

Terra Oilfield Services

**Biliken 6 Federal 1H-Release #1
Work Plan**

**Section 16, Township 26S, Range 34E
Lea County, New Mexico**

January 23, 2018



Prepared for:

**Terra Oilfield Services
15487 Pin Oak Drive
Conroe, TX 77384**

By:

**Safety & Environmental Solutions, Inc.
703 East Clinton Street
Hobbs, New Mexico 88240
(575) 397-0510**

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I. Company Contacts

Representative	Company	Telephone	E-mail
Todd Nilson	Terra Oilfield Services	618-407-6696	Todd.nilson@terraofs.com
Bob Allen	SESI	575-397-0510	ballen@sesi-nm.com

II. Background

Safety and Environmental Solutions, Inc., hereinafter referred to as (SESI) was engaged by Terra Oilfield Services to assess a spill area on the Biliken 6 Federal 1H Release #1, concerning a eight (8) bbl. treated water release. This site is situated in Lea County, Section 16, Township 26S, and Range 34E.

According to the C-141: approximately eight (8) barrels of treated water was released when a transfer line pressured up and a flange at a road crossing failed. Soil sampling will be conducted and a remediation plan determined upon receipt of sampling results.

III. Surface and Ground Water

There is no record of groundwater in the immediate vicinity of the site location. Further research of the New Mexico Office of the State Engineer records indicates the average depth to groundwater for the area to be 240' bgs.

IV. Characterization

The target cleanup levels are determined using the *Guidelines for Remediation of Leaks, Spills and Releases* published by the NMOCD (August 13, 1993). Based on the ranking criteria presented below, the applicable Recommended Remediation Action Levels (RRAL) are 10 parts per million (ppm) Benzene, 50 ppm combined benzene, toluene, ethyl benzene, and total xylenes (BTEX), and 5,000 ppm Total Petroleum Hydrocarbons (TPH). Characterization of vertical extent of chloride concentration to a level of 250 mg/kg (PPM) is also required.

Depth to Ground Water:			
(Vertical distance from contaminants to seasonal high water elevation of groundwater)	Less than 50 feet	20 points	
	50 feet to 99 feet	10 points	
	>100 feet	0 points	X
Wellhead Protection Area:			
(Less than 200 feet from a private domestic water source; or less than 1000 feet from all other water sources)	Yes	20 points	
	No	0 points	X
Distance to Surface Water:			
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet	20 points	
	200 feet to 1000 feet	10 points	
	>1000 feet	0 points	X
RANKING SCORE (TOTAL POINTS)			0

V. Work Performed

On March 29, 2017 Safety and Environmental Solutions, Inc. (SESI) personnel, are onsite to look over the Terra Biliken release #1 and to determine where to install the boreholes using the Geo probe to determine vertical extent of contamination. After looking over the release area, SESI personnel advised to bore down to four feet and every four feet to field test the soil samples. Borehole one was installed to the depth of ten feet. The soil was wet, red sand to four feet, five to twelve feet caliche, clay mix a lot of moisture. At the four to eight foot boring the plastic core liner crimped up and was easily extracted. At the eight to twelve foot boring the plastic liner again crimped up inside the core barrel and we had a hard time extracting the liner and soil sample. The liner and soil sample was lost in removing and clearing the core barrel and boring was stopped. Soil sample cores were capped off, labeled and properly preserved. Borehole two was then installed to the depth of refusal at five and half feet. Soil sample cores were capped and properly preserved. The sample points were mapped using the Juno 3B.

On April 7, 2017, SESI personnel was onsite at the Terra Biliken Release #1 with Custom Welding Backhoe w/operator and spotter to install test trenches to determine vertical extent of contamination. Test trench one was installed to the depth of sixteen feet and soil samples were obtained at two foot increments. Soil samples were field tested for Chlorides. The soil character, surface to four feet was red sand, four to eight was red clay caliche mix, and eight to sixteen was hard caliche with one to four inch angular rock. Vertical was met at fourteen feet. Test results were less than 124 ppm at fourteen feet and less than 124 ppm at sixteen. The trench was then backfilled. Trench two was then installed to the depth of thirteen feet to refusal. The soil character, surface to four feet, was red sand; four to eight feet, sand and clay mix; eight to thirteen feet, solid hard caliche rock. Vertical was met at twelve feet with test results 124 ppm and less than 124 ppm at thirteen feet. Trench was then backfilled. Trench three was then installed to refusal at six feet. Soil character, surface to four feet, was red sand; four to six feet, solid rock hard caliche. The test result at six feet refusal was 848 ppm. Trench was then backfilled. Trench four was installed to the depth of refusal at eight feet. Soil character, surface to six feet, red sand clay mix; six to eight feet, caliche to rock solid hard caliche. The test result at eight feet was 608 ppm. Trench was then backfilled. Trench five was installed to the depth of refusal at four feet. Soil character, surface to four feet red sand and clay mix; four foot solid rock hard caliche rock. Test result at four foot was 848 ppm. The soil sample points were mapped using the Juno 3B and photos were taken of the test trenches. The samples were properly packaged, preserved and transported to Cardinal Laboratories of Hobbs, NM by chain of custody, and analyzed for TPH(total petroleum hydrocarbons)(Method 8015M), and Chlorides (Method SM4500CI-B). The results are recapped in the following table:

Terra Oilfield Services Biliken 6 Fed 1H Release #1 Soil Sample Results: Cardinal Laboratories 4-10-2017									
SAMPLE ID	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Total BTEX	Chlorides	TPH GRO	TPH DRO	EXT DRO
TT-1 @ 2ft	<0.050	<0.050	<0.050	<0.150	<0.300	5040	<10.0	<10.0	<10.0
TT-1 @ 6ft	<0.050	<0.050	<0.050	<0.150	<0.300	11800	<10.0	<10.0	<10.0
TT-1 @ 10ft	<0.050	<0.050	<0.050	<0.150	<0.300	2840	<10.0	<10.0	<10.0
TT-1 @ 14ft	<0.050	<0.050	<0.050	<0.150	<0.300	64.0	<10.0	<10.0	<10.0
TT-1 @ 16ft	<0.050	<0.050	<0.050	<0.150	<0.300	48.0	<10.0	<10.0	<10.0
TT-2 @ 2ft	<0.050	<0.050	<0.050	<0.150	<0.300	4930	<10.0	<10.0	<10.0
TT-2 @ 8ft	<0.050	<0.050	<0.050	<0.150	<0.300	2800	<10.0	<10.0	<10.0
TT-2 @ 12ft	<0.050	<0.050	<0.050	<0.150	<0.300	160	<10.0	<10.0	<10.0
TT-2 @ 14ft	<0.050	<0.050	<0.050	<0.150	<0.300	144	<10.0	<10.0	<10.0
TT-3 @ 4ft	<0.050	<0.050	<0.050	<0.150	<0.300	6000	<10.0	<10.0	<10.0
TT-3 @ 6ft	<0.050	<0.050	<0.050	<0.150	<0.300	912	<10.0	<10.0	<10.0
TT-4 @ 4ft	<0.050	<0.050	<0.050	<0.150	<0.300	4240	<10.0	<10.0	<10.0
TT-4 @ 6ft	<0.050	<0.050	<0.050	<0.150	<0.300	1440	<10.0	<10.0	<10.0
TT-4 @ 8ft	<0.050	<0.050	<0.050	<0.150	<0.300	688	<10.0	<10.0	<10.0
TT-5 @ 2ft	<0.050	<0.050	<0.050	<0.150	<0.300	10600	<10.0	<10.0	<10.0
TT-5 @ 4ft	<0.050	<0.050	<0.050	<0.150	<0.300	1020	<10.0	<10.0	<10.0

VI. Action Plan

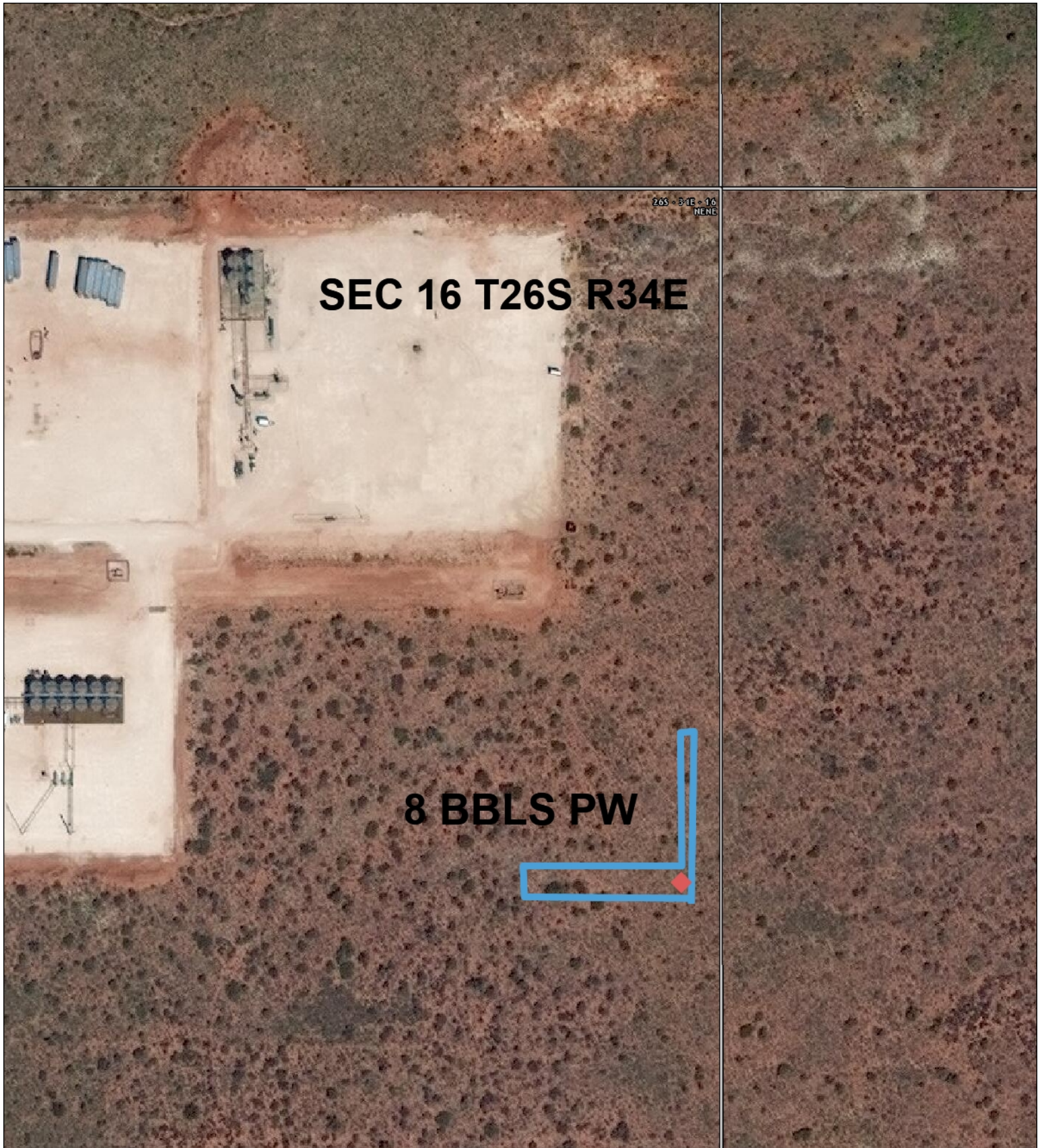
The entire horizontal area of the impacted soil will be excavated to a depth of 4' where the Chloride concentration is less than 1000 ppm. A liner will be installed on the bottom of the excavation. The excavation will be backfilled with uncontaminated soil and returned to natural grade. Upon completion of this work plan, all necessary documentation and reports will be completed and distributed to the appropriate regulatory agencies.

VII. Figures & Appendices

Figure 1 - Vicinity Map
 Figure 2 - Site Plan
 Appendix A – C-141
 Appendix B – Groundwater
 Appendix C – Analytical Results
 Appendix D – Photo Documentation

Figure 1

Vicinity Map



Spill 3/20/2017



This map is for illustrative purposes only and is neither a legally recorded map nor survey and is not intended to be used as one. Devon makes no warranty, representation, or guarantee of any kind regarding this map.

WGS_1984_Web_Mercator_Auxiliary_Sphere
Prepared by: Menoud
Map is current as of: 23-Mar-2017



Miles

0 0.01 0.02 0.04 1:1,779



Figure 2
Site Plan

Terra Oilfield Services

Biliken 6Fed Release #1

Legend

- Feature 1
- Feature 2
- Pipeline 3
- Release Point 2
- Terra Biliken 6FED 1H & 2H Release #1

Terra Biliken 6FED 1H & 2H Release #1

Release Point 2

16

26S 34E

W103.468°

Survey
Google earth
© 2016 Google



500 ft

Appendix A

C-141

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Devon Energy Production Co LP (6137)	Contact: Stephen Richards, Devon Completions Foreman
Address: PO Box 250 Artesia, NM 88211	Telephone No. 575-252-3717
Facility Name: Billiken 6 Federal 1H	Facility Type: Oil Well

Surface Owner: State	Mineral Owner: State	API No. 30-025-42685
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LOCATION OF RELEASE

Unit Letter A	Section 16	Township 26S	Range 34E	Feet from the 660	North/South Line NORTH	Feet from the 30	East/West Line EAST	County LEA
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Latitude: **32.048490 N** Longitude: **-103.466538 W**

NATURE OF RELEASE

Type of Release: TREATED WATER	Volume of Release: 8 BBLS	Volume Recovered: 0 BBLS
Source of Release FAILED FLANGE ON WATER LINE	Date and Hour of Occurrence 3/20/2017; 7:00 PM	Date and Hour of Discovery 3/20/2017; 7:00 PM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour: N/A	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

RECEIVED

By Olivia Yu at 10:51 am, Mar 31, 2017

Describe Cause of Problem and Remedial Action Taken.*

After completing a frac stage the contractor completed filling the minion, the contractor on location radioed the pump operators to shut down. He then shut the valve on the minion without verifying pump shutdown. At that time, the transfer line pressured up and a flange at a road crossing failed. When the pump operator noticed the pressure drop at the pump, he shut down the pump and inspected the line. Once identified, the line was pinched off to prevent any further water loss. Repairs were made immediately made to the line.

Describe Area Affected and Cleanup Action Taken.*

The spill area affected is approximately 140' x 10' running North and South and 197' x 14' running East and West on the pipeline easement following the lease road. A central location of the spill is: Lat - N 32.048490; Long - W -103.466538 and is approximately 3.28 miles Southwest of the Billiken 6 Fed #1. An estimated 8 barrels of treated produced water was spilled and none was recovered, all water soaked into the sand. A remediation contractor will be contacted.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Denise Menoud</i>	OIL CONSERVATION DIVISION	
Printed Name: Denise Menoud	Approved by Environmental Specialist: <i>oy</i>	
Title: Field Admin Support	Approval Date: 3/31/2017	Expiration Date:
E-mail Address: Denise.Menoud@dvn.com	Conditions of Approval: see attached directive	Attached <input checked="" type="checkbox"/>
Date: 3/23/2017	Phone: 575-746-5544	

* Attach Additional Sheets If Necessary

nOY1709038420

1RP-4661

pOY1709039206

Appendix B

Groundwater



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,
O=orphaned,
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 03795 POD1	C	LE		4	4	3	24	26S	35E	658419	3544221	496	250	246
J 00005 POD1		LE		2	2	2	13	26S	35E	659200	3547174*	601	230	371

Average Depth to Water: **240 feet**

Minimum Depth: **230 feet**

Maximum Depth: **250 feet**

Record Count: 2

PLSS Search:

Township: 26S

Range: 35E

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

Appendix C

Analytical Results

April 13, 2017

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: TER -17-001

Enclosed are the results of analyses for samples received by the laboratory on 04/10/17 11:07.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/10/2017
Reported: 04/13/2017
Project Name: TER -17-001
Project Number: TER - 17- 001
Project Location: NOT GIVEN

Sampling Date: 04/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-1 2' (H700944-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2017	ND	1.93	96.4	2.00	1.12	
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.8	2.00	1.43	
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.78	88.9	2.00	1.48	
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.05	84.2	6.00	1.42	
Total BTX	<0.300	0.300	04/11/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5040	16.0	04/12/2017	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 89.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 95.9 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/10/2017
Reported: 04/13/2017
Project Name: TER -17-001
Project Number: TER - 17- 001
Project Location: NOT GIVEN

Sampling Date: 04/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-1 6' (H700944-02)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2017	ND	1.93	96.4	2.00	1.12	
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.8	2.00	1.43	
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.78	88.9	2.00	1.48	
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.05	84.2	6.00	1.42	
Total BTEX	<0.300	0.300	04/11/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11800	16.0	04/12/2017	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 86.6 % 28.3-164

Surrogate: 1-Chlorooctadecane 88.9 % 34.7-157

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/10/2017
Reported: 04/13/2017
Project Name: TER -17-001
Project Number: TER - 17- 001
Project Location: NOT GIVEN

Sampling Date: 04/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-1 10' (H700944-03)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2017	ND	1.93	96.4	2.00	1.12		
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.8	2.00	1.43		
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.78	88.9	2.00	1.48		
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.05	84.2	6.00	1.42		
Total BTEX	<0.300	0.300	04/11/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2840	16.0	04/12/2017	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 82.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 85.5 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/10/2017
Reported: 04/13/2017
Project Name: TER -17-001
Project Number: TER - 17- 001
Project Location: NOT GIVEN

Sampling Date: 04/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-1 14' (H700944-04)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2017	ND	1.93	96.4	2.00	1.12		
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.8	2.00	1.43		
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.78	88.9	2.00	1.48		
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.05	84.2	6.00	1.42		
Total BTEX	<0.300	0.300	04/11/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/12/2017	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 90.7 % 28.3-164

Surrogate: 1-Chlorooctadecane 93.4 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/10/2017
Reported: 04/13/2017
Project Name: TER -17-001
Project Number: TER - 17- 001
Project Location: NOT GIVEN

Sampling Date: 04/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-1 16' (H700944-05)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2017	ND	1.93	96.4	2.00	1.12		
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.8	2.00	1.43		
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.78	88.9	2.00	1.48		
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.05	84.2	6.00	1.42		
Total BTEX	<0.300	0.300	04/11/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 72-148

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	04/12/2017	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 88.6 % 28.3-164

Surrogate: 1-Chlorooctadecane 93.3 % 34.7-157

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Received: 04/10/2017
Reported: 04/13/2017
Project Name: TER -17-001
Project Number: TER - 17- 001
Project Location: NOT GIVEN

Sampling Date: 04/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-2 2' (H700944-06)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/11/2017	ND	1.93	96.4	2.00	1.12	
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.8	2.00	1.43	
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.78	88.9	2.00	1.48	
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.05	84.2	6.00	1.42	
Total BTEX	<0.300	0.300	04/11/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4930	16.0	04/12/2017	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 85.7 % 28.3-164

Surrogate: 1-Chlorooctadecane 89.2 % 34.7-157

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 Received: 04/10/2017
 Reported: 04/13/2017
 Project Name: TER -17-001
 Project Number: TER - 17- 001
 Project Location: NOT GIVEN

 Sampling Date: 04/07/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: TT-2 8' (H700944-07)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2017	ND	1.93	96.4	2.00	1.12		
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.8	2.00	1.43		
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.78	88.9	2.00	1.48		
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.05	84.2	6.00	1.42		
Total BTEX	<0.300	0.300	04/11/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2800	16.0	04/12/2017	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 93.3 % 28.3-164

Surrogate: 1-Chlorooctadecane 94.1 % 34.7-157

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Received: 04/10/2017
Reported: 04/13/2017
Project Name: TER -17-001
Project Number: TER - 17- 001
Project Location: NOT GIVEN

Sampling Date: 04/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-2 12' (H700944-08)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2017	ND	1.93	96.4	2.00	1.12		
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.8	2.00	1.43		
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.78	88.9	2.00	1.48		
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.05	84.2	6.00	1.42		
Total BTEX	<0.300	0.300	04/11/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	04/12/2017	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 92.3 % 28.3-164

Surrogate: 1-Chlorooctadecane 95.5 % 34.7-157

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Received: 04/10/2017
Reported: 04/13/2017
Project Name: TER -17-001
Project Number: TER - 17- 001
Project Location: NOT GIVEN

Sampling Date: 04/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-2 14' (H700944-09)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/11/2017	ND	1.93	96.4	2.00	1.12		
Toluene*	<0.050	0.050	04/11/2017	ND	1.80	89.8	2.00	1.43		
Ethylbenzene*	<0.050	0.050	04/11/2017	ND	1.78	88.9	2.00	1.48		
Total Xylenes*	<0.150	0.150	04/11/2017	ND	5.05	84.2	6.00	1.42		
Total BTEX	<0.300	0.300	04/11/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	04/11/2017	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 88.7 % 28.3-164

Surrogate: 1-Chlorooctadecane 92.3 % 34.7-157

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Received: 04/10/2017
Reported: 04/13/2017
Project Name: TER -17-001
Project Number: TER - 17- 001
Project Location: NOT GIVEN

Sampling Date: 04/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-3 4' (H700944-10)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2017	ND	1.73	86.6	2.00	1.84		
Toluene*	<0.050	0.050	04/12/2017	ND	1.62	81.2	2.00	1.50		
Ethylbenzene*	<0.050	0.050	04/12/2017	ND	1.62	80.8	2.00	2.04		
Total Xylenes*	<0.150	0.150	04/12/2017	ND	4.58	76.3	6.00	1.63		
Total BTEX	<0.300	0.300	04/12/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6000	16.0	04/11/2017	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 86.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 89.9 % 34.7-157

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Received: 04/10/2017
Reported: 04/13/2017
Project Name: TER -17-001
Project Number: TER - 17- 001
Project Location: NOT GIVEN

Sampling Date: 04/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-3 6' (H700944-11)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2017	ND	1.73	86.6	2.00	1.84		
Toluene*	<0.050	0.050	04/12/2017	ND	1.62	81.2	2.00	1.50		
Ethylbenzene*	<0.050	0.050	04/12/2017	ND	1.62	80.8	2.00	2.04		
Total Xylenes*	<0.150	0.150	04/12/2017	ND	4.58	76.3	6.00	1.63		
Total BTX	<0.300	0.300	04/12/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	912	16.0	04/11/2017	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 79.9 % 28.3-164

Surrogate: 1-Chlorooctadecane 80.3 % 34.7-157

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Received: 04/10/2017
Reported: 04/13/2017
Project Name: TER -17-001
Project Number: TER - 17- 001
Project Location: NOT GIVEN

Sampling Date: 04/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-4 4' (H700944-12)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2017	ND	1.73	86.6	2.00	1.84		
Toluene*	<0.050	0.050	04/12/2017	ND	1.62	81.2	2.00	1.50		
Ethylbenzene*	<0.050	0.050	04/12/2017	ND	1.62	80.8	2.00	2.04		
Total Xylenes*	<0.150	0.150	04/12/2017	ND	4.58	76.3	6.00	1.63		
Total BTEX	<0.300	0.300	04/12/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4240	16.0	04/11/2017	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 73.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 74.5 % 34.7-157

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Received: 04/10/2017
Reported: 04/13/2017
Project Name: TER -17-001
Project Number: TER - 17- 001
Project Location: NOT GIVEN

Sampling Date: 04/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-4 6' (H700944-13)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2017	ND	1.73	86.6	2.00	1.84	
Toluene*	<0.050	0.050	04/12/2017	ND	1.62	81.2	2.00	1.50	
Ethylbenzene*	<0.050	0.050	04/12/2017	ND	1.62	80.8	2.00	2.04	
Total Xylenes*	<0.150	0.150	04/12/2017	ND	4.58	76.3	6.00	1.63	
Total BTEX	<0.300	0.300	04/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1440	16.0	04/11/2017	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 86.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 89.0 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Safety & Environmental Solutions
 Bob Allen
 703 East Clinton
 Hobbs NM, 88240
 Fax To: (575) 393-4388

 Received: 04/10/2017
 Reported: 04/13/2017
 Project Name: TER -17-001
 Project Number: TER - 17- 001
 Project Location: NOT GIVEN

 Sampling Date: 04/07/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: TT-4 8' (H700944-14)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2017	ND	1.73	86.6	2.00	1.84		
Toluene*	<0.050	0.050	04/12/2017	ND	1.62	81.2	2.00	1.50		
Ethylbenzene*	<0.050	0.050	04/12/2017	ND	1.62	80.8	2.00	2.04		
Total Xylenes*	<0.150	0.150	04/12/2017	ND	4.58	76.3	6.00	1.63		
Total BTX	<0.300	0.300	04/12/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 72-148

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	688	16.0	04/11/2017	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 86.3 % 28.3-164

Surrogate: 1-Chlorooctadecane 89.5 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/10/2017
Reported: 04/13/2017
Project Name: TER -17-001
Project Number: TER - 17- 001
Project Location: NOT GIVEN

Sampling Date: 04/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-5 2' (H700944-15)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/12/2017	ND	1.73	86.6	2.00	1.84		
Toluene*	<0.050	0.050	04/12/2017	ND	1.62	81.2	2.00	1.50		
Ethylbenzene*	<0.050	0.050	04/12/2017	ND	1.62	80.8	2.00	2.04		
Total Xylenes*	<0.150	0.150	04/12/2017	ND	4.58	76.3	6.00	1.63		
Total BTEX	<0.300	0.300	04/12/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.2 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10600	16.0	04/11/2017	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 82.3 % 28.3-164

Surrogate: 1-Chlorooctadecane 85.1 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 04/10/2017
Reported: 04/13/2017
Project Name: TER -17-001
Project Number: TER - 17- 001
Project Location: NOT GIVEN

Sampling Date: 04/07/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

Sample ID: TT-5 4' (H700944-16)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/12/2017	ND	1.73	86.6	2.00	1.84	QR-03
Toluene*	<0.050	0.050	04/12/2017	ND	1.62	81.2	2.00	1.50	QR-03
Ethylbenzene*	<0.050	0.050	04/12/2017	ND	1.62	80.8	2.00	2.04	QR-03
Total Xylenes*	<0.150	0.150	04/12/2017	ND	4.58	76.3	6.00	1.63	QR-03
Total BTEX	<0.300	0.300	04/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1020	16.0	04/11/2017	ND	448	112	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	
EXT DRO >C28-C36	<10.0	10.0	04/11/2017	ND					

Surrogate: 1-Chlorooctane 91.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 95.9 % 34.7-157

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: Same

Attn:

Address:

City:

State:

Zip:

Fax #:

Company Name: Safety and Environmental Solutions

Project Manager: Bob Allen

Address: 703 East Clinton, PO Box 1613

City: Hobbs State: NM Zip: 88240

Phone #: 575 397-0510 Fax #: 575 393-4388

Project #: 702-17-001 Project Owner:

Project Name:

Project Location:

Sampler Name:

FOR LAB USE ONLY

Lab I.D. Sample I.D.

H100944

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER:

ACID/BASE:

ICE / COOL

OTHER:

DATE

TIME

08/07

0830

0900

0930

1000

1025

1035

1120

1145

1150

1200

TPH (8015 EX)
1376X
Chloride

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Relinquished By:

Date: 08/15/17

Time:

Received By:

Date: 08/15/17

Time:

Relinquished By:

Date: 08/10/17

Time:

Received By:

Date: 08/10/17

Time:

Delivered By: (Circle One)

Date: 08/10/17

Time:

Received By:

Date: 08/10/17

Time:

Sampler - UPS - Bus - Other:

Date: 08/10/17

Time:

Received By:

Date: 08/10/17

Time:

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Pg 2 of 2

Company Name: Safety and Environmental Solutions		P.O. #:		BILL TO																	
Project Manager: Bob Allen		Company: Same		ANALYSIS REQUEST																	
Address: 703 East Clinton, PO Box 1613		Attn:																			
City: Hobbs		Address:																			
Phone #: 575 397-0510		City:																			
Fax #: 575 393-4388		State:																			
Project #: TEL-17-001		Zip:																			
Project Name:		Phone #:																			
Project Location:		Fax #:																			
Sampler Name:		PRESERV																			
FOR LAB USE ONLY		SAMPLING																			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX		PRESERV		SAMPLING													
				GROUNDWATER																	
				WASTEWATER																	
				SOIL																	
				OIL																	
				SLUDGE																	
				OTHER :																	
				ACID/BASE:																	
				ICE / COOL																	
				OTHER :																	
				DATE	TIME																
HT00944	6-3	4	1	04/07	1330	X															
11	6-4	4	1	04/07	1345	X															
12	6-5	4	1	04/07	1355	X															
13	6-6	4	1	04/07	1400	X															
14	6-7	4	1	04/07	1430	X															
15	6-8	4	1	04/07	1440	X															
16	6-9	4	1	04/07	1440	X															
REMARKS:																					
Relinquished By: [Signature] Date: 04/07/07 Received By: [Signature] Date: 04/07/07																					
Relinquished By: [Signature] Date: 04/07/07 Received By: [Signature] Date: 04/07/07																					
Delivered By: (Circle One) 3.3c																					
Sampler - UPS - Bus - Other: [Signature]																					
CHECKED BY: [Signature]																					
Phone Result: [] Yes [] No Add'l Phone #: []																					
Fax Result: [] Yes [] No Add'l Fax #: []																					

Appendix D

Site Photos

Terra Oilfield Services-Biliken Release #1

Photos-March 24, 2017





