



18-Apr-2018

Kris Rowe
HRL Compliance Solutions, Inc
2385 F 1/2 Road
Grand Junction, CO 81505

Re: **Terra Energy - GV 15-36**

Work Order: **1804301**

Dear Kris,

ALS Environmental received 1 sample on 06-Apr-2018 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 22.

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", is written over a light blue horizontal line.

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Report of Laboratory Analysis

Certificate No: MN 998501

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

Environmental 

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RIGHT SOLUTIONS RIGHT PARTNER

Client: HRL Compliance Solutions, Inc
Project: Terra Energy - GV 15-36
Work Order: 1804301

Work Order Sample Summary

<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>
1804301-01	Spill Confirmation	Soil		4/5/2018 11:30	4/6/2018 10:30	<input type="checkbox"/>

Client: HRL Compliance Solutions, Inc

Project: Terra Energy - GV 15-36

Work Order: 1804301

Case Narrative

VOC and GRO sample was not preserved in methanol within 48 hours.

<u>Qualifier</u>	<u>Description</u>
*	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
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.

<u>Acronym</u>	<u>Description</u>
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

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
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

Client: HRL Compliance Solutions, Inc
 Project: Terra Energy - GV 15-36
 Sample ID: Spill Confirmation
 Collection Date: 4/5/2018 11:30 AM

Work Order: 1804301
 Lab ID: 1804301-01
 Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID							
				Method: SW8015C		Prep: SW3546 / 4/9/18	Analyst: MEB
DRO (C10-C28)	41		3.0	5.2	mg/Kg-dry	1	4/10/2018 08:14
Surr: 4-Terphenyl-d14	63.6			34-130	%REC	1	4/10/2018 08:14
GASOLINE RANGE ORGANICS BY GC-FID							
				Method: SW8015D		Prep: SW5035 / 4/9/18	Analyst: MEB
GRO (C6-C10)	27		2.3	5.4	mg/Kg	1	4/12/2018 02:47
Surr: Toluene-d8	85.8			71-123	%REC	1	4/12/2018 02:47
MERCURY BY CVAA							
				Method: SW7471B		Prep: SW7471 / 4/12/18	Analyst: RSH
Mercury	0.0099	J	0.0019	0.019	mg/Kg-dry	1	4/18/2018 14:35
METALS ANALYSIS BY ICP							
				Method: SW846 6010C		Prep: SW3050B / 4/9/18	Analyst: HBA
Arsenic	4.6		0.095	0.36	mg/Kg-dry	1	4/10/2018 05:48
Barium	300		0.15	0.36	mg/Kg-dry	1	4/10/2018 05:48
Cadmium	0.25	J	0.035	0.73	mg/Kg-dry	1	4/10/2018 05:48
Chromium	9.5		0.020	0.36	mg/Kg-dry	1	4/10/2018 05:48
Copper	8.9		0.16	0.73	mg/Kg-dry	1	4/10/2018 05:48
Lead	5.2		0.077	0.36	mg/Kg-dry	1	4/10/2018 05:48
Nickel	6.5		0.15	0.36	mg/Kg-dry	1	4/10/2018 05:48
Selenium	2.8		0.20	0.73	mg/Kg-dry	1	4/10/2018 05:48
Silver	U		0.045	0.36	mg/Kg-dry	1	4/10/2018 05:48
Zinc	26		0.058	0.73	mg/Kg-dry	1	4/10/2018 05:48
SOLUBLE CATIONS FOR SAR							
				Method: SW6020A		Prep: USDA Method 20B / 4/11/18	Analyst: JF
Calcium	16		0.86	5.0	mg/L	10	4/11/2018 12:45
Magnesium	3.0		0.068	2.0	mg/L	10	4/11/2018 12:45
Sodium	120		0.34	2.0	mg/L	10	4/11/2018 12:45
SODIUM ADSORPTION RATIO							
				Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 4/11/18	Analyst: RH
Sodium Adsorption Ratio	7.4		0.010	0.010	none	1	4/11/2018
SEMI-VOLATILE ORGANIC COMPOUNDS							
				Method: SW846 8270D		Prep: SW3546 / 4/9/18	Analyst: RM
Acenaphthene	U		0.0031	0.043	mg/Kg-dry	1	4/10/2018 12:07
Anthracene	U		0.0016	0.043	mg/Kg-dry	1	4/10/2018 12:07
Benzo(a)anthracene	U		0.0026	0.043	mg/Kg-dry	1	4/10/2018 12:07
Benzo(a)pyrene	U		0.0011	0.043	mg/Kg-dry	1	4/10/2018 12:07
Benzo(b)fluoranthene	U		0.0017	0.043	mg/Kg-dry	1	4/10/2018 12:07
Benzo(k)fluoranthene	U		0.0022	0.043	mg/Kg-dry	1	4/10/2018 12:07
Chrysene	U		0.0017	0.043	mg/Kg-dry	1	4/10/2018 12:07
Dibenzo(a,h)anthracene	U		0.0014	0.043	mg/Kg-dry	1	4/10/2018 12:07
Fluoranthene	U		0.0012	0.043	mg/Kg-dry	1	4/10/2018 12:07

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

ALS Group, USA

Date: 18-Apr-18

Client: HRL Compliance Solutions, Inc
Project: Terra Energy - GV 15-36
Sample ID: Spill Confirmation
Collection Date: 4/5/2018 11:30 AM

Work Order: 1804301
Lab ID: 1804301-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Fluorene	U		0.0014	0.043	mg/Kg-dry	1	4/10/2018 12:07
Indeno(1,2,3-cd)pyrene	U		0.0013	0.043	mg/Kg-dry	1	4/10/2018 12:07
Naphthalene	U		0.0081	0.043	mg/Kg-dry	1	4/10/2018 12:07
Pyrene	U		0.0016	0.043	mg/Kg-dry	1	4/10/2018 12:07
Surr: 2-Fluorobiphenyl	58.0			20-140	%REC	1	4/10/2018 12:07
Surr: 4-Terphenyl-d14	48.0			22-172	%REC	1	4/10/2018 12:07
Surr: Nitrobenzene-d5	66.4			28-140	%REC	1	4/10/2018 12:07
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B		Prep: SW5035 / 4/9/18		Analyst: BG
Benzene	U		0.0055	0.032	mg/Kg	1	4/9/2018 22:04
Ethylbenzene	U		0.0068	0.032	mg/Kg	1	4/9/2018 22:04
m,p-Xylene	0.019	J	0.015	0.065	mg/Kg	1	4/9/2018 22:04
o-Xylene	U		0.013	0.032	mg/Kg	1	4/9/2018 22:04
Toluene	U		0.0089	0.032	mg/Kg	1	4/9/2018 22:04
Xylenes, Total	U		0.028	0.097	mg/Kg	1	4/9/2018 22:04
Surr: 1,2-Dichloroethane-d4	97.8			70-130	%REC	1	4/9/2018 22:04
Surr: 4-Bromofluorobenzene	98.9			70-130	%REC	1	4/9/2018 22:04
Surr: Dibromofluoromethane	81.2			70-130	%REC	1	4/9/2018 22:04
Surr: Toluene-d8	105			70-130	%REC	1	4/9/2018 22:04
ELECTRICAL CONDUCTIVITY (SAR)			Method: USDA H60 METHOD 2		Prep: USDA Method 20B / 4/11/18		Analyst: JB
Electrical Conductivity @ Saturation	0.66		0.011	0.10	mmhos/cm @25°	20	4/12/2018 09:45
CHROMIUM, TRIVALENT			Method: CALCULATION				Analyst: JB
Chromium, Trivalent	9.5		0.32	1.0	mg/Kg-dry	1	4/12/2018 08:30
CHROMIUM, HEXAVALENT			Method: SW7196A		Prep: SW3060A / 4/9/18		Analyst: EE
Chromium, Hexavalent	U		0.31	1.0	mg/Kg-dry	1	4/11/2018 13:15
MOISTURE			Method: SW3550C				Analyst: NW
Moisture	3.9		0.025	0.050	% of sample	1	4/10/2018 16:10
PH			Method: SW9045D		Prep: EXTRACT / 4/10/18		Analyst: RZM
pH	9.61		0.10	0.100	s.u.	1	4/10/2018 16:25

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

Client: HRL Compliance Solutions, Inc
Work Order: 1804301
Project: Terra Energy - GV 15-36

QC BATCH REPORT

Batch ID: **116515** Instrument ID **GC8** Method: **SW8015C**

MBLK		Sample ID: DBLKS1-116515-116515				Units: mg/Kg		Analysis Date: 4/9/2018 11:01 PM		
Client ID:		Run ID: GC8_180409B		SeqNo: 4973957		Prep Date: 4/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	U	5.0								
<i>Surr: 4-Terphenyl-d14</i>	2.133	0	3.33	0	64.1	34-130	0			

LCS		Sample ID: DLCSS1-116515-116515				Units: mg/Kg		Analysis Date: 4/9/2018 11:31 PM		
Client ID:		Run ID: GC8_180409B		SeqNo: 4973958		Prep Date: 4/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	304.9	5.0	333	0	91.6	65-122	0			
<i>Surr: 4-Terphenyl-d14</i>	2.35	0	3.33	0	70.6	34-130	0			

MS		Sample ID: 1804227-01B MS				Units: mg/Kg		Analysis Date: 4/10/2018 12:29 PM		
Client ID:		Run ID: GC8_180409B		SeqNo: 4973977		Prep Date: 4/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	254.6	5.0	332	8.829	74	65-122	0			
<i>Surr: 4-Terphenyl-d14</i>	1.279	0	3.32	0	38.5	34-130	0			

MSD		Sample ID: 1804227-01B MSD				Units: mg/Kg		Analysis Date: 4/10/2018 12:58 PM		
Client ID:		Run ID: GC8_180409B		SeqNo: 4973978		Prep Date: 4/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (C10-C28)	292.9	5.0	330.5	8.829	86	65-122	254.6	14	30	
<i>Surr: 4-Terphenyl-d14</i>	3.49	0	3.305	0	106	34-130	1.279	92.7	30	R

The following samples were analyzed in this batch: 1804301-01A

Client: HRL Compliance Solutions, Inc
 Work Order: 1804301
 Project: Terra Energy - GV 15-36

QC BATCH REPORT

Batch ID: 116541 Instrument ID GC10 Method: SW8015D

MBLK		Sample ID: MBLK-116541-116541				Units: µg/Kg-dry		Analysis Date: 4/10/2018 08:28 PM		
Client ID:		Run ID: GC10_180410A		SeqNo: 4976817		Prep Date: 4/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	U	5,000								
Surr: Toluene-d8	4880	0	5000	0	97.6	71-123	0			

LCS		Sample ID: LCS-116541-116541				Units: µg/Kg-dry		Analysis Date: 4/10/2018 07:35 PM		
Client ID:		Run ID: GC10_180410A		SeqNo: 4976816		Prep Date: 4/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	401000	5,000	500000	0	80.2	71-123	0			
Surr: Toluene-d8	4731	0	5000	0	94.6	71-123	0			

MS		Sample ID: 1804301-01A MS				Units: µg/Kg-dry		Analysis Date: 4/12/2018 03:14 AM		
Client ID: Spill Confirmation		Run ID: GC10_180411B		SeqNo: 4977946		Prep Date: 4/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	483500	5,400	540600	26930	84.5	71-123	0			
Surr: Toluene-d8	4658	0	5406	0	86.2	71-123	0			

MSD		Sample ID: 1804301-01A MSD				Units: µg/Kg-dry		Analysis Date: 4/12/2018 03:40 AM		
Client ID: Spill Confirmation		Run ID: GC10_180411B		SeqNo: 4977947		Prep Date: 4/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	457800	5,400	540600	26930	79.7	71-123	483500	5.46	30	
Surr: Toluene-d8	4557	0	5406	0	84.3	71-123	4658	2.21	30	

The following samples were analyzed in this batch:

Client: HRL Compliance Solutions, Inc
 Work Order: 1804301
 Project: Terra Energy - GV 15-36

QC BATCH REPORT

Batch ID: 116536 Instrument ID ICP2 Method: SW846 6010C

MBLK		Sample ID: MBLK-116536-116536				Units: mg/Kg		Analysis Date: 4/10/2018 03:04 AM		
Client ID:		Run ID: ICP2_180409B			SeqNo: 4973131		Prep Date: 4/9/2018		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	0.50								
Chromium	0.0268	0.25								J
Copper	U	0.50								
Lead	U	0.25								
Nickel	U	0.25								
Selenium	U	0.50								
Silver	0.0358	0.25								J
Zinc	U	0.50								

LCS		Sample ID: LCS-116536-116536				Units: mg/Kg		Analysis Date: 4/10/2018 03:10 AM		
Client ID:		Run ID: ICP2_180409B			SeqNo: 4973132		Prep Date: 4/9/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.919	0.25	5	0	98.4	80-120	0			
Barium	5.448	0.25	5	0	109	80-120	0			
Cadmium	5.116	0.50	5	0	102	80-120	0			
Chromium	5.348	0.25	5	0	107	80-120	0			
Copper	5.055	0.50	5	0	101	80-120	0			
Lead	5.031	0.25	5	0	101	80-120	0			
Nickel	5.325	0.25	5	0	107	80-120	0			
Selenium	4.79	0.50	5	0	95.8	80-120	0			
Silver	5.239	0.25	5	0	105	80-120	0			
Zinc	5.126	0.50	5	0	103	80-120	0			

MS		Sample ID: 1804258-05AMS				Units: mg/Kg		Analysis Date: 4/10/2018 05:36 AM		
Client ID:		Run ID: ICP2_180409B			SeqNo: 4973161		Prep Date: 4/9/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	118.2	0.39	7.704	102.2	208	75-125	0			SO
Barium	147.1	0.39	7.704	129.1	234	75-125	0			SO
Cadmium	9.673	0.77	7.704	1.968	100	75-125	0			
Chromium	28.98	0.39	7.704	19.27	126	75-125	0			S
Copper	63.5	0.77	7.704	51.85	151	75-125	0			SO
Lead	65.35	0.39	7.704	56.72	112	75-125	0			O
Nickel	22.43	0.39	7.704	10.21	159	75-125	0			S
Selenium	22.74	0.77	7.704	15.17	98.2	75-125	0			
Silver	8.137	0.39	7.704	0.04267	105	75-125	0			
Zinc	141.9	0.77	7.704	125.5	213	75-125	0			SO

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

Client: HRL Compliance Solutions, Inc
Work Order: 1804301
Project: Terra Energy - GV 15-36

QC BATCH REPORT

Batch ID: **116536** Instrument ID **ICP2** Method: **SW846 6010C**

MSD		Sample ID: 1804258-05AMSD				Units: mg/Kg		Analysis Date: 4/10/2018 05:42 AM			
Client ID:		Run ID: ICP2_180409B			SeqNo: 4973162		Prep Date: 4/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	97.73	0.39	7.728	102.2	-57.3	75-125	118.2	18.9	20	SO	
Barium	158.4	0.39	7.728	129.1	379	75-125	147.1	7.38	20	SO	
Cadmium	9.48	0.77	7.728	1.968	97.2	75-125	9.673	2.02	20		
Chromium	34.85	0.39	7.728	19.27	202	75-125	28.98	18.4	20	S	
Copper	81.67	0.77	7.728	51.85	386	75-125	63.5	25	20	SRO	
Lead	56.72	0.39	7.728	56.72	-0.058	75-125	65.35	14.1	20	SO	
Nickel	22.49	0.39	7.728	10.21	159	75-125	22.43	0.266	20	S	
Selenium	20.99	0.77	7.728	15.17	75.3	75-125	22.74	8	20		
Silver	8.153	0.39	7.728	0.04267	105	75-125	8.137	0.198	20		
Zinc	132.8	0.77	7.728	125.5	95.1	75-125	141.9	6.59	20	O	

The following samples were analyzed in this batch: 1804301-01A

Client: HRL Compliance Solutions, Inc
 Work Order: 1804301
 Project: Terra Energy - GV 15-36

QC BATCH REPORT

Batch ID: **116667** Instrument ID **ICPMS3** Method: **SW6020A**

DUP		Sample ID: 1804383-01BDUP				Units: mg/L		Analysis Date: 4/11/2018 12:50 PM			
Client ID:		Run ID: ICPMS3_180411A				SeqNo: 4976604		Prep Date: 4/11/2018		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Calcium	222.8	5.0	0	0	0	0-0	210.2	5.83			
Magnesium	69.58	2.0	0	0	0	0-0	69.42	0.231			

DUP		Sample ID: 1804383-01BDUP				Units: mg/L		Analysis Date: 4/11/2018 12:54 PM			
Client ID:		Run ID: ICPMS3_180411A				SeqNo: 4976610		Prep Date: 4/11/2018		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Sodium	2616	20	0	0	0	0-0	2558	2.24			

The following samples were analyzed in this batch:

Batch ID: **116667** Instrument ID **SAR** Method: **USDA H60 Metho**

DUP		Sample ID: 1804383-01BDUP				Units: none		Analysis Date: 4/11/2018			
Client ID:		Run ID: SAR_180411A				SeqNo: 4976705		Prep Date: 4/11/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Sodium Adsorption Ratio	39.2	0.010	0	0	0		39.35	0.359	50		

The following samples were analyzed in this batch:

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

Client: HRL Compliance Solutions, Inc
Work Order: 1804301
Project: Terra Energy - GV 15-36

QC BATCH REPORT

Batch ID: **116514** Instrument ID **SVMS6** Method: **SW846 8270D**

MBLK		Sample ID: SBLKS1-116514-116514				Units: µg/Kg		Analysis Date: 4/9/2018 07:37 PM		
Client ID:		Run ID: SVMS6_180409A		SeqNo: 4974940		Prep Date: 4/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	U	42								
Anthracene	U	42								
Benzo(a)anthracene	U	42								
Benzo(a)pyrene	U	42								
Benzo(b)fluoranthene	U	42								
Benzo(k)fluoranthene	U	42								
Chrysene	U	42								
Dibenzo(a,h)anthracene	U	42								
Fluoranthene	U	42								
Fluorene	U	42								
Indeno(1,2,3-cd)pyrene	U	42								
Naphthalene	U	42								
Pyrene	U	42								
<i>Surr: 2-Fluorobiphenyl</i>	2864	0	3333	0	85.9	20-140	0			
<i>Surr: 4-Terphenyl-d14</i>	2980	0	3333	0	89.4	22-172	0			
<i>Surr: Nitrobenzene-d5</i>	3332	0	3333	0	100	28-140	0			

LCS		Sample ID: SLCSS1-116514-116514				Units: µg/Kg		Analysis Date: 4/9/2018 07:52 PM		
Client ID:		Run ID: SVMS6_180409A		SeqNo: 4974941		Prep Date: 4/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	1093	42	1333	0	82	40-140	0			
Anthracene	1331	42	1333	0	99.8	40-140	0			
Benzo(a)anthracene	1218	42	1333	0	91.4	40-140	0			
Benzo(a)pyrene	1300	42	1333	0	97.5	40-140	0			
Benzo(b)fluoranthene	1098	42	1333	0	82.4	40-140	0			
Benzo(k)fluoranthene	1216	42	1333	0	91.2	40-140	0			
Chrysene	1216	42	1333	0	91.2	40-140	0			
Dibenzo(a,h)anthracene	1429	42	1333	0	107	40-140	0			
Fluoranthene	1284	42	1333	0	96.3	40-140	0			
Fluorene	1234	42	1333	0	92.6	40-140	0			
Indeno(1,2,3-cd)pyrene	1423	42	1333	0	107	40-140	0			
Naphthalene	1264	42	1333	0	94.8	40-140	0			
Pyrene	1149	42	1333	0	86.2	40-140	0			
<i>Surr: 2-Fluorobiphenyl</i>	2579	0	3333	0	77.4	20-140	0			
<i>Surr: 4-Terphenyl-d14</i>	2760	0	3333	0	82.8	22-172	0			
<i>Surr: Nitrobenzene-d5</i>	3380	0	3333	0	101	28-140	0			

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

Client: HRL Compliance Solutions, Inc
 Work Order: 1804301
 Project: Terra Energy - GV 15-36

QC BATCH REPORT

Batch ID: 116514 Instrument ID: SVMS6 Method: SW846 8270D

MS				Sample ID: 1804335-01B MS			Units: µg/Kg		Analysis Date: 4/9/2018 08:06 PM		
Client ID:		Run ID: SVMS6_180409A		SeqNo: 4974942		Prep Date: 4/9/2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	616.1	41	1319	0	46.7	40-140	0				
Anthracene	704.1	41	1319	0	53.4	40-140	0				
Benzo(a)anthracene	539.3	41	1319	0	40.9	40-140	0				
Benzo(a)pyrene	706.6	41	1319	0	53.6	40-140	0				
Benzo(b)fluoranthene	598.5	41	1319	0	45.4	40-140	0				
Benzo(k)fluoranthene	728.8	41	1319	0	55.3	40-140	0				
Chrysene	771.9	41	1319	0	58.5	40-140	0				
Dibenzo(a,h)anthracene	782	41	1319	0	59.3	40-140	0				
Fluoranthene	688.2	41	1319	0	52.2	40-140	0				
Fluorene	668.7	41	1319	0	50.7	40-140	0				
Indeno(1,2,3-cd)pyrene	730.4	41	1319	0	55.4	40-140	0				
Naphthalene	683.9	41	1319	69.92	46.6	40-140	0				
Pyrene	731.8	41	1319	0	55.5	40-140	0				
Surr: 2-Fluorobiphenyl	2328	0	3298	0	70.6	20-140	0				
Surr: 4-Terphenyl-d14	2868	0	3298	0	87	22-172	0				
Surr: Nitrobenzene-d5	2749	0	3298	0	83.4	28-140	0				

MSD				Sample ID: 1804335-01B MSD			Units: µg/Kg		Analysis Date: 4/9/2018 08:20 PM		
Client ID:		Run ID: SVMS6_180409A		SeqNo: 4974943		Prep Date: 4/9/2018		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Acenaphthene	732	41	1313	0	55.8	40-140	616.1	17.2	30		
Anthracene	410.9	41	1313	0	31.3	40-140	704.1	52.6	30	SR	
Benzo(a)anthracene	152.7	41	1313	0	11.6	40-140	539.3	112	30	SR	
Benzo(a)pyrene	175.2	41	1313	0	13.3	40-140	706.6	121	30	SR	
Benzo(b)fluoranthene	133.4	41	1313	0	10.2	40-140	598.5	127	30	SR	
Benzo(k)fluoranthene	102.7	41	1313	0	7.83	40-140	728.8	151	30	SR	
Chrysene	145.2	41	1313	0	11.1	40-140	771.9	137	30	SR	
Dibenzo(a,h)anthracene	341.4	41	1313	0	26	40-140	782	78.4	30	SR	
Fluoranthene	261.8	41	1313	0	19.9	40-140	688.2	89.8	30	SR	
Fluorene	661.9	41	1313	0	50.4	40-140	668.7	1.02	30		
Indeno(1,2,3-cd)pyrene	348	41	1313	0	26.5	40-140	730.4	70.9	30	SR	
Naphthalene	1050	41	1313	69.92	74.6	40-140	683.9	42.2	30	R	
Pyrene	216.3	41	1313	0	16.5	40-140	731.8	109	30	SR	
Surr: 2-Fluorobiphenyl	2245	0	3282	0	68.4	20-140	2328	3.67	0		
Surr: 4-Terphenyl-d14	547.3	0	3282	0	16.7	22-172	2868	136	0	S	
Surr: Nitrobenzene-d5	2587	0	3282	0	78.8	28-140	2749	6.09	0		

The following samples were analyzed in this batch: 1804301-01A

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

Client: HRL Compliance Solutions, Inc
 Work Order: 1804301
 Project: Terra Energy - GV 15-36

QC BATCH REPORT

Batch ID: 116540 Instrument ID VMS10 Method: SW8260B

MBLK		Sample ID: MBLK-116540-116540				Units: µg/Kg-dry		Analysis Date: 4/9/2018 08:46 PM		
Client ID:		Run ID: VMS10_180409A		SeqNo: 4973782		Prep Date: 4/9/2018		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	980.5	0	1000	0	98	70-130	0			
Surr: 4-Bromofluorobenzene	950.5	0	1000	0	95	70-130	0			
Surr: Dibromofluoromethane	803.5	0	1000	0	80.4	70-130	0			
Surr: Toluene-d8	1042	0	1000	0	104	70-130	0			

LCS		Sample ID: LCS-116540-116540				Units: µg/Kg-dry		Analysis Date: 4/9/2018 07:59 PM		
Client ID:		Run ID: VMS10_180409A		SeqNo: 4973781		Prep Date: 4/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1057	30	1000	0	106	75-125	0			
Ethylbenzene	1121	30	1000	0	112	75-125	0			
m,p-Xylene	2312	60	2000	0	116	80-125	0			
o-Xylene	1178	30	1000	0	118	75-125	0			
Toluene	1100	30	1000	0	110	70-125	0			
Xylenes, Total	3490	90	3000	0	116	75-125	0			
Surr: 1,2-Dichloroethane-d4	976	0	1000	0	97.6	70-130	0			
Surr: 4-Bromofluorobenzene	1018	0	1000	0	102	70-130	0			
Surr: Dibromofluoromethane	945	0	1000	0	94.5	70-130	0			
Surr: Toluene-d8	1008	0	1000	0	101	70-130	0			

MS		Sample ID: 1804301-01A MS				Units: µg/Kg-dry		Analysis Date: 4/10/2018 02:43 AM		
Client ID: Spill Confirmation		Run ID: VMS10_180409A		SeqNo: 4973791		Prep Date: 4/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1118	32	1081	0	103	75-125	0			
Ethylbenzene	1148	32	1081	0	106	75-125	0			
m,p-Xylene	2343	65	2162	18.92	108	80-125	0			
o-Xylene	1184	32	1081	0	110	75-125	0			
Toluene	1133	32	1081	0	105	70-125	0			
Xylenes, Total	3527	97	3243	19	108	75-125	0			
Surr: 1,2-Dichloroethane-d4	1047	0	1081	0	96.8	70-130	0			
Surr: 4-Bromofluorobenzene	1074	0	1081	0	99.3	70-130	0			
Surr: Dibromofluoromethane	1011	0	1081	0	93.5	70-130	0			
Surr: Toluene-d8	1102	0	1081	0	102	70-130	0			

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

Client: HRL Compliance Solutions, Inc
Work Order: 1804301
Project: Terra Energy - GV 15-36

QC BATCH REPORT

Batch ID: **116540** Instrument ID **VMS10** Method: **SW8260B**

MSD		Sample ID: 1804301-01A MSD				Units: µg/Kg-dry		Analysis Date: 4/10/2018 02:59 AM		
Client ID: Spill Confirmation		Run ID: VMS10_180409A		SeqNo: 4973792		Prep Date: 4/9/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1150	32	1081	0	106	75-125	1118	2.81	30	
Ethylbenzene	1196	32	1081	0	111	75-125	1148	4.15	30	
m,p-Xylene	2412	65	2162	18.92	111	80-125	2343	2.86	30	
o-Xylene	1206	32	1081	0	112	75-125	1184	1.85	30	
Toluene	1158	32	1081	0	107	70-125	1133	2.22	30	
Xylenes, Total	3618	97	3243	19	111	75-125	3527	2.53	30	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>1082</i>	<i>0</i>	<i>1081</i>	<i>0</i>	<i>100</i>	<i>70-130</i>	<i>1047</i>	<i>3.35</i>	<i>30</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>1089</i>	<i>0</i>	<i>1081</i>	<i>0</i>	<i>101</i>	<i>70-130</i>	<i>1074</i>	<i>1.4</i>	<i>30</i>	
<i>Surr: Dibromofluoromethane</i>	<i>1006</i>	<i>0</i>	<i>1081</i>	<i>0</i>	<i>93</i>	<i>70-130</i>	<i>1011</i>	<i>0.482</i>	<i>30</i>	
<i>Surr: Toluene-d8</i>	<i>1110</i>	<i>0</i>	<i>1081</i>	<i>0</i>	<i>103</i>	<i>70-130</i>	<i>1102</i>	<i>0.684</i>	<i>30</i>	

The following samples were analyzed in this batch: 1804301-01A

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

Client: HRL Compliance Solutions, Inc
 Work Order: 1804301
 Project: Terra Energy - GV 15-36

QC BATCH REPORT

Batch ID: 116601 Instrument ID WETCHEM Method: SW7196A

MBLK	Sample ID: MBLK-116601-116601		Units: mg/Kg		Analysis Date: 4/11/2018 01:15 PM					
Client ID:	Run ID: WETCHEM_180411J		SeqNo: 4976865		Prep Date: 4/9/2018 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent U 1.0

LCS	Sample ID: LCS-116601-116601		Units: mg/Kg		Analysis Date: 4/11/2018 01:15 PM					
Client ID:	Run ID: WETCHEM_180411J		SeqNo: 4976866		Prep Date: 4/9/2018 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 5.13 1.0 5 0 103 80-120 0

MS	Sample ID: 1804301-01A MS		Units: mg/Kg		Analysis Date: 4/11/2018 01:15 PM					
Client ID: Spill Confirmation	Run ID: WETCHEM_180411J		SeqNo: 4976869		Prep Date: 4/9/2018 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 4.11 0.92 4.587 0.2136 84.9 75-125 0

MS	Sample ID: 1804301-01A MSI		Units: mg/Kg		Analysis Date: 4/11/2018 01:15 PM					
Client ID: Spill Confirmation	Run ID: WETCHEM_180411J		SeqNo: 4976871		Prep Date: 4/9/2018 DF: 100					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 2806 98 2824 0.2136 99.4 75-125 0

MSD	Sample ID: 1804301-01A MSD		Units: mg/Kg		Analysis Date: 4/11/2018 01:15 PM					
Client ID: Spill Confirmation	Run ID: WETCHEM_180411J		SeqNo: 4976870		Prep Date: 4/9/2018 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Chromium, Hexavalent 3.895 0.95 4.762 0.2136 77.3 75-125 4.11 5.37 20

The following samples were analyzed in this batch:

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

Client: HRL Compliance Solutions, Inc
Work Order: 1804301
Project: Terra Energy - GV 15-36

QC BATCH REPORT

Batch ID: **116610** Instrument ID **WETCHEM** Method: **SW9045D**

LCS		Sample ID: LCS-116610-116610				Units: s.u.		Analysis Date: 4/10/2018 04:25 PM		
Client ID:		Run ID: WETCHEM_180410Q		SeqNo: 4975241		Prep Date: 4/10/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	3.94	0.10	4	0	98.5	90-110	0			

DUP		Sample ID: 1804301-01A DUP				Units: s.u.		Analysis Date: 4/10/2018 04:25 PM		
Client ID: Spill Confirmation		Run ID: WETCHEM_180410Q		SeqNo: 4975249		Prep Date: 4/10/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	9.7	0.10	0	0	0	0-0	9.61	0.932	20	

The following samples were analyzed in this batch:

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

Client: HRL Compliance Solutions, Inc
Work Order: 1804301
Project: Terra Energy - GV 15-36

QC BATCH REPORT

Batch ID: **116667** Instrument ID **WETCHEM** Method: **USDA H60 Metho**

DUP	Sample ID: 1804383-01B DUP		Units: mmhos/cm @25°		Analysis Date: 4/12/2018 09:45 AM					
Client ID:	Run ID: WETCHEM_180412B		SeqNo: 4977920		Prep Date: 4/11/2018 DF: 20					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	18.86	0.10	0	0	0		18.92	0.318	50	

The following samples were analyzed in this batch:

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

Client: HRL Compliance Solutions, Inc
Work Order: 1804301
Project: Terra Energy - GV 15-36

QC BATCH REPORT

Batch ID: **R233518** Instrument ID **MOIST** Method: **SW3550C**

MBLK		Sample ID: WBLKS-R233518				Units: % of sample			Analysis Date: 4/10/2018 04:10 PM		
Client ID:		Run ID: MOIST_180410C				SeqNo: 4976163		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Moisture	0.03	0.050								J	

LCS		Sample ID: LCS-R233518				Units: % of sample			Analysis Date: 4/10/2018 04:10 PM		
Client ID:		Run ID: MOIST_180410C				SeqNo: 4976162		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Moisture	100	0.050	100	0	100	99.5-100.5	0				

DUP		Sample ID: 1804211-01B DUP				Units: % of sample			Analysis Date: 4/10/2018 04:10 PM		
Client ID:		Run ID: MOIST_180410C				SeqNo: 4976141		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Moisture	74.05	0.050	0	0	0	0-0	74.08	0.0405	10		

DUP		Sample ID: 1804227-01B DUP				Units: % of sample			Analysis Date: 4/10/2018 04:10 PM		
Client ID:		Run ID: MOIST_180410C				SeqNo: 4976144		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Moisture	22.37	0.050	0	0	0	0-0	20.94	6.6	10		

The following samples were analyzed in this batch: 1804301-01A

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



ALS Laboratory Group

3352 128th Ave. Holland, MI 49424

TF: (800) 443-1511 PH: (616) 399-6070 FX: (616) 399-6185

Chain-of-Custody

Form 202r8

WORKORDER #	1804301
PAGE	1 of 1

PROJECT NAME	Terra Energy - GV 15-36	SAMPLER	Casey Richardson					DATE	4.5.18				DISPOSAL	1 of 1				
PROJECT No.		SITE ID	CONFIRMATION					TURNAROUND	STANDARD				By Lab or	Return to Client				
COMPANY NAME	HRL Compliance Solutions, Inc.	EDD FORMAT																
SEND REPORT TO	Kris Rowe, Mike Gardner	PURCHASE ORDER																
ADDRESS	2385 F 1/2 Road	BILL TO COMPANY	Terra Energy															
CITY / STATE / ZIP	Grand Junction, CO. 81505	INVOICE ATTN TO	Mike Gardner															
PHONE	970-243-3271	ADDRESS	1058 County Road 215															
FAX	970-243-3280	CITY / STATE / ZIP	Parachute, CO 81635															
E-MAIL	krowe@hrlcomp.com mgardner@terraep.com	PHONE	970-263-2760															
		FAX																
		E-MAIL	mgardner@terraep.com															
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	DRO	GRO	BTEX	Metals (COGCC Table 910-1)	Semi-Vols - PAH	SAR	EC	PH			
1	SPILL CONFIRMATION	S	4.5.18	1130	3	B	II	L	Y	X	K	L	X	X	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: SR2 3.4.c 	QC PACKAGE (check below)	
	<input checked="" type="checkbox"/>	LEVEL II (Standard QC)
	<input type="checkbox"/>	LEVEL III (Std QC + forms)
	<input type="checkbox"/>	LEVEL IV (Std QC + forms + raw data)

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Casey Richardson	4.5.18	1215
RECEIVED BY			4.5.18	1300
RELINQUISHED BY		Diane Shan	4.5.18	1830
RECEIVED BY			4/6/18	1030
RELINQUISHED BY				
RECEIVED BY				

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

Sample Receipt Checklist

Client Name: **HRL**

Date/Time Received: **06-Apr-18 10:30**

Work Order: **1804301**

Received by: **DS**

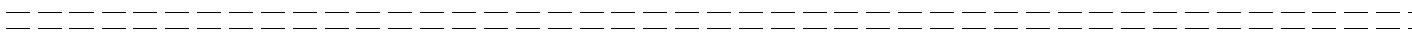
Checklist completed by Diane Shaw 06-Apr-18
eSignature Date

Reviewed by: Chad Whilton 06-Apr-18
eSignature Date

Matrices: **Soil**
 Carrier name: **FedEx**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<input type="text" value="3.4/3.4 c"/>		<input type="text" value="SR2"/>
Cooler(s)/Kit(s):	<input type="text"/>		
Date/Time sample(s) sent to storage:	<input type="text" value="4/6/2018 1:41:34 PM"/>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:	<input type="text"/>		

Login Notes:



Client Contacted: _____ Date Contacted: _____ Person Contacted: _____

Contacted By: _____ Regarding: _____

Comments:

CorrectiveAction: