

# **Breitburn Management**

**State 14 C#009**

**Work Plan**

**Section 14, Township 18S, Range 28E  
Eddy County, New Mexico**

**September 11, 2018**



**Prepared for:**

**Breitburn Management  
P.O. BOX 678  
Andrews, TX 79714**

**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
Thomas Haigood	Breitburn	(432) 701-7802	Thomas.haigood@breitburn.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 Breitburn to assess a spill on the State 14 C #009 concerning a ten (10) bbls. oil and one hundred (100) bbls. water release. This site is situated in Eddy County, Section 14, Township 18S, and Range 28E.

According to the C-141: approximately ten (10) barrels of oil and one hundred (100) barrels of water was released when an abandoned flowline that was tied into the production line failed. All free fluids were removed via vacuum truck and the impacted soil was removed and placed on plastic while delineation and remediation is being prepared. A remediation contractor was contacted.

## 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 300' 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 July 2, 2018, SESI personnel was onsite at the Breitbart State 14 C #009 to begin delineation of the release. Breitbart personnel stated that the release had already be excavated by the use of a bull dozer. The release area was observed to had been excavated to the depth of one foot, with some small areas of hydrocarbon staining. Four bottom surface soil samples were obtained from the excavated area and field tested for TPH and Chlorides. Due to levels above delineation requirements, the samples were not sent to the lab for analysis. The excavation was mapped using the Juno 3B and site photos were taken. Aerial photos of the location, release area, and excavation were also taken using the drone.

Field Test Results: 7-2-2018		
Sample ID	TPH	Chlorides
SP-1	124	22,936
SP-2	5662	22,936
SP-3	5331	22,936
SP-4	59	<128

On August 27, 2018, SESI personnel was onsite at the Breitbart State 14 C #009 with Breitbart personnel and JC Services backhoe personnel to install test trenches to determine vertical extent of contamination. Three test trenches and sample points were installed in the excavated area and field tested. All soil 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), BTEX, and Chlorides (Method SM4500Cl-B). The lab results are recapped in the following table:

Breitbart State 14 C #009 Soil Sample Results: Cardinal Laboratories 8-30-2018									
SAMPLE ID	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Total BTEX	Chlorides	TPH GRO	TPH DRO	EXT DRO
TT-1 3ft	<0.050	<0.050	<0.050	<0.150	<0.300	896	<10.0	<10.0	<10.0
TT-1 5ft	<0.050	<0.050	<0.050	<0.150	<0.300	624	<10.0	<10.0	<10.0
TT-1 6ft	<0.050	<0.050	<0.050	<0.150	<0.300	256	<10.0	<10.0	<10.0
TT-1 7ft	<0.050	<0.050	<0.050	<0.150	<0.300	208	<10.0	<10.0	<10.0
TT-1 8ft	<0.050	<0.050	<0.050	<0.150	<0.300	192	<10.0	<10.0	<10.0
TT-1 16ft	<0.050	<0.050	<0.050	<0.150	<0.300	144	<10.0	<10.0	<10.0
TT-2 2ft	<0.050	<0.050	<0.050	<0.150	<0.300	208	<10.0	<10.0	<10.0
TT-2 3ft	<0.050	<0.050	<0.050	<0.150	<0.300	240	<10.0	<10.0	<10.0
TT-2 4ft	<0.050	<0.050	<0.050	<0.150	<0.300	128	<10.0	<10.0	<10.0
TT-2 16ft	<0.050	<0.050	<0.050	<0.150	<0.300	128	<10.0	<10.0	<10.0
TT-3 3ft	<0.050	<0.050	<0.050	<0.150	<0.300	640	<10.0	<10.0	<10.0
TT-3 4ft	<0.050	<0.050	<0.050	<0.150	<0.300	288	<10.0	<10.0	<10.0
TT-3 5ft	<0.050	<0.050	<0.050	<0.150	<0.300	160	<10.0	<10.0	<10.0
TT-3 6ft	<0.050	<0.050	<0.050	<0.150	<0.300	128	<10.0	<10.0	<10.0
TT-3 16ft	<0.050	<0.050	<0.050	<0.150	<0.300	112	<10.0	<10.0	<10.0
SP-5 South Wall	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0	<10.0	<10.0	<10.0
SP-6 South Wall	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0	<10.0	<10.0	<10.0
SP-7 East Wall	<0.050	<0.050	<0.050	<0.150	<0.300	128	<10.0	<10.0	<10.0
SP-8 North Wall	<0.050	<0.050	<0.050	<0.150	<0.300	176	<10.0	<10.0	<10.0
SP-9 North Wall	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0	<10.0	<10.0	<10.0
SP-10 North Wall	<0.050	<0.050	<0.050	<0.150	<0.300	192	<10.0	<10.0	<10.0
SP-11 West Wall	<0.050	<0.050	<0.050	<0.150	<0.300	<16.0	<10.0	<10.0	<10.0

## **VI. Action Plan**

The results of the samples listed above indicate no BTEX or TPH were present in any of the samples. Therefore, it is proposed to excavate the bottom of the excavation to a depth where all bottom samples are at or below 600 ppm chlorides.

The horizontal extent of contamination was determined by the side wall samples taken on August 27, 2018. . The excavation will be backfilled with uncontaminated soil and all contaminated soil will be transported to an NMOCD approved facility. Upon completion of all approved remediation activity, all necessary closure documentation will be submitted 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**

# Breitburn State 14 C#009

Spill Area Map 7-2-18

## Legend

- Excavation 1
- Feature 1
- Pipeline 2
- State 14 C #009

14

State 14 C #009

W104.148°

Google Earth

200 ft



**Figure 2**  
**Site Plan**

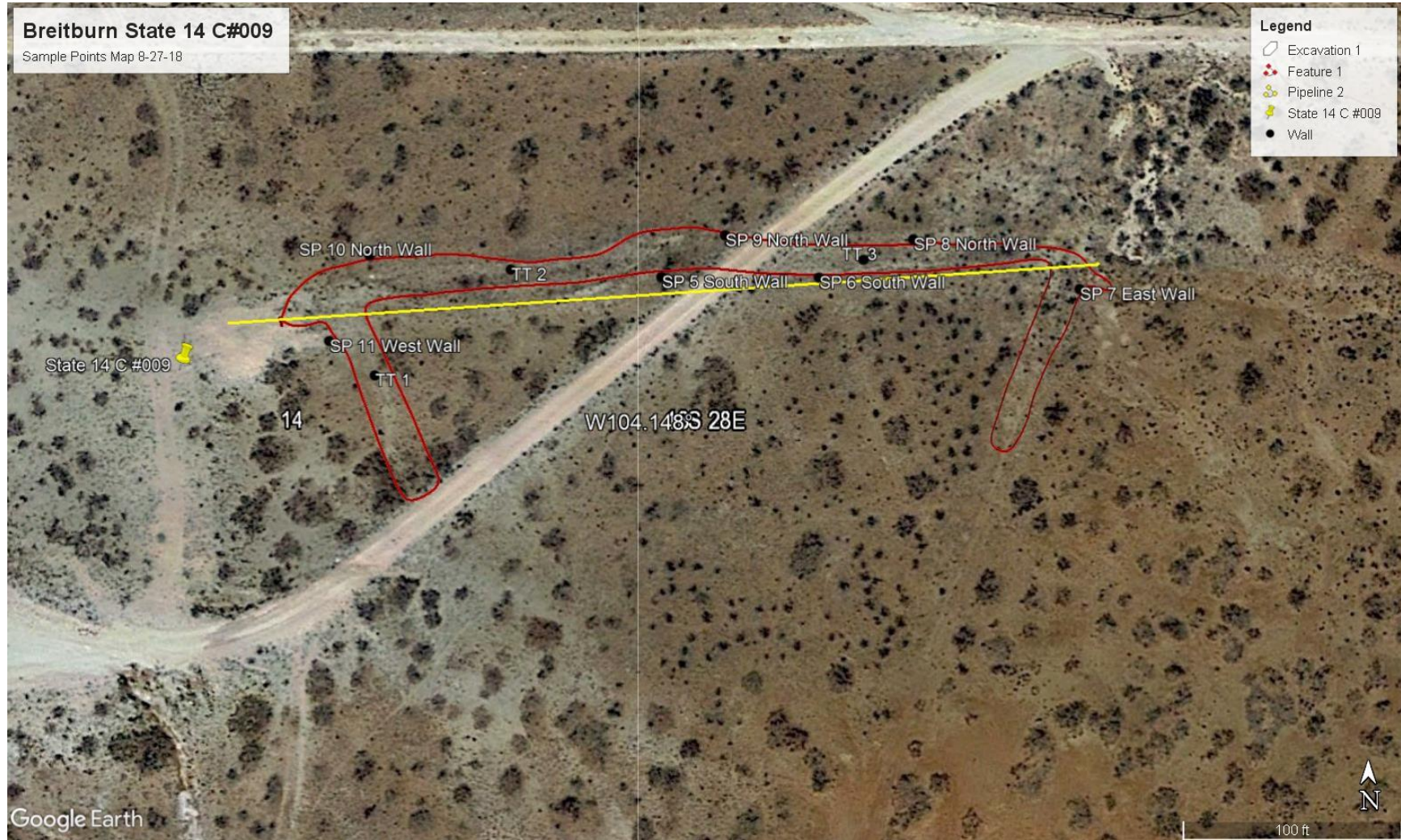


# Breitburn State 14 C#009

Sample Points Map 8-27-18

## Legend

- Excavation 1
- Feature 1
- Pipeline 2
- State 14 C #009
- Wall



# **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

Form C-141  
Revised August 8, 2011

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

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	Breitbart Operating, LP	Contact	Jason Thomas, EHS Supervisor
Address	4320 SW 3001, Andrews TX 79714	Telephone No.	903-291-6513
Facility Name	State 14 C#009	Facility Type	Oil & Gas Lease
Surface Owner	State of New Mexico	Mineral Owner	State of New Mexico
		API No.	30015018620000

### LOCATION OF RELEASE

Unit Letter	Section 14	Township 18S	Range 28E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
-------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	----------------

Latitude 32.746311

Longitude -104.148650

### NATURE OF RELEASE

Type of Release Gathering line liquid release; oil and produced water	Volume of Release- 10 bbl oil, 100 bbl water	Volume Recovered Pending
Source of Release Gathering line	Date and Hour of Occurrence	Date and Hour of Discovery 6/26/18 14:46
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mr. Gilbert Cordero, NMOCD	
By Whom? Jason Thomas, EHS Supervisor	Date and Hour 6/27/18 12:09	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. NA	

If a Watercourse was Impacted, Describe Fully.\*  
NA

Describe Cause of Problem and Remedial Action Taken.\*

Unknown, abandoned flowline that tied into our production line failed allowing the release of both oil and produced water.

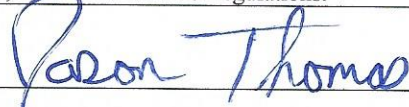
Disconnected and capped abandoned line. Breitbart also conducted additional review of that production line to identify any other potential abandoned lines tied in. One additional line was disconnected and capped.

Describe Area Affected and Cleanup Action Taken.\*

Area impacted is approximately 3'-5' wide by 300-350 yards long proceeding down gradient.

Removed all free fluids w/ vacuum truck and applied absorbent materials and booms to contain further fluid migration. Impacted soil on is being removed and placed on plastic while delineation and remediation plan is being prepared. Contaminated soil will be hauled to an approved disposal facility once excavation is complete.

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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Jason Thomas	Approved by Environmental Specialist:	
Title EHS Supervisor	Approval Date:	Expiration Date:
E-mail Address: Jason.thomas@breitbart.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 7/2/18	Phone: 903-291-6513	

\* Attach Additional Sheets If Necessary

# **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														
Sub-														
Q Q Q														
POD Number	Code	basin	County	64	16	4	Sec	Tws	Rng	X	Y	Depth	Depth	Water
												Well	Water	Column
<a href="#">RA 09588</a>			ED	1	2	33	18S	28E		576976	3619384*		300	

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 1

PLSS Search:

Township: 18S

Range: 28E

\*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**

August 30, 2018

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: BRE-18-006

Enclosed are the results of analyses for samples received by the laboratory on 08/28/18 8:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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](http://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: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: TT - 1 3' (H802405-01)**

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	08/28/2018	ND	1.86	93.0	2.00	0.672	
Toluene*	<0.050	0.050	08/28/2018	ND	1.80	90.0	2.00	1.12	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	1.83	91.5	2.00	1.18	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	5.56	92.6	6.00	1.13	
Total BTEX	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.7 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	896	16.0	08/29/2018	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	08/28/2018	ND	206	103	200	1.84	
DRO >C10-C28*	<10.0	10.0	08/28/2018	ND	196	98.0	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/28/2018	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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: 08/28/2018  
 Reported: 08/30/2018  
 Project Name: BRE-18-006  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 08/27/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT - 1 5' (H802405-02)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTX	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	08/29/2018	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	08/28/2018	ND	206	103	200	1.84	
DRO >C10-C28*	<10.0	10.0	08/28/2018	ND	196	98.0	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/28/2018	ND					

Surrogate: 1-Chlorooctane 115 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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Received: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: TT - 1 6' (H802405-03)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEX	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	08/29/2018	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	08/28/2018	ND	206	103	200	1.84	
DRO >C10-C28*	<10.0	10.0	08/28/2018	ND	196	98.0	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/28/2018	ND					

Surrogate: 1-Chlorooctane 115 % 41-142

Surrogate: 1-Chlorooctadecane 110 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: TT - 1 7' (H802405-04)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEx	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	08/29/2018	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	08/28/2018	ND	206	103	200	1.84	
DRO >C10-C28*	<10.0	10.0	08/28/2018	ND	196	98.0	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/28/2018	ND					

Surrogate: 1-Chlorooctane 114 % 41-142

Surrogate: 1-Chlorooctadecane 109 % 37.6-147

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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: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: TT - 1 8' (H802405-05)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEx	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	08/29/2018	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	08/28/2018	ND	206	103	200	1.84	
DRO >C10-C28*	<10.0	10.0	08/28/2018	ND	196	98.0	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/28/2018	ND					

Surrogate: 1-Chlorooctane 98.8 % 41-142

Surrogate: 1-Chlorooctadecane 95.0 % 37.6-147

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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: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: TT - 1 16' (H802405-06)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEx	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 69.8-142

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	08/29/2018	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	08/28/2018	ND	206	103	200	1.84	
DRO >C10-C28*	<10.0	10.0	08/28/2018	ND	196	98.0	200	10.7	
EXT DRO >C28-C36	<10.0	10.0	08/28/2018	ND					

Surrogate: 1-Chlorooctane 121 % 41-142

Surrogate: 1-Chlorooctadecane 117 % 37.6-147

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**Analytical Results For:**

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

 Received: 08/28/2018  
 Reported: 08/30/2018  
 Project Name: BRE-18-006  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 08/27/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT - 2 2' (H802405-07)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEx	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	08/29/2018	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	08/28/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/28/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/28/2018	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 96.6 % 37.6-147

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 Safety & Environmental Solutions  
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 Received: 08/28/2018  
 Reported: 08/30/2018  
 Project Name: BRE-18-006  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 08/27/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: TT - 2 3' (H802405-08)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTX	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	08/29/2018	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	08/28/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/28/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/28/2018	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 93.1 % 37.6-147

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

Received: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: TT - 2 4' (H802405-09)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80		
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83		
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06		
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47		
Total BTEX	<0.300	0.300	08/28/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 112 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/29/2018	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	08/29/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/29/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/29/2018	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 97.3 % 37.6-147

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**Analytical Results For:**

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

Received: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: TT - 2 16' (H802405-10)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEx	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/29/2018	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	08/29/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/29/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/29/2018	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 94.1 % 37.6-147

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**Analytical Results For:**

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

Received: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: TT - 3 3' (H802405-11)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEX	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 112 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	640	16.0	08/29/2018	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	08/29/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/29/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/29/2018	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 93.8 % 37.6-147

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**Analytical Results For:**

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

Received: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: TT - 3 4' (H802405-12)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEX	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	08/29/2018	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	08/29/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/29/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/29/2018	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 94.4 % 37.6-147

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Safety & Environmental Solutions  
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Hobbs NM, 88240  
Fax To: (575) 393-4388

Received: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: TT - 3 5' (H802405-13)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEX	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 69.8-142

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	08/29/2018	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	08/29/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/29/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/29/2018	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 98.3 % 37.6-147

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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: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: TT - 3 6' (H802405-14)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEX	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/29/2018	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	08/29/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/29/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/29/2018	ND					

Surrogate: 1-Chlorooctane 99.8 % 41-142

Surrogate: 1-Chlorooctadecane 93.0 % 37.6-147

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**Analytical Results For:**

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

Received: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: TT - 3 16' (H802405-15)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80		
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83		
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06		
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47		
Total BTEX	<0.300	0.300	08/28/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 114 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	08/29/2018	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	08/29/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/29/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/29/2018	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 95.0 % 37.6-147

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Fax To: (575) 393-4388

Received: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP - 5 SOUTH WALL (H802405-16)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEx	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/29/2018	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	08/29/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/29/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/29/2018	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 96.4 % 37.6-147

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Fax To: (575) 393-4388

Received: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP - 6 SOUTH WALL (H802405-17)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEX	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 111 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/29/2018	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	08/29/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/29/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/29/2018	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 96.2 % 37.6-147

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Safety & Environmental Solutions  
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 Fax To: (575) 393-4388

Received: 08/28/2018  
 Reported: 08/30/2018  
 Project Name: BRE-18-006  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP - 7 EAST WALL (H802405-18)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80		
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83		
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06		
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47		
Total BTX	<0.300	0.300	08/28/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 115 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/29/2018	ND	416	104	400	3.77	

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	08/29/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/29/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/29/2018	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 96.0 % 37.6-147

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**Analytical Results For:**

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

Received: 08/28/2018  
 Reported: 08/30/2018  
 Project Name: BRE-18-006  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP - 8 NORTH WALL (H802405-19)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEx	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	08/29/2018	ND	416	104	400	3.77	

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	08/29/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/29/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/29/2018	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 97.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP - 9 NORTH WALL (H802405-20)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEx	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 115 % 69.8-142

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/29/2018	ND	416	104	400	3.77		

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	08/29/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/29/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/29/2018	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 97.2 % 37.6-147

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**Analytical Results For:**

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

Received:	08/28/2018	Sampling Date:	08/27/2018
Reported:	08/30/2018	Sampling Type:	Soil
Project Name:	BRE-18-006	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: SP - 10 NORTH WALL (H802405-21)**

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	08/28/2018	ND	1.98	99.1	2.00	5.80	
Toluene*	<0.050	0.050	08/28/2018	ND	2.03	101	2.00	5.83	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	2.08	104	2.00	7.06	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	6.07	101	6.00	7.47	
Total BTEX	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 113 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	192	16.0	08/29/2018	ND	416	104	400	3.77		

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	08/29/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/29/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/29/2018	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 98.3 % 37.6-147

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Hobbs NM, 88240  
Fax To: (575) 393-4388

Received: 08/28/2018  
Reported: 08/30/2018  
Project Name: BRE-18-006  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/27/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP - 11 WEST WALL (H802405-22)**

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	08/28/2018	ND	1.80	90.1	2.00	7.30	
Toluene*	<0.050	0.050	08/28/2018	ND	1.75	87.3	2.00	7.93	
Ethylbenzene*	<0.050	0.050	08/28/2018	ND	1.76	88.2	2.00	7.74	
Total Xylenes*	<0.150	0.150	08/28/2018	ND	5.27	87.9	6.00	7.56	
Total BTEX	<0.300	0.300	08/28/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.1 % 69.8-142

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/29/2018	ND	416	104	400	3.77		

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	08/29/2018	ND	202	101	200	0.897	
DRO >C10-C28*	<10.0	10.0	08/29/2018	ND	211	105	200	0.543	
EXT DRO >C28-C36	<10.0	10.0	08/29/2018	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 97.3 % 37.6-147

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\*=Accredited Analyte

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**Notes and Definitions**

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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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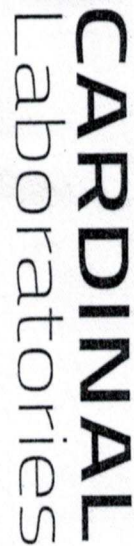
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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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## **Appendix D**

### **Site Photos**

**Breitburn State 14**  
**Drone Photos-7/2/2018**













