	996.5	0	1000	0	99.6	70-130	0				
Surr: Dibromofluoromethane	987	0	1000	0	98.7	70-130	0				
Surr: Toluene-d8	989	0	1000	0	98.9	70-130	0				

MS				Sample ID: 21080449-01A MS		Units: µg/Kg-dry		Analysis Date: 8/7/2021 09:47 AM		
Client ID: North Half - West Wall			Run ID: VMS10_210806B		SeqNo: 7647680		Prep Date: 8/6/2021		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2535	71	2367	0	107	75-125	0			
Ethylbenzene	2533	71	2367	0	107	75-125	0			
m,p-Xylene	5233	140	4734	17.75	110	80-125	0			
o-Xylene	2588	71	2367	0	109	75-125	0			
Toluene	2424	71	2367	0	102	70-125	0			
Xylenes, Total	7821	210	7101	0	110	75-125	0			
Surr: 1,2-Dichloroethane-d4	2512	0	2367	0	106	70-130	0			
Surr: 4-Bromofluorobenzene	2462	0	2367	0	104	70-130	0			
Surr: Dibromofluoromethane	2340	0	2367	0	98.8	70-130	0			
Surr: Toluene-d8	2277	0	2367	0	96.2	70-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Terra Energy Partners, LLC  
**Work Order:** 21080449  
**Project:** Terra Energy - Gov 26-1 - Excavation

## QC BATCH REPORT

Batch ID: **181543**      Instrument ID **VMS10**      Method: **SW8260C**

MSD				Sample ID: <b>21080449-01A MSD</b>			Units: <b>µg/Kg-dry</b>		Analysis Date: <b>8/7/2021 10:04 AM</b>	
Client ID: <b>North Half - West Wall</b>				Run ID: <b>VMS10_210806B</b>			SeqNo: <b>7647681</b>		Prep Date: <b>8/6/2021</b>	
									DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2349	71	2367	0	99.3	75-125	2535	7.61	30	
Ethylbenzene	2299	71	2367	0	97.2	75-125	2533	9.65	30	
m,p-Xylene	4799	140	4734	17.75	101	80-125	5233	8.66	30	
o-Xylene	2409	71	2367	0	102	75-125	2588	7.15	30	
Toluene	2277	71	2367	0	96.2	70-125	2424	6.24	30	
Xylenes, Total	7208	210	7101	0	102	75-125	7821	8.16	30	
<i>Surr: 1,2-Dichloroethane-d4</i>	2510	0	2367	0	106	70-130	2512	0.0944	30	
<i>Surr: 4-Bromofluorobenzene</i>	2443	0	2367	0	103	70-130	2462	0.772	30	
<i>Surr: Dibromofluoromethane</i>	2283	0	2367	0	96.5	70-130	2340	2.46	30	
<i>Surr: Toluene-d8</i>	2316	0	2367	0	97.8	70-130	2277	1.7	30	

The following samples were analyzed in this batch:

21080449-01A	21080449-02A	21080449-03A
21080449-04A		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Terra Energy Partners, LLC  
**Work Order:** 21080449  
**Project:** Terra Energy - Gov 26-1 - Excavation

## QC BATCH REPORT

Batch ID: **181539**      Instrument ID **WETCHEM**      Method: **SW9045D**

LCS					Sample ID: LCS-181539-181539					Units: s.u.			Analysis Date: 8/6/2021 09:39 AM			
Client ID:					Run ID: WETCHEM_210806D					SeqNo: 7643778			Prep Date: 8/6/2021		DF: 1	
Analyte					Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
pH					4	0.10	4	0	100	90-110	0					

DUP				Sample ID: 21080449-01B DUP				Units: s.u.		Analysis Date: 8/6/2021 09:39 AM	
Client ID: North Half - West Wall			Run ID: WETCHEM_210806D			SeqNo: 7643780		Prep Date: 8/6/2021		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
pH	9.51	0.10	0	0	0	0-0	9.59	0.838	20		
Temperature	20.9	0.10	0	0	0		21.1	0.952			

The following samples were analyzed in this batch:

21080449-01B	21080449-02B	21080449-03B
21080449-04B		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.



Client: Terra Energy Partners, LLC  
 Work Order: 21080449  
 Project: Terra Energy - Gov 26-1 - Excavation

## QC BATCH REPORT

Batch ID: **181674** Instrument ID **WETCHEM** Method: **SW7196A**

<b>MBLK</b>		Sample ID: <b>MBLK-181674-181674</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/9/2021 04:52 PM</b>		
Client ID:		Run ID: <b>WETCHEM_210809K</b>				SeqNo: <b>7649471</b>		Prep Date: <b>8/7/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent U 1.0

<b>LCS</b>		Sample ID: <b>LCS-181674-181674</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/9/2021 04:52 PM</b>		
Client ID:		Run ID: <b>WETCHEM_210809K</b>				SeqNo: <b>7649472</b>		Prep Date: <b>8/7/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.75 1.0 5 0 95 80-120 0

<b>MS</b>		Sample ID: <b>21080449-01B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/9/2021 04:52 PM</b>		
Client ID: <b>North Half - West Wall</b>		Run ID: <b>WETCHEM_210809K</b>				SeqNo: <b>7649475</b>		Prep Date: <b>8/7/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.87 1.0 5 0.66 84.2 75-125 0

<b>MS</b>		Sample ID: <b>21080449-01B MSI</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/9/2021 04:52 PM</b>		
Client ID: <b>North Half - West Wall</b>		Run ID: <b>WETCHEM_210809K</b>				SeqNo: <b>7649477</b>		Prep Date: <b>8/7/2021</b>		DF: <b>100</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2097 100 2156 0.66 97.2 75-125 0

<b>MSD</b>		Sample ID: <b>21080449-01B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>8/9/2021 04:52 PM</b>		
Client ID: <b>North Half - West Wall</b>		Run ID: <b>WETCHEM_210809K</b>				SeqNo: <b>7649476</b>		Prep Date: <b>8/7/2021</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.25 1.0 5 0.66 71.8 75-125 4.87 13.6 20 S

The following samples were analyzed in this batch:

21080449-01B	21080449-02B	21080449-03B
21080449-04B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** Terra Energy Partners, LLC  
**Work Order:** 21080449  
**Project:** Terra Energy - Gov 26-1 - Excavation

## QC BATCH REPORT

Batch ID: **181702** Instrument ID **WETCHEM** Method: **USDA H60 Method**

<b>DUP</b>		Sample ID: <b>21080449-04B DUP</b>				Units: <b>mmhos/cm @25°</b>		Analysis Date: <b>8/10/2021 12:01 PM</b>		
Client ID: <b>North Half - Bottom</b>			Run ID: <b>WETCHEM_210810R</b>			SeqNo: <b>7653715</b>		Prep Date: <b>8/10/2021</b>		DF: <b>20</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	1.224	0.10	0	0	0		1.218	0.491	50	

The following samples were analyzed in this batch:

21080449-01B	21080449-02B	21080449-03B
21080449-04B		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Terra Energy Partners, LLC  
 Work Order: 21080449  
 Project: Terra Energy - Gov 26-1 - Excavation

## QC BATCH REPORT

Batch ID: **R323868** Instrument ID **MOIST** Method: **SW3550C**

<b>MBLK</b>		Sample ID: <b>WBLKS-R323868</b>				Units: % of sample		Analysis Date: <b>8/6/2021 11:09 AM</b>		
Client ID:		Run ID: <b>MOIST_210806A</b>				SeqNo: <b>7646203</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

<b>LCS</b>		Sample ID: <b>LCS-R323868</b>				Units: % of sample		Analysis Date: <b>8/6/2021 11:09 AM</b>		
Client ID:		Run ID: <b>MOIST_210806A</b>				SeqNo: <b>7646202</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	99.99	0.10	100	0	100	98-102	0			

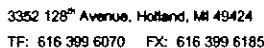
<b>DUP</b>		Sample ID: <b>21080290-01A DUP</b>				Units: % of sample		Analysis Date: <b>8/6/2021 11:09 AM</b>		
Client ID:		Run ID: <b>MOIST_210806A</b>				SeqNo: <b>7646184</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	17.07	0.10	0	0	0	0-0	17.09	0.117	10	

<b>DUP</b>		Sample ID: <b>21080311-01A DUP</b>				Units: % of sample		Analysis Date: <b>8/6/2021 11:09 AM</b>		
Client ID:		Run ID: <b>MOIST_210806A</b>				SeqNo: <b>7646188</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	10.58	0.10	0	0	0	0-0	11.83	11.2	10	R

The following samples were analyzed in this batch:

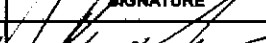

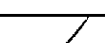
21080449-01B	21080449-02B	21080449-03B
21080449-04B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



21080449

Form 202r0

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Kris Rowe	8/4/2021	17:00
RECEIVED BY		Keri Wiersma	8/5/21	0850
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

Sample Receipt Checklist

Client Name: **TERRAENERGY**

Date/Time Received: **05-Aug-21 08:50**

Work Order: **21080449**

Received by: **KRW**

Checklist completed by **Keith Wierenga**

06-Aug-21

Reviewed by: **Alex J. Csaszar**

06-Aug-21

eSignature

Date

eSignature

Date

Matrices: **Soil**

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Sample(s) received on ice?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

3.4/4.4 C

IR3

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

8/6/2021 7:36:24 AM

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

pH adjusted?

Yes ☐

No ☐

N/A ☒

pH adjusted by:

-

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: