08-Jul-2020

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

Re: **GM 41-4-796 Gas Sales Line Leak** Work Order: **20070170**

Dear Mike,

ALS Environmental received 4 samples on 02-Jul-2020 10:30 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 27.

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,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Report of Laboratory Analysis

ALS Group, USA

Date: 08-Jul-20

Client: Terra Energy Partners, LLC
Project: GM 41-4-796 Gas Sales Line Leak
Work Order: **20070170**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20070170-01	SL-1: Bottom of Excavation	Soil		7/1/2020 15:00	7/2/2020 10:30	☐
20070170-02	SL-2: Side Walls of excavation - north half	Soil		7/1/2020 15:00	7/2/2020 10:30	☐
20070170-03	SL-2: Side Walls of excavation - south half	Soil		7/1/2020 15:00	7/2/2020 10:30	☐
20070170-04	SL-4: Background	Soil		7/1/2020 15:00	7/2/2020 10:30	☐

Client: Terra Energy Partners, LLC
Project: GM 41-4-796 Gas Sales Line Leak
Work Order: 20070170

Case Narrative

Batch 158475, Method ICP_6020_S, Sample 20070170-04A MS/MSD: The MS/MSD recoveries were outside of the control limits for Arsenic and Chromium. However, the MSD recoveries and the RPDs between the MS and MSD were in control. No qualification is required.

Batch 158475, Method ICP_6020_S, Sample 20070170-04A MS/MSD: The MS/MSD recoveries were outside of the control limits for Barium and Zinc; however, the results in the parent sample are greater than 4x the spike amount. No qualification is required.

Batch 158475, Method ICP_6020_S, Sample 20070170-04A MS/MSD: The MS/MSD recovery was above the upper control limit for Lead. The corresponding result in the parent sample may be biased high for this analyte.

Batch 158563, Method CR6_7196_S, Sample 20070170-02A MSD: The MSD recovery was outside of the control limit for hexavalent chromium. However, the MS recovery and the RPD between the MS and MSD was in control. No qualification is required.

ALS Group, USA

Date: 08-Jul-20

Qualifier	Description
*	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.

Acronym	Description
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

Units Reported	Description
% of sample	Percent of Sample
°C	Degrees Celcius
mg/Kg	Milligrams per Kilogram
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: *08-Jul-20*

Client: Terra Energy Partners, LLC
Project: GM 41-4-796 Gas Sales Line Leak
Sample ID: SL-1: Bottom of Excavation
Collection Date: 7/1/2020 03:00 PM

Work Order: 20070170
Lab ID: 20070170-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015D**			Prep: SW3550 / 7/2/20		Analyst: **JZB**
DRO (C10-C28)	**5.5**	J	**3.3**	**12**	**mg/Kg-dry**	1	7/6/2020 11:24
Surr: 4-Terphenyl-d14	*61.2*			*33-111*	*%REC*	1	7/6/2020 11:24
GASOLINE RANGE ORGANICS BY GC-FID		Method: **SW8015D**			Prep: SW5035 / 7/3/20		Analyst: **JZB**
GRO (C6-C10)	**6.3**	J	**2.8**	**6.8**	**mg/Kg**	1	7/6/2020 13:32
Surr: Toluene-d8	*91.9*			*71-123*	*%REC*	1	7/6/2020 13:32
MERCURY BY CVAA		Method: **SW7471B**			Prep: SW7471 / 7/6/20		Analyst: **MAC**
Mercury	**0.21**		**0.014**	**0.020**	**mg/Kg-dry**	1	7/6/2020 15:06
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 7/2/20		Analyst: **STP**
Arsenic	**5.6**		**0.055**	**0.46**	**mg/Kg-dry**	1	7/2/2020 20:08
Barium	**210**		**4.2**	**4.6**	**mg/Kg-dry**	10	7/6/2020 15:06
Cadmium	**0.30**		**0.027**	**0.18**	**mg/Kg-dry**	1	7/2/2020 20:08
Chromium	**8.1**		**0.20**	**0.46**	**mg/Kg-dry**	1	7/2/2020 20:08
Copper	**10**		**0.46**	**0.46**	**mg/Kg-dry**	1	7/2/2020 20:08
Lead	**11**		**0.22**	**0.46**	**mg/Kg-dry**	1	7/2/2020 20:08
Nickel	**12**		**0.24**	**0.46**	**mg/Kg-dry**	1	7/2/2020 20:08
Selenium	**0.53**		**0.42**	**0.46**	**mg/Kg-dry**	1	7/2/2020 20:08
Silver	U		0.060	0.46	mg/Kg-dry	1	7/2/2020 20:08
Zinc	**43**		**0.89**	**0.91**	**mg/Kg-dry**	1	7/2/2020 20:08
SOLUBLE CATIONS FOR SAR		Method: **SW6020B**			Prep: USDA Method 20B / 7/6/20		Analyst: **STP**
Calcium	**670**		**2.5**	**5.0**	**mg/L**	10	7/6/2020 15:26
Magnesium	**180**		**0.50**	**2.0**	**mg/L**	10	7/6/2020 15:26
Sodium	**620**		**0.45**	**2.0**	**mg/L**	10	7/6/2020 15:26
SODIUM ADSORPTION RATIO		Method: **USDA H60 METHOD 2**			Prep: USDA Method 20B / 7/6/20		Analyst: **STP**
Sodium Adsorption Ratio	**5.5**		**0.010**	**0.010**	**none**	1	7/6/2020
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)		Method: **SW8270E**			Prep: SW3546 / 7/2/20		Analyst: **EEW**
Acenaphthene	U		0.00091	0.0047	mg/Kg-dry	1	7/6/2020 15:03
Anthracene	U		0.0016	0.0047	mg/Kg-dry	1	7/6/2020 15:03
Benzo(a)anthracene	U		0.0019	0.0047	mg/Kg-dry	1	7/6/2020 15:03
Benzo(a)pyrene	U		0.0013	0.0047	mg/Kg-dry	1	7/6/2020 15:03
Benzo(b)fluoranthene	U		0.0011	0.0047	mg/Kg-dry	1	7/6/2020 15:03
Benzo(k)fluoranthene	U		0.0014	0.0047	mg/Kg-dry	1	7/6/2020 15:03
Chrysene	U		0.00097	0.0047	mg/Kg-dry	1	7/6/2020 15:03
Dibenzo(a,h)anthracene	U		0.0011	0.0047	mg/Kg-dry	1	7/6/2020 15:03
Fluoranthene	U		0.00086	0.0047	mg/Kg-dry	1	7/6/2020 15:03

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

Client: Terra Energy Partners, LLC
Project: GM 41-4-796 Gas Sales Line Leak
Sample ID: SL-1: Bottom of Excavation
Collection Date: 7/1/2020 03:00 PM

Work Order: 20070170
Lab ID: 20070170-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.0016	0.0047	mg/Kg-dry	1	7/6/2020 15:03
Indeno(1,2,3-cd)pyrene	U		0.0017	0.0047	mg/Kg-dry	1	7/6/2020 15:03
Naphthalene	U		0.0020	0.0047	mg/Kg-dry	1	7/6/2020 15:03
Pyrene	U		0.00078	0.0047	mg/Kg-dry	1	7/6/2020 15:03
Surr: 2-Fluorobiphenyl	*0*			*20-140*	*%REC*	1	7/6/2020 15:03
Surr: 4-Terphenyl-d14	*0*			*22-172*	*%REC*	1	7/6/2020 15:03
Surr: Nitrobenzene-d5	*0*			*28-140*	*%REC*	1	7/6/2020 15:03
VOLATILE ORGANIC COMPOUNDS		Method:	**SW8260C**		Prep: SW5035 / 7/3/20		Analyst: **SJB**
Benzene	U		0.0070	0.041	mg/Kg-dry	1	7/3/2020 17:17
Ethylbenzene	U		0.0086	0.041	mg/Kg-dry	1	7/3/2020 17:17
m,p-Xylene	U		0.054	0.082	mg/Kg-dry	1	7/3/2020 17:17
o-Xylene	U		0.016	0.041	mg/Kg-dry	1	7/3/2020 17:17
Toluene	U		0.011	0.041	mg/Kg-dry	1	7/3/2020 17:17
Xylenes, Total	U		0.054	0.12	mg/Kg-dry	1	7/3/2020 17:17
Surr: 1,2-Dichloroethane-d4	*101*			*70-130*	*%REC*	1	7/3/2020 17:17
Surr: 4-Bromofluorobenzene	*95.2*			*70-130*	*%REC*	1	7/3/2020 17:17
Surr: Dibromofluoromethane	*95.7*			*70-130*	*%REC*	1	7/3/2020 17:17
Surr: Toluene-d8	*96.8*			*70-130*	*%REC*	1	7/3/2020 17:17
ELECTRICAL CONDUCTIVITY (SAR)		Method:	**USDA H60 METHOD 2**		Prep: USDA Method 20B / 7/6/20		Analyst: **QTN**
Electrical Conductivity @ Saturation	**8.0**		**0.011**	**0.10**	**mmhos/cm @25°**	20	7/6/2020 14:30
CHROMIUM, TRIVALENT		Method:	**CALCULATION**				Analyst: **JB**
Chromium, Trivalent	**8.1**		**1.0**	**1.2**	**mg/Kg-dry**	1	7/6/2020 16:30
CHROMIUM, HEXAVALENT		Method:	**SW7196A**		Prep: SW3060A / 7/6/20		Analyst: **KTP**
Chromium, Hexavalent	U		0.97	1.1	mg/Kg-dry	1	7/6/2020 15:16
MOISTURE		Method:	**SW3550C**				Analyst: **KTP**
Moisture	**15**		**0.10**	**0.10**	**% of sample**	1	7/2/2020 19:09
PH		Method:	**SW9045D**		Prep: EXTRACT / 7/2/20		Analyst: **QTN**
pH	**8.16**		**0.10**	**0.100**	**s.u.**	1	7/6/2020 11:58
Temperature	**20.9**		**0.10**	**0.100**	**°C**	1	7/6/2020 11:58

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

ALS Group, USA

Date: *08-Jul-20*

Client: Terra Energy Partners, LLC
Project: GM 41-4-796 Gas Sales Line Leak
Sample ID: SL-2: Side Walls of excavation - north half
Collection Date: 7/1/2020 03:00 PM

Work Order: 20070170
Lab ID: 20070170-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015D**			Prep: SW3550 / 7/2/20		Analyst: **JZB**
DRO (C10-C28)	**3.7**	J	**3.3**	**11**	**mg/Kg-dry**	1	7/6/2020 12:03
Surr: 4-Terphenyl-d14	*59.0*			*33-111*	*%REC*	1	7/6/2020 12:03
GASOLINE RANGE ORGANICS BY GC-FID		Method: **SW8015D**			Prep: SW5035 / 7/3/20		Analyst: **JZB**
GRO (C6-C10)	**8.6**		**2.8**	**6.8**	**mg/Kg**	1	7/6/2020 13:55
Surr: Toluene-d8	*93.6*			*71-123*	*%REC*	1	7/6/2020 13:55
MERCURY BY CVAA		Method: **SW7471B**			Prep: SW7471 / 7/6/20		Analyst: **MAC**
Mercury	**0.13**		**0.013**	**0.020**	**mg/Kg-dry**	1	7/6/2020 15:08
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 7/2/20		Analyst: **STP**
Arsenic	**7.7**		**0.053**	**0.44**	**mg/Kg-dry**	1	7/2/2020 20:10
Barium	**220**		**4.1**	**4.4**	**mg/Kg-dry**	10	7/6/2020 15:08
Cadmium	**0.52**		**0.026**	**0.18**	**mg/Kg-dry**	1	7/2/2020 20:10
Chromium	**9.9**		**0.19**	**0.44**	**mg/Kg-dry**	1	7/2/2020 20:10
Copper	**20**		**4.4**	**4.4**	**mg/Kg-dry**	10	7/6/2020 15:08
Lead	**14**		**0.21**	**0.44**	**mg/Kg-dry**	1	7/2/2020 20:10
Nickel	**14**		**0.23**	**0.44**	**mg/Kg-dry**	1	7/2/2020 20:10
Selenium	**0.86**		**0.41**	**0.44**	**mg/Kg-dry**	1	7/2/2020 20:10
Silver	**0.065**	J	**0.058**	**0.44**	**mg/Kg-dry**	1	7/2/2020 20:10
Zinc	**58**		**0.86**	**0.88**	**mg/Kg-dry**	1	7/2/2020 20:10
SOLUBLE CATIONS FOR SAR		Method: **SW6020B**			Prep: USDA Method 20B / 7/6/20		Analyst: **STP**
Calcium	**540**		**2.5**	**5.0**	**mg/L**	10	7/6/2020 15:28
Magnesium	**140**		**0.50**	**2.0**	**mg/L**	10	7/6/2020 15:28
Sodium	**570**		**0.45**	**2.0**	**mg/L**	10	7/6/2020 15:28
SODIUM ADSORPTION RATIO		Method: **USDA H60 METHOD 2**			Prep: USDA Method 20B / 7/6/20		Analyst: **STP**
Sodium Adsorption Ratio	**5.6**		**0.010**	**0.010**	**none**	1	7/6/2020
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)		Method: **SW8270E**			Prep: SW3546 / 7/2/20		Analyst: **EEW**
Acenaphthene	U		0.00089	0.0046	mg/Kg-dry	1	7/6/2020 15:19
Anthracene	U		0.0015	0.0046	mg/Kg-dry	1	7/6/2020 15:19
Benzo(a)anthracene	U		0.0019	0.0046	mg/Kg-dry	1	7/6/2020 15:19
Benzo(a)pyrene	U		0.0013	0.0046	mg/Kg-dry	1	7/6/2020 15:19
Benzo(b)fluoranthene	U		0.0011	0.0046	mg/Kg-dry	1	7/6/2020 15:19
Benzo(k)fluoranthene	U		0.0014	0.0046	mg/Kg-dry	1	7/6/2020 15:19
Chrysene	U		0.00095	0.0046	mg/Kg-dry	1	7/6/2020 15:19
Dibenzo(a,h)anthracene	U		0.0011	0.0046	mg/Kg-dry	1	7/6/2020 15:19
Fluoranthene	U		0.00085	0.0046	mg/Kg-dry	1	7/6/2020 15:19

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

Client: Terra Energy Partners, LLC
Project: GM 41-4-796 Gas Sales Line Leak
Sample ID: SL-2: Side Walls of excavation - north half
Collection Date: 7/1/2020 03:00 PM

Work Order: 20070170
Lab ID: 20070170-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.0015	0.0046	mg/Kg-dry	1	7/6/2020 15:19
Indeno(1,2,3-cd)pyrene	U		0.0016	0.0046	mg/Kg-dry	1	7/6/2020 15:19
Naphthalene	U		0.0020	0.0046	mg/Kg-dry	1	7/6/2020 15:19
Pyrene	U		0.00076	0.0046	mg/Kg-dry	1	7/6/2020 15:19
Surr: 2-Fluorobiphenyl	*0*			*20-140*	*%REC*	1	7/6/2020 15:19
Surr: 4-Terphenyl-d14	*0*			*22-172*	*%REC*	1	7/6/2020 15:19
Surr: Nitrobenzene-d5	*0*			*28-140*	*%REC*	1	7/6/2020 15:19
VOLATILE ORGANIC COMPOUNDS		Method:	**SW8260C**		Prep: SW5035 / 7/3/20		Analyst: **SJB**
Benzene	U		0.0069	0.041	mg/Kg-dry	1	7/3/2020 17:34
Ethylbenzene	U		0.0086	0.041	mg/Kg-dry	1	7/3/2020 17:34
m,p-Xylene	U		0.054	0.081	mg/Kg-dry	1	7/3/2020 17:34
o-Xylene	U		0.016	0.041	mg/Kg-dry	1	7/3/2020 17:34
Toluene	U		0.011	0.041	mg/Kg-dry	1	7/3/2020 17:34
Xylenes, Total	U		0.054	0.12	mg/Kg-dry	1	7/3/2020 17:34
Surr: 1,2-Dichloroethane-d4	*101*			*70-130*	*%REC*	1	7/3/2020 17:34
Surr: 4-Bromofluorobenzene	*95.1*			*70-130*	*%REC*	1	7/3/2020 17:34
Surr: Dibromofluoromethane	*91.1*			*70-130*	*%REC*	1	7/3/2020 17:34
Surr: Toluene-d8	*98.9*			*70-130*	*%REC*	1	7/3/2020 17:34
ELECTRICAL CONDUCTIVITY (SAR)		Method:	**USDA H60 METHOD 2**		Prep: USDA Method 20B / 7/6/20		Analyst: **QTN**
Electrical Conductivity @ Saturation	**6.9**		**0.011**	**0.10**	**mmhos/cm @25°**	20	7/6/2020 14:30
CHROMIUM, TRIVALENT		Method:	**CALCULATION**				Analyst: **JB**
Chromium, Trivalent	**9.9**		**0.98**	**1.2**	**mg/Kg-dry**	1	7/6/2020 16:30
CHROMIUM, HEXAVALENT		Method:	**SW7196A**		Prep: SW3060A / 7/6/20		Analyst: **KTP**
Chromium, Hexavalent	U		0.96	1.1	mg/Kg-dry	1	7/6/2020 15:16
MOISTURE		Method:	**SW3550C**				Analyst: **KTP**
Moisture	**14**		**0.10**	**0.10**	**% of sample**	1	7/2/2020 19:09
PH		Method:	**SW9045D**		Prep: EXTRACT / 7/2/20		Analyst: **QTN**
pH	**7.98**		**0.10**	**0.100**	**s.u.**	1	7/6/2020 11:58
Temperature	**21.0**		**0.10**	**0.100**	**°C**	1	7/6/2020 11:58

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

ALS Group, USA

Date: *08-Jul-20*

Client: Terra Energy Partners, LLC
Project: GM 41-4-796 Gas Sales Line Leak
Sample ID: SL-2: Side Walls of excavation - south half
Collection Date: 7/1/2020 03:00 PM

Work Order: 20070170
Lab ID: 20070170-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015D**			Prep: SW3550 / 7/2/20		Analyst: **JZB**
DRO (C10-C28)	**3.6**	J	**3.4**	**12**	**mg/Kg-dry**	1	7/6/2020 12:42
Surr: 4-Terphenyl-d14	*59.9*			*33-111*	*%REC*	1	7/6/2020 12:42
GASOLINE RANGE ORGANICS BY GC-FID		Method: **SW8015D**			Prep: SW5035 / 7/3/20		Analyst: **JZB**
GRO (C6-C10)	**12**		**3.0**	**7.1**	**mg/Kg**	1	7/6/2020 14:18
Surr: Toluene-d8	*97.7*			*71-123*	*%REC*	1	7/6/2020 14:18
MERCURY BY CVAA		Method: **SW7471B**			Prep: SW7471 / 7/6/20		Analyst: **MAC**
Mercury	**0.12**		**0.014**	**0.021**	**mg/Kg-dry**	1	7/6/2020 15:10
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 7/2/20		Analyst: **STP**
Arsenic	**18**		**0.057**	**0.47**	**mg/Kg-dry**	1	7/2/2020 20:12
Barium	**250**		**4.4**	**4.7**	**mg/Kg-dry**	10	7/6/2020 15:10
Cadmium	**0.49**		**0.028**	**0.19**	**mg/Kg-dry**	1	7/2/2020 20:12
Chromium	**9.3**		**0.21**	**0.47**	**mg/Kg-dry**	1	7/2/2020 20:12
Copper	**14**		**0.47**	**0.47**	**mg/Kg-dry**	1	7/2/2020 20:12
Lead	**14**		**0.23**	**0.47**	**mg/Kg-dry**	1	7/2/2020 20:12
Nickel	**13**		**0.25**	**0.47**	**mg/Kg-dry**	1	7/2/2020 20:12
Selenium	**0.95**		**0.44**	**0.47**	**mg/Kg-dry**	1	7/2/2020 20:12
Silver	U		0.062	0.47	mg/Kg-dry	1	7/2/2020 20:12
Zinc	**52**		**0.93**	**0.95**	**mg/Kg-dry**	1	7/2/2020 20:12
SOLUBLE CATIONS FOR SAR		Method: **SW6020B**			Prep: USDA Method 20B / 7/6/20		Analyst: **STP**
Calcium	**330**		**2.5**	**5.0**	**mg/L**	10	7/6/2020 15:31
Magnesium	**91**		**0.50**	**2.0**	**mg/L**	10	7/6/2020 15:31
Sodium	**420**		**0.45**	**2.0**	**mg/L**	10	7/6/2020 15:31
SODIUM ADSORPTION RATIO		Method: **USDA H60 METHOD 2**			Prep: USDA Method 20B / 7/6/20		Analyst: **STP**
Sodium Adsorption Ratio	**5.3**		**0.010**	**0.010**	**none**	1	7/6/2020
POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)		Method: **SW8270E**			Prep: SW3546 / 7/2/20		Analyst: **EEW**
Acenaphthene	U		0.00096	0.0050	mg/Kg-dry	1	7/6/2020 15:34
Anthracene	U		0.0017	0.0050	mg/Kg-dry	1	7/6/2020 15:34
Benzo(a)anthracene	U		0.0020	0.0050	mg/Kg-dry	1	7/6/2020 15:34
Benzo(a)pyrene	U		0.0014	0.0050	mg/Kg-dry	1	7/6/2020 15:34
Benzo(b)fluoranthene	U		0.0012	0.0050	mg/Kg-dry	1	7/6/2020 15:34
Benzo(k)fluoranthene	U		0.0015	0.0050	mg/Kg-dry	1	7/6/2020 15:34
Chrysene	U		0.0010	0.0050	mg/Kg-dry	1	7/6/2020 15:34
Dibenzo(a,h)anthracene	U		0.0012	0.0050	mg/Kg-dry	1	7/6/2020 15:34
Fluoranthene	U		0.00092	0.0050	mg/Kg-dry	1	7/6/2020 15:34

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

Client: Terra Energy Partners, LLC
Project: GM 41-4-796 Gas Sales Line Leak
Sample ID: SL-2: Side Walls of excavation - south half
Collection Date: 7/1/2020 03:00 PM

Work Order: 20070170
Lab ID: 20070170-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.0016	0.0050	mg/Kg-dry	1	7/6/2020 15:34
Indeno(1,2,3-cd)pyrene	U		0.0018	0.0050	mg/Kg-dry	1	7/6/2020 15:34
Naphthalene	U		0.0022	0.0050	mg/Kg-dry	1	7/6/2020 15:34
Pyrene	U		0.00082	0.0050	mg/Kg-dry	1	7/6/2020 15:34
Surr: 2-Fluorobiphenyl	*0*			*20-140*	*%REC*	1	7/6/2020 15:34
Surr: 4-Terphenyl-d14	*0*			*22-172*	*%REC*	1	7/6/2020 15:34
Surr: Nitrobenzene-d5	*0*			*28-140*	*%REC*	1	7/6/2020 15:34
VOLATILE ORGANIC COMPOUNDS		Method:	**SW8260C**		Prep: SW5035 / 7/3/20		Analyst: **SJB**
Benzene	U		0.0073	0.043	mg/Kg-dry	1	7/3/2020 17:51
Ethylbenzene	U		0.0090	0.043	mg/Kg-dry	1	7/3/2020 17:51
m,p-Xylene	U		0.057	0.085	mg/Kg-dry	1	7/3/2020 17:51
o-Xylene	U		0.016	0.043	mg/Kg-dry	1	7/3/2020 17:51
Toluene	U		0.012	0.043	mg/Kg-dry	1	7/3/2020 17:51
Xylenes, Total	U		0.057	0.13	mg/Kg-dry	1	7/3/2020 17:51
Surr: 1,2-Dichloroethane-d4	*101*			*70-130*	*%REC*	1	7/3/2020 17:51
Surr: 4-Bromofluorobenzene	*95.6*			*70-130*	*%REC*	1	7/3/2020 17:51
Surr: Dibromofluoromethane	*93.9*			*70-130*	*%REC*	1	7/3/2020 17:51
Surr: Toluene-d8	*99.4*			*70-130*	*%REC*	1	7/3/2020 17:51
ELECTRICAL CONDUCTIVITY (SAR)		Method:	**USDA H60 METHOD 2**		Prep: USDA Method 20B / 7/6/20		Analyst: **QTN**
Electrical Conductivity @ Saturation	**4.8**		**0.011**	**0.10**	**mmhos/cm @25°**	20	7/6/2020 14:30
CHROMIUM, TRIVALENT		Method:	**CALCULATION**				Analyst: **JB**
Chromium, Trivalent	**9.3**		**1.0**	**1.2**	**mg/Kg-dry**	1	7/6/2020 16:30
CHROMIUM, HEXAVALENT		Method:	**SW7196A**		Prep: SW3060A / 7/6/20		Analyst: **KTP**
Chromium, Hexavalent	U		0.98	1.2	mg/Kg-dry	1	7/6/2020 15:16
MOISTURE		Method:	**SW3550C**				Analyst: **KTP**
Moisture	**17**		**0.10**	**0.10**	**% of sample**	1	7/2/2020 19:09
PH		Method:	**SW9045D**		Prep: EXTRACT / 7/2/20		Analyst: **QTN**
pH	**7.96**		**0.10**	**0.100**	**s.u.**	1	7/6/2020 11:58
Temperature	**20.8**		**0.10**	**0.100**	**°C**	1	7/6/2020 11:58

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

ALS Group, USA

Date: *08-Jul-20*

Client: Terra Energy Partners, LLC
Project: GM 41-4-796 Gas Sales Line Leak
Sample ID: SL-4: Background
Collection Date: 7/1/2020 03:00 PM

Work Order: 20070170
Lab ID: 20070170-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 7/2/20		Analyst: **STP**
Arsenic	**11**		**0.045**	**0.38**	**mg/Kg-dry**	1	7/2/2020 20:13
SOLUBLE CATIONS FOR SAR		Method: **SW6020B**			Prep: USDA Method 20B / 7/6/20		Analyst: **STP**
Calcium	**70**		**2.5**	**5.0**	**mg/L**	10	7/6/2020 15:33
Magnesium	**12**		**0.50**	**2.0**	**mg/L**	10	7/6/2020 15:33
Sodium	**31**		**0.45**	**2.0**	**mg/L**	10	7/6/2020 15:33
SODIUM ADSORPTION RATIO		Method: **USDA H60 METHOD 2**			Prep: USDA Method 20B / 7/6/20		Analyst: **STP**
Sodium Adsorption Ratio	**0.90**		**0.010**	**0.010**	**none**	1	7/6/2020
ELECTRICAL CONDUCTIVITY (SAR)		Method: **USDA H60 METHOD 2**			Prep: USDA Method 20B / 7/6/20		Analyst: **QTN**
Electrical Conductivity @ Saturation	**0.60**		**0.011**	**0.10**	**mmhos/cm @25°**	20	7/6/2020 14:30
MOISTURE		Method: **SW3550C**					Analyst: **KTP**
Moisture	**3.0**		**0.10**	**0.10**	**% of sample**	1	7/2/2020 19:09

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

ALS Group, USA

Date: 08-Jul-20

Client: Terra Energy Partners, LLC

Work Order: 20070170

Project: GM 41-4-796 Gas Sales Line Leak

QC BATCH REPORT

Batch ID: **158461** Instrument ID **GC8** Method: **SW8015D**

MBLK Sample ID: **DBLKS1-158461-158461** Units: **mg/Kg** Analysis Date: **7/6/2020 10:06 AM**

Client ID: Run ID: **GC8_200706A** SeqNo: **6540008** Prep Date: **7/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	3.475	10	0	0	0		0			J
Surr: 4-Terphenyl-d14	*2.134*	0	*3.33*	0	*64.1*	*33-111*	0			

LCS Sample ID: **DLCSS1-158461-158461** Units: **mg/Kg** Analysis Date: **7/6/2020 10:45 AM**

Client ID: Run ID: **GC8_200706A** SeqNo: **6540009** Prep Date: **7/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	338.4	10	333	0	102	80-121	0			
Surr: 4-Terphenyl-d14	*2.003*	0	*3.33*	0	*60.2*	*33-111*	0			

MS Sample ID: **20062218-01C MS** Units: **mg/Kg** Analysis Date: **7/6/2020 10:30 PM**

Client ID: Run ID: **GC8_200706A** SeqNo: **6542478** Prep Date: **7/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	437.4	9.9	330.2	110.9	98.9	80-121	0			
Surr: 4-Terphenyl-d14	*2.88*	0	*3.302*	0	*87.2*	*33-111*	0			

MSD Sample ID: **20062218-01C MSD** Units: **mg/Kg** Analysis Date: **7/6/2020 11:09 PM**

Client ID: Run ID: **GC8_200706A** SeqNo: **6542479** Prep Date: **7/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	465	9.8	327.6	110.9	108	80-121	437.4	6.11	30	
Surr: 4-Terphenyl-d14	*3.019*	0	*3.276*	0	*92.2*	*33-111*	2.88	*4.72*	*30*	

The following samples were analyzed in this batch: 20070170-01A 20070170-02A 20070170-03A

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

Client: Terra Energy Partners, LLC
Work Order: 20070170
Project: GM 41-4-796 Gas Sales Line Leak

QC BATCH REPORT

Batch ID: **158525** Instrument ID **GC9** Method: **SW8015D**

MBLK Sample ID: **MBLK-158525-158525** Units: **µg/Kg-dry** Analysis Date: **7/6/2020 01:09 PM**
Client ID: Run ID: **GC9_200706A** SeqNo: **6540281** Prep Date: **7/3/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	3160	5,000	0	0	0		0			J
Surr: Toluene-d8	*4642*	0	*5000*	0	*92.8*	*71-123*	0			

LCS Sample ID: **LCS-158525-158525** Units: **µg/Kg-dry** Analysis Date: **7/6/2020 12:23 PM**
Client ID: Run ID: **GC9_200706A** SeqNo: **6540290** Prep Date: **7/3/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	203200	5,000	250000	0	81.3	71-123	0			
Surr: Toluene-d8	*4604*	0	*5000*	0	*92.1*	*71-123*	0			

MS Sample ID: **20062080-01C MS** Units: **µg/Kg-dry** Analysis Date: **7/6/2020 04:57 PM**
Client ID: Run ID: **GC9_200706A** SeqNo: **6542573** Prep Date: **7/3/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	272900	6,800	338000	9506	77.9	71-123	0			
Surr: Toluene-d8	*6251*	0	*6760*	0	*92.5*	*71-123*	0			

MSD Sample ID: **20062080-01C MSD** Units: **µg/Kg-dry** Analysis Date: **7/6/2020 05:20 PM**
Client ID: Run ID: **GC9_200706A** SeqNo: **6542574** Prep Date: **7/3/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	320200	6,600	331600	9506	93.7	71-123	272900	15.9	30	
Surr: Toluene-d8	*6031*	0	*6632*	0	*90.9*	*71-123*	6251	*3.57*	*30*	

The following samples were analyzed in this batch: 20070170-01A 20070170-02A 20070170-03A

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

Client: Terra Energy Partners, LLC
Work Order: 20070170
Project: GM 41-4-796 Gas Sales Line Leak

QC BATCH REPORT

Batch ID: **158560** Instrument ID **HG4** Method: **SW7471B**

MBLK Sample ID: **MBLK-158560-158560** Units: **mg/Kg** Analysis Date: **7/6/2020 03:27 PM**
Client ID: Run ID: **HG4_200706A** SeqNo: **6540131** Prep Date: **7/6/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.020								

LCS Sample ID: **LCS-158560-158560** Units: **mg/Kg** Analysis Date: **7/6/2020 03:24 PM**
Client ID: Run ID: **HG4_200706A** SeqNo: **6540130** Prep Date: **7/6/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1667	0.020	0.1665	0	100	80-120	0			

MS Sample ID: **20070170-03AMS** Units: **mg/Kg** Analysis Date: **7/6/2020 03:12 PM**
Client ID: **SL-2: Side Walls of excavation - south half** Run ID: **HG4_200706A** SeqNo: **6540124** Prep Date: **7/6/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.2429	0.017	0.1415	0.09712	103	75-125	0			

MSD Sample ID: **20070170-03AMSD** Units: **mg/Kg** Analysis Date: **7/6/2020 03:14 PM**
Client ID: **SL-2: Side Walls of excavation - south half** Run ID: **HG4_200706A** SeqNo: **6540125** Prep Date: **7/6/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.2553	0.017	0.1417	0.09712	112	75-125	0.2429	4.98	35	

The following samples were analyzed in this batch: 20070170-01A 20070170-02A 20070170-03A

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

Client: Terra Energy Partners, LLC
Work Order: 20070170
Project: GM 41-4-796 Gas Sales Line Leak

QC BATCH REPORT

Batch ID: **158475** Instrument ID **ICPMS3** Method: **SW6020B**

MBLK Sample ID: **MBLK-158475-158475** Units: **mg/Kg** Analysis Date: **7/2/2020 07:27 PM**
Client ID: Run ID: **ICPMS3_200702B** SeqNo: **6538269** Prep Date: **7/2/2020** 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								
Selenium	U	0.25								
Silver	U	0.25								
Zinc	U	0.50								

LCS Sample ID: **LCS-158475-158475** Units: **mg/Kg** Analysis Date: **7/2/2020 07:29 PM**
Client ID: Run ID: **ICPMS3_200702B** SeqNo: **6538270** Prep Date: **7/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.165	0.25	5	0	103	80-120	0			
Barium	5.239	0.25	5	0	105	80-120	0			
Cadmium	5.45	0.10	5	0	109	80-120	0			
Chromium	5.304	0.25	5	0	106	80-120	0			
Copper	5.373	0.25	5	0	107	80-120	0			
Lead	5.287	0.25	5	0	106	80-120	0			
Nickel	5.237	0.25	5	0	105	80-120	0			
Selenium	5.275	0.25	5	0	105	80-120	0			
Silver	5.518	0.25	5	0	110	80-120	0			
Zinc	5.369	0.50	5	0	107	80-120	0			

MS Sample ID: **20070170-04AMS** Units: **mg/Kg** Analysis Date: **7/2/2020 08:15 PM**
Client ID: **SL-4: Background** Run ID: **ICPMS3_200702B** SeqNo: **6538297** Prep Date: **7/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	15.37	0.36	7.236	10.64	65.4	75-125	0			S
Barium	206.5	0.36	7.236	173.8	451	75-125	0			SEO
Cadmium	6.687	0.14	7.236	0.4324	86.4	75-125	0			
Chromium	16.87	0.36	7.236	7.506	129	75-125	0			S
Copper	19.43	0.36	7.236	11.24	113	75-125	0			
Lead	22.03	0.36	7.236	12.66	130	75-125	0			S
Nickel	19.32	0.36	7.236	11.26	111	75-125	0			
Selenium	6.469	0.36	7.236	0.6603	80.3	75-125	0			
Silver	6.008	0.36	7.236	0.04446	82.4	75-125	0			
Zinc	62.67	0.72	7.236	44.74	248	75-125	0			SO

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

Client: Terra Energy Partners, LLC
Work Order: 20070170
Project: GM 41-4-796 Gas Sales Line Leak

QC BATCH REPORT

Batch ID: **158475** Instrument ID **ICPMS3** Method: **SW6020B**

MSD Sample ID: **20070170-04AMSD** Units: **mg/Kg** Analysis Date: **7/2/2020 08:17 PM**
Client ID: **SL-4: Background** Run ID: **ICPMS3_200702B** SeqNo: **6538298** Prep Date: **7/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	16.89	0.37	7.31	10.64	85.4	75-125	15.37	9.39	20	
Barium	203.8	0.37	7.31	173.8	409	75-125	206.5	1.33	20	SEO
Cadmium	6.656	0.15	7.31	0.4324	85.1	75-125	6.687	0.472	20	
Chromium	15.65	0.37	7.31	7.506	111	75-125	16.87	7.52	20	
Copper	18.2	0.37	7.31	11.24	95.2	75-125	19.43	6.57	20	
Lead	22.54	0.37	7.31	12.66	135	75-125	22.03	2.32	20	S
Nickel	18.02	0.37	7.31	11.26	92.6	75-125	19.32	6.94	20	
Selenium	6.258	0.37	7.31	0.6603	76.6	75-125	6.469	3.32	20	
Silver	5.91	0.37	7.31	0.04446	80.2	75-125	6.008	1.65	20	
Zinc	56.68	0.73	7.31	44.74	163	75-125	62.67	10	20	SO

The following samples were analyzed in this batch:

20070170-01A	20070170-02A	20070170-03A
20070170-04A		

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

Client: Terra Energy Partners, LLC
Work Order: 20070170
Project: GM 41-4-796 Gas Sales Line Leak

QC BATCH REPORT

Batch ID: **158559** Instrument ID **ICPMS3** Method: **SW6020B**

DUP Sample ID: **20070170-02ADUP** Units: **mg/L** Analysis Date: **7/6/2020 03:30 PM**

Client ID: **SL-2: Side Walls of excavation - north half** Run ID: **ICPMS3_200706A** SeqNo: **6539896** Prep Date: **7/6/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	582.1	5.0	0	0	0	0-0	541.4	7.26		
Magnesium	143.9	2.0	0	0	0	0-0	138.3	3.96		
Sodium	578.1	2.0	0	0	0	0-0	566.7	2		

The following samples were analyzed in this batch: 20070170-01A 20070170-02A 20070170-03A 20070170-04A

Batch ID: **158559** Instrument ID **SAR** Method: **USDA H60 Metho**

DUP Sample ID: **20070170-02ADUP** Units: **none** Analysis Date: **7/6/2020**

Client ID: **SL-2: Side Walls of excavation - north half** Run ID: **SAR_200706A** SeqNo: **6540177** Prep Date: **7/6/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	5.562	0.010	0	0	0		5.626	1.14	50	

The following samples were analyzed in this batch: 20070170-01A 20070170-02A 20070170-03A 20070170-04A

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

Batch ID: **158468** Instrument ID **SVMS6** Method: **SW8270E**

MBLK Sample ID: **SBLKS1-158468-158468** Units: **µg/Kg** Analysis Date: **7/6/2020 11:11 AM**

Client ID: Run ID: **SVMS6_200706A** SeqNo: **6540225** Prep Date: **7/2/2020** 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	*3213*	0	*3333*	0	*96.4*	*20-140*	0			
Surr: 4-Terphenyl-d14	*3857*	0	*3333*	0	*116*	*22-172*	0			
Surr: Nitrobenzene-d5	*3274*	0	*3333*	0	*98.2*	*28-140*	0			

LCS Sample ID: **SLCSS1-158468-158468** Units: **µg/Kg** Analysis Date: **7/6/2020 11:27 AM**

Client ID: Run ID: **SVMS6_200706A** SeqNo: **6540226** Prep Date: **7/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1106	4.2	1333	0	83	40-140	0			
Anthracene	1225	4.2	1333	0	91.9	40-140	0			
Benzo(a)anthracene	1191	4.2	1333	0	89.4	40-140	0			
Benzo(a)pyrene	1148	4.2	1333	0	86.2	40-140	0			
Benzo(b)fluoranthene	1016	4.2	1333	0	76.2	40-140	0			
Benzo(k)fluoranthene	1179	4.2	1333	0	88.5	40-140	0			
Chrysene	1231	4.2	1333	0	92.4	40-140	0			
Dibenzo(a,h)anthracene	1246	4.2	1333	0	93.5	40-140	0			
Fluoranthene	1136	4.2	1333	0	85.2	40-140	0			
Fluorene	1164	4.2	1333	0	87.3	40-140	0			
Indeno(1,2,3-cd)pyrene	1233	4.2	1333	0	92.5	40-140	0			
Naphthalene	1181	4.2	1333	0	88.6	40-140	0			
Pyrene	1436	4.2	1333	0	108	40-140	0			
Surr: 2-Fluorobiphenyl	*3124*	0	*3333*	0	*93.7*	*20-140*	0			
Surr: 4-Terphenyl-d14	*4265*	0	*3333*	0	*128*	*22-172*	0			
Surr: Nitrobenzene-d5	*2771*	0	*3333*	0	*83.1*	*28-140*	0			

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

Client: Terra Energy Partners, LLC
Work Order: 20070170
Project: GM 41-4-796 Gas Sales Line Leak

QC BATCH REPORT

Batch ID: **158468** Instrument ID **SVMS6** Method: **SW8270E**

MS Sample ID: **20062369-09B MS** Units: **µg/Kg** Analysis Date: **7/6/2020 02:17 PM**
Client ID: Run ID: **SVMS6_200706A** SeqNo: **6540227** Prep Date: **7/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1139	4.1	1323	0	86.1	40-140	0			
Anthracene	1249	4.1	1323	0	94.4	40-140	0			
Benzo(a)anthracene	1231	4.1	1323	0	93	40-140	0			
Benzo(a)pyrene	1168	4.1	1323	0	88.3	40-140	0			
Benzo(b)fluoranthene	1066	4.1	1323	0	80.6	40-140	0			
Benzo(k)fluoranthene	1192	4.1	1323	0	90.1	40-140	0			
Chrysene	1276	4.1	1323	0	96.5	40-140	0			
Dibenzo(a,h)anthracene	1250	4.1	1323	0	94.5	40-140	0			
Fluoranthene	1190	4.1	1323	0	90	40-140	0			
Fluorene	1186	4.1	1323	0	89.7	40-140	0			
Indeno(1,2,3-cd)pyrene	1240	4.1	1323	0	93.7	40-140	0			
Naphthalene	1243	4.1	1323	0	94	40-140	0			
Pyrene	1403	4.1	1323	0	106	40-140	0			
Surr: 2-Fluorobiphenyl	*3198*	0	*3308*	0	*96.7*	*20-140*	0			
Surr: 4-Terphenyl-d14	*4109*	0	*3308*	0	*124*	*22-172*	0			
Surr: Nitrobenzene-d5	*3230*	0	*3308*	0	*97.6*	*28-140*	0			

MSD Sample ID: **20062369-09B MSD** Units: **µg/Kg** Analysis Date: **7/6/2020 02:32 PM**
Client ID: Run ID: **SVMS6_200706A** SeqNo: **6540228** Prep Date: **7/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1127	4.0	1282	0	87.9	40-140	1139	1.05	30	
Anthracene	1231	4.0	1282	0	96	40-140	1249	1.41	30	
Benzo(a)anthracene	1217	4.0	1282	0	94.9	40-140	1231	1.13	30	
Benzo(a)pyrene	1119	4.0	1282	0	87.3	40-140	1168	4.25	30	
Benzo(b)fluoranthene	1021	4.0	1282	0	79.7	40-140	1066	4.24	30	
Benzo(k)fluoranthene	1137	4.0	1282	0	88.7	40-140	1192	4.72	30	
Chrysene	1250	4.0	1282	0	97.5	40-140	1276	2.08	30	
Dibenzo(a,h)anthracene	1207	4.0	1282	0	94.2	40-140	1250	3.49	30	
Fluoranthene	1150	4.0	1282	0	89.7	40-140	1190	3.41	30	
Fluorene	1169	4.0	1282	0	91.2	40-140	1186	1.49	30	
Indeno(1,2,3-cd)pyrene	1202	4.0	1282	0	93.8	40-140	1240	3.06	30	
Naphthalene	1229	4.0	1282	0	95.8	40-140	1243	1.19	30	
Pyrene	1373	4.0	1282	0	107	40-140	1403	2.2	30	
Surr: 2-Fluorobiphenyl	*3136*	0	*3205*	0	*97.8*	*20-140*	3198	*1.98*	*0*	
Surr: 4-Terphenyl-d14	*3985*	0	*3205*	0	*124*	*22-172*	4109	*3.06*	*0*	
Surr: Nitrobenzene-d5	*3164*	0	*3205*	0	*98.7*	*28-140*	3230	*2.06*	*0*	

The following samples were analyzed in this batch: 20070170-01A 20070170-02A 20070170-03A

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

Client: Terra Energy Partners, LLC
Work Order: 20070170
Project: GM 41-4-796 Gas Sales Line Leak

QC BATCH REPORT

Batch ID: **158524** Instrument ID **VMS8** Method: **SW8260C**

MBLK Sample ID: **MBLK-158524-158524** Units: **µg/Kg-dry** Analysis Date: **7/4/2020 05:04 AM**
Client ID: Run ID: **VMS8_200703C** SeqNo: **6538795** Prep Date: **7/3/2020** 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	*1040*	0	*1000*	0	*104*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1012*	0	*1000*	0	*101*	*70-130*	0			
Surr: Dibromofluoromethane	*908*	0	*1000*	0	*90.8*	*70-130*	0			
Surr: Toluene-d8	*986*	0	*1000*	0	*98.6*	*70-130*	0			

LCS Sample ID: **LCS-158524-158524** Units: **µg/Kg-dry** Analysis Date: **7/4/2020 04:14 AM**
Client ID: Run ID: **VMS8_200703C** SeqNo: **6538794** Prep Date: **7/3/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1092	30	1000	0	109	75-125	0			
Ethylbenzene	959.5	30	1000	0	96	75-125	0			
m,p-Xylene	1906	60	2000	0	95.3	80-125	0			
o-Xylene	969.5	30	1000	0	97	75-125	0			
Toluene	1076	30	1000	0	108	70-125	0			
Xylenes, Total	2876	90	3000	0	95.9	75-125	0			
Surr: 1,2-Dichloroethane-d4	*984*	0	*1000*	0	*98.4*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1004*	0	*1000*	0	*100*	*70-130*	0			
Surr: Dibromofluoromethane	*963*	0	*1000*	0	*96.3*	*70-130*	0			
Surr: Toluene-d8	*960*	0	*1000*	0	*96*	*70-130*	0			

MS Sample ID: **20062080-01A MS** Units: **µg/Kg-dry** Analysis Date: **7/4/2020 09:29 AM**
Client ID: Run ID: **VMS8_200703C** SeqNo: **6538811** Prep Date: **7/3/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1116	29	975.6	0	114	75-125	0			
Ethylbenzene	1023	29	975.6	0	105	75-125	0			
m,p-Xylene	2060	59	1951	0	106	80-125	0			
o-Xylene	1035	29	975.6	0	106	75-125	0			
Toluene	1143	29	975.6	0	117	70-125	0			
Xylenes, Total	3096	88	2927	0	106	75-125	0			
Surr: 1,2-Dichloroethane-d4	*947.3*	0	*975.6*	0	*97.1*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1020*	0	*975.6*	0	*105*	*70-130*	0			
Surr: Dibromofluoromethane	*840*	0	*975.6*	0	*86.1*	*70-130*	0			
Surr: Toluene-d8	*984.4*	0	*975.6*	0	*101*	*70-130*	0			

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

Client: Terra Energy Partners, LLC
Work Order: 20070170
Project: GM 41-4-796 Gas Sales Line Leak

QC BATCH REPORT

Batch ID: **158524** Instrument ID **VMS8** Method: **SW8260C**

MSD	Sample ID: **20062080-01A MSD**				Units: **µg/Kg-dry**		Analysis Date: **7/4/2020 09:45 AM**			
Client ID:		Run ID: **VMS8_200703C**			SeqNo: **6538812**		Prep Date: **7/3/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1053	29	954.2	0	110	75-125	1116	5.78	30	
Ethylbenzene	955.6	29	954.2	0	100	75-125	1023	6.8	30	
m,p-Xylene	1921	57	1908	0	101	80-125	2060	7.02	30	
o-Xylene	951.3	29	954.2	0	99.7	75-125	1035	8.44	30	
Toluene	1081	29	954.2	0	113	70-125	1143	5.6	30	
Xylenes, Total	2872	86	2863	0	100	75-125	3096	7.49	30	
Surr: 1,2-Dichloroethane-d4	*904.6*	0	*954.2*	0	*94.8*	*70-130*	947.3	*4.62*	*30*	
Surr: 4-Bromofluorobenzene	*976.6*	0	*954.2*	0	*102*	*70-130*	1020	*4.39*	*30*	
Surr: Dibromofluoromethane	*821.1*	0	*954.2*	0	*86*	*70-130*	840	*2.28*	*30*	
Surr: Toluene-d8	*952.3*	0	*954.2*	0	*99.8*	*70-130*	984.4	*3.31*	*30*	

The following samples were analyzed in this batch: 20070170-01A 20070170-02A 20070170-03A

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

Client: Terra Energy Partners, LLC
Work Order: 20070170
Project: GM 41-4-796 Gas Sales Line Leak

QC BATCH REPORT

Batch ID: **158507** Instrument ID **WETCHEM** Method: **SW9045D**

LCS Sample ID: **LCS-158507-158507** Units: **s.u.** Analysis Date: **7/6/2020 11:58 AM**

Client ID: Run ID: **WETCHEM_200706A** SeqNo: **6539166** Prep Date: **7/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.99	0.10	4	0	99.8	90-110	0			

DUP Sample ID: **20070170-02A DUP** Units: **s.u.** Analysis Date: **7/6/2020 11:58 AM**

Client ID: **SL-2: Side Walls of excavation - north half** Run ID: **WETCHEM_200706A** SeqNo: **6539174** Prep Date: **7/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.02	0.10	0	0	0	0-0	7.98	0.5	20	
Temperature	20.8	0.10	0	0	0		21	0.957		

The following samples were analyzed in this batch: 20070170-01A 20070170-02A 20070170-03A

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

Client: Terra Energy Partners, LLC
Work Order: 20070170
Project: GM 41-4-796 Gas Sales Line Leak

QC BATCH REPORT

Batch ID: **158563** Instrument ID **WETCHEM** Method: **SW7196A**

MBLK Sample ID: **MBLK-158563-158563** Units: **mg/Kg** Analysis Date: **7/6/2020 03:16 PM**
Client ID: Run ID: **WETCHEM_200706H** SeqNo: **6539731** Prep Date: **7/6/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	U	0.98								

LCS Sample ID: **LCS-158563-158563** Units: **mg/Kg** Analysis Date: **7/6/2020 03:16 PM**
Client ID: Run ID: **WETCHEM_200706H** SeqNo: **6539732** Prep Date: **7/6/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	4.584	0.99	4.95	0	92.6	80-120	0			

MS Sample ID: **20070170-02A MS** Units: **mg/Kg** Analysis Date: **7/6/2020 03:16 PM**
Client ID: **SL-2: Side Walls of excavation - north half** Run ID: **WETCHEM_200706H** SeqNo: **6539735** Prep Date: **7/6/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	4.243	0.97	4.854	0.5392	76.3	75-125	0			

MS Sample ID: **20070170-02A MSI** Units: **mg/Kg** Analysis Date: **7/6/2020 03:16 PM**
Client ID: **SL-2: Side Walls of excavation - north half** Run ID: **WETCHEM_200706H** SeqNo: **6539737** Prep Date: **7/6/2020** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2170	100	2269	0.5392	95.6	75-125	0			

MSD Sample ID: **20070170-02A MSD** Units: **mg/Kg** Analysis Date: **7/6/2020 03:16 PM**
Client ID: **SL-2: Side Walls of excavation - north half** Run ID: **WETCHEM_200706H** SeqNo: **6539736** Prep Date: **7/6/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	4.079	0.99	4.95	0.5392	71.5	75-125	4.243	3.93	20	S

The following samples were analyzed in this batch: 20070170-01A 20070170-02A 20070170-03A

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

Client: Terra Energy Partners, LLC
Work Order: 20070170
Project: GM 41-4-796 Gas Sales Line Leak

QC BATCH REPORT

Batch ID: **R292296** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R292296** Units: **% of sample** Analysis Date: **7/2/2020 07:09 PM**
Client ID: Run ID: **MOIST_200702E** SeqNo: **6538458** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R292296** Units: **% of sample** Analysis Date: **7/2/2020 07:09 PM**
Client ID: Run ID: **MOIST_200702E** SeqNo: **6538457** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **20070055-10A DUP** Units: **% of sample** Analysis Date: **7/2/2020 07:09 PM**
Client ID: Run ID: **MOIST_200702E** SeqNo: **6538444** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	19.21	0.10	0	0	0	0-0	19.12	0.47	10	

DUP Sample ID: **20070055-11A DUP** Units: **% of sample** Analysis Date: **7/2/2020 07:09 PM**
Client ID: Run ID: **MOIST_200702E** SeqNo: **6538446** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	9.08	0.10	0	0	0	0-0	8.96	1.33	10	

The following samples were analyzed in this batch:

20070170-01A	20070170-02A	20070170-03A
20070170-04A		

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

ALS Laboratory Group

HOLLAND, Michigan 49424

Chain-of-Custody

Form 202r8

WORKORDER # 20070170

PAGE 1 of 1

DISPOSAL: By Lab or Return to Client

PROJECT NAME	GM 41-4-796 Gas Sales Line Leak	SITE ID	GM 41-4-796 Sales Line
PROJECT No.		EDD FORMAT	
		PURCHASE ORDER	
COMPANY NAME	TEP Rocky Mountain LLC	BILL TO COMPANY	TEP Rocky Mountain LLC
SEND REPORT TO	Mike Gardner	INVOICE ATTN TO	Mike Gardner, Tammy Gose
ADDRESS		ADDRESS	1058 Co Rd 215
CITY / STATE / ZIP		CITY / STATE / ZIP	Parachute, CO 81635
PHONE		PHONE	970-263-2760
FAX		FAX	
E-MAIL	mgardner@terraep.com	E-MAIL	mgardner@terraep.com; tgose@terraep.com
SAMPLER	Mike Gardner	DATE	7/1/2020
		TURNAROUND	RUSH

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	Full COGCC 910-1 List	Arsenic, SAR, EC
1	SL-1: Bottom of Excavation	Soil	7/1/2020	3:00 p.m.	1 x 16 oz			X	
2	SL-2: Side walls of excavation - north half	Soil	7/1/2020	3:00 p.m.	1 x 16 oz			X	
3	SL-3: Side walls of excavation - south half	Soil	7/1/2020	3:00 p.m.	1 x 16 oz			X	
4	SL-4: Background	Soil	7/1/2020	3:00 p.m.	1 x 16 oz				X

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments: SR1 4.4'2

QC PACKAGE (check below)	
X	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw data)

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Mike Gardner	7/1/2020	
RECEIVED BY		WM	7-1-20	1800
RELINQUISHED BY		WM	7-1-20	1830
RECEIVED BY		Diane E. Shea	7/2/20	1030
RELINQUISHED BY				
RECEIVED BY				

ALS Group, USA

Sample Receipt Checklist

Client Name: **TERRAENERGY** Date/Time Received: **02-Jul-20 10:30**

Work Order: **20070170** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 02-Jul-20 (Date) Reviewed by: Chad Whelton (eSignature) 02-Jul-20 (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):	4.4/4.4 c	SR1	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	7/2/2020 1:59:40 PM		
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: