

**Cross Border Resources**  
**Sunray State Tank Battery**

**Closure Report**  
**Section 16, Township 8S, Range 31E**  
**Chaves County, New Mexico**

**February 20, 2018**



**Prepared for:**  
**Red Mountain Resources**  
**14282 Gills Rd.**  
**Farmers Branch, TX 75244**

**By:**

***Safety & Environmental Solutions, Inc.***  
***703 E. Clinton Suite 102***  
***Hobbs, New Mexico 88240***  
***(505) 397-0510***

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## I. Company Contacts

NAME	Company	Telephone	E-mail
Ross Pearson	Red Mountain Resources, Inc.	817-996-4653	ross@redmountainresources.com
Bob Allen	SESI	505-397-0510	ballen@sesi-nm.com

## II. Background

Safety and Environmental Solutions, Inc. (SESI) was engaged to perform delineation services on the Sunray State Battery located in Section 16, Township 8S, Range 31E Chaves County, New Mexico. According to the C-141: a compromised line to the heater treater ruptured, causing a release of crude oil to ground surface. The line was repaired, and the impacted surface area was fenced in. The C-141 was filed with NMOCD on April 24, 2015 and assigned **1RP-3619**.

## III. Surface and Ground Water

Research of the *New Mexico Office of the State Engineer* indicates that there is no record of groundwater in the immediate vicinity, but that average depth to water for Township 8S, and Range 31E is 103' 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 100 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	<b>X</b>
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	<b>X</b>
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	<b>X</b>
RANKING SCORE (TOTAL POINTS)			<b>0</b>

## **V. Work Performed**

On June 15, 2016 SESI personnel were on location to address the concerns of ground surface impact. The impacted area was mapped utilizing a handheld Trimble Juno 3D, whereby it was determined that the spill area measured approximately 28,704 sq. ft. The site was flagged in order to activate a line locate request with the New Mexico One Center, in order to conduct a vertical delineation of the impacted area.

On June 29, 2016 SESI personnel revisited the site in order to determine the vertical extent of impact and map sample point positions. Four (4) Soil Bores were advanced from depths of 1' BGS at BH-4 to 27' BGS at BH-3, respectively. Representative soil samples were retrieved at various depth below ground surface, properly packaged, preserved, transported to Cardinal Labs of Hobbs, NM by Chain of Custody and analyzed for Chloride (Cl-) (Method SM 4500Cl-B). The results are presented in the table below:

<b>Soil Sample Results: Field Tests 06-29-16</b>			
<b>SAMPLE ID</b>	<b>Sample Date</b>	<b>Field Test CHLORIDES</b>	<b>Lab Results CHLORIDES</b>
BH-1 Surface	6/29/16	1030 ppm	
BH-1 @ 1'	6/29/16	1030 ppm	
BH-1 @ 2'	6/29/16	1040 ppm	
BH-1 @ 3'	6/29/16	1045 ppm	
BH-1 @ 4'	6/29/16		32.0
BH-2 @ 4'	6/29/16	<124 ppm	
BH-3 @ 4'	07/01/16		32.0
BH-3 @ 7'	6/29/16		976
BH-3 @ 8'	07/01/16	4484 ppm	
BH-3 @ 11'	6/29/16	4884 ppm	
BH-3 @ 12'	7/01/16		2440
BH-3 @ 13'	6/29/16	3164 ppm	
BH-3 @ 16'	7/01/16	1012 ppm	
BH-3 @ 17'	6/29/16	1528 ppm	
BH-3 @ 20'	7/01/16		976
BH-3 @ 24'	07/01/16	360 ppm	
BH-3 @ 27'	07/01/16		192
BH-4 Surface	6/29/16	<124	
BH-4 @ 1'	6/29/16		16.0

Between October 13, 2016 and October 24, 2016, Gandy removed the hard pan hydrocarbon from the site and transported the material to an NMOCD approved facility.

Between November 7, 2017 and November 8, 2017, SESI personnel was onsite with Gandy Corporation backhoe operator at the Sunray State 2 Battery to begin remediation. The excavation was twelve by twelve square feet and soil samples were obtained and field test on all four walls. Soil samples were obtained and field tested on all four walls, and two areas from the bottom of the excavation. A liner was installed and loaded with backfill material. The excavation and sample points were mapped and photos were taken of the excavation and the installed liner. All soil samples were properly preserved.

On December 11, 2017, SESI personnel was onsite at the CBR Sunray Battery to till and reseed the affected area. SESI personnel walked the whole area of the site and hand spread the seed. Before and after photos of the area were taken.

**VI. Request for Closure**

The results of the confirmation sampling indicate that all soils impacted above 250ppm Chlorides were removed and transported to an approved NMOCD facility for disposal. The area was backfilled with clean soil and returned to grade. The area has also been reseeded with BLM #2-LPC seed mixture, and SESI commits to a second application being applied in spring 2018. Cross Border Resources respectfully submits this closure report for your consideration, and requests that no further action be required.

**VII. Figures & Appendices**

Figure 1 – Vicinity Map  
Figure 2– Site Plan  
Appendix A – Analytical Results  
Appendix B – Site Photos  
Appendix C – C-141

# **Figure 1**

## **Vicinity Map**





Survey

© 2016 Google

Google earth

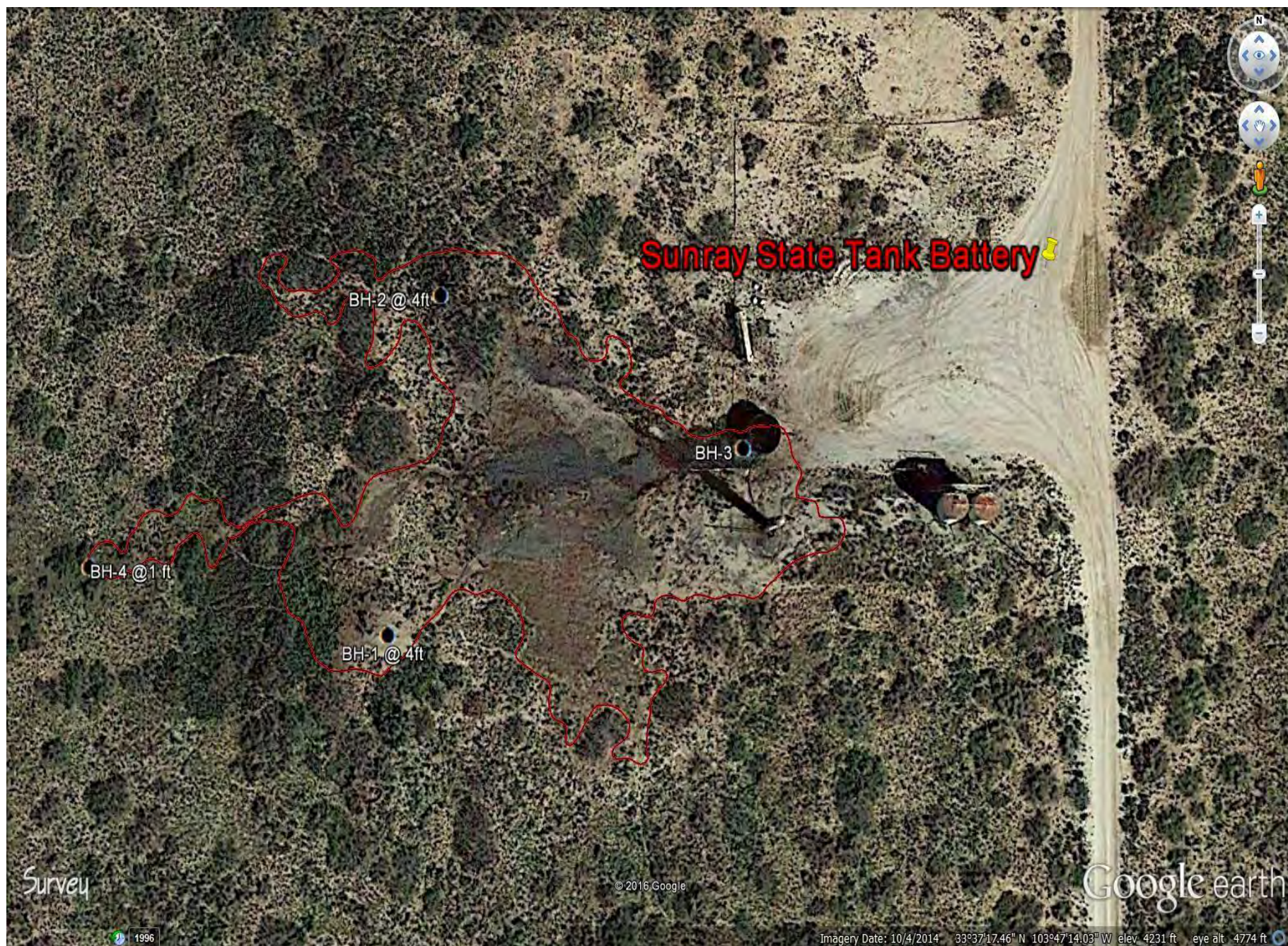
1996

Imagery Date: 10/4/2014 33°37'17.32" N 103°47'13.83" W elev 4231 ft eye alt 4821 ft



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



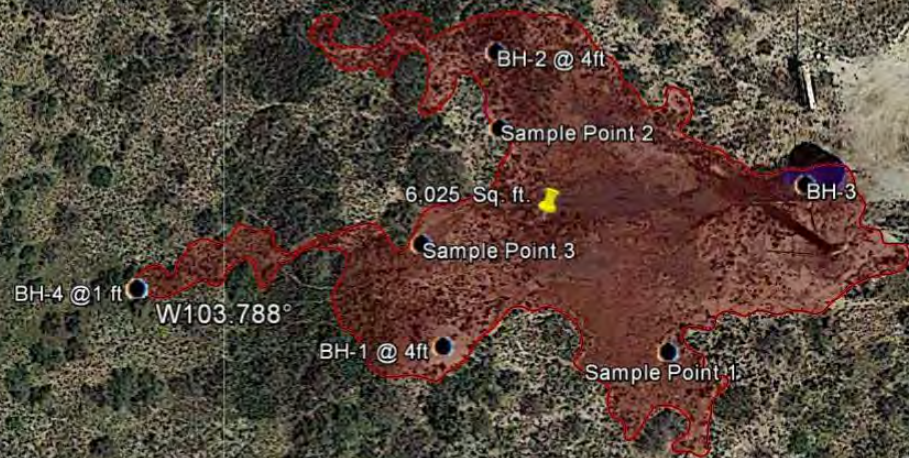




**Cross Border Resources**  
Sunray State Tank Battery  
Sample Points Map

- Legend**
- @ 4ft
  - BH-4 @1 ft
  - BH-4 @1 ft
  - BH-4 @1 ft
  - Feature 1
  - Feature 2
  - Sample Point
  - Spill Area 1
  - United States
  - Untitled Polygon

**Sunray State Tank Battery**



# **Appendix A**

## **Analytical Results**



March 28, 2017

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: CBR-16-001

Enclosed are the results of analyses for samples received by the laboratory on 03/24/17 8:15.

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](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: 03/24/2017  
Reported: 03/28/2017  
Project Name: CBR-16-001  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 03/20/2017  
Sampling Type: Soil  
Sampling Condition: \*\* (See Notes)  
Sample Received By: Tamara Oldaker

**Sample ID: AH -1 1' (H700779-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/27/2017	ND	448	112	400	0.00	

**Sample ID: AH -1 1.5' (H700779-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	03/27/2017	ND	448	112	400	0.00	

**Sample ID: AH -2 1' (H700779-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/27/2017	ND	448	112	400	0.00	

**Sample ID: AH -2 2' (H700779-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	03/27/2017	ND	448	112	400	0.00	

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: 03/24/2017  
 Reported: 03/28/2017  
 Project Name: CBR-16-001  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 03/20/2017  
 Sampling Type: Soil  
 Sampling Condition: \*\* (See Notes)  
 Sample Received By: Tamara Oldaker

**Sample ID: AH -3 1' (H700779-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/27/2017	ND	448	112	400	0.00		

**Sample ID: AH -3 2' (H700779-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/27/2017	ND	448	112	400	0.00		

**Sample ID: AH -3 3' (H700779-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	03/27/2017	ND	448	112	400	0.00		

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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June 30, 2017

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: CBR -16 -001

Enclosed are the results of analyses for samples received by the laboratory on 06/21/17 9:31.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-9. 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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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  
703 East Clinton  
Hobbs NM, 88240Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388Reported:  
30-Jun-17 16:38

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TT -1 1'	H701601-01	Soil	20-Jun-17 11:15	21-Jun-17 09:31
TT -1 3'	H701601-02	Soil	20-Jun-17 11:15	21-Jun-17 09:31
TT -1 4'	H701601-03	Soil	20-Jun-17 11:20	21-Jun-17 09:31
TT -1 9'	H701601-04	Soil	20-Jun-17 11:40	21-Jun-17 09:31
TT -1 14'	H701601-05	Soil	20-Jun-17 12:00	21-Jun-17 09:31
TT -2 1'	H701601-06	Soil	20-Jun-17 12:20	21-Jun-17 09:31
TT -2 3'	H701601-07	Soil	20-Jun-17 12:20	21-Jun-17 09:31
TT -2 4'	H701601-08	Soil	20-Jun-17 12:30	21-Jun-17 09:31
TT -2 9'	H701601-09	Soil	20-Jun-17 12:50	21-Jun-17 09:31
TT -2 14'	H701601-10	Soil	20-Jun-17 13:10	21-Jun-17 09:31
TT -4 1'	H701601-11	Soil	20-Jun-17 13:15	21-Jun-17 09:31
TT -4 3'	H701601-12	Soil	20-Jun-17 13:15	21-Jun-17 09:31
TT -4 4'	H701601-13	Soil	20-Jun-17 13:30	21-Jun-17 09:31
TT -4 9'	H701601-14	Soil	20-Jun-17 13:45	21-Jun-17 09:31
TT -4 14'	H701601-15	Soil	20-Jun-17 14:00	21-Jun-17 09:31

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### TT -1 1' H701601-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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### Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			101 %		72-148	7062201	MS	22-Jun-17	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
DRO >C10-C28	20.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctane			92.1 %		28.3-164	7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctadecane			80.1 %		34.7-157	7062104	MS	22-Jun-17	8015B	

### Green Analytical Laboratories

#### Soluble (DI Water Extraction)

Chloride	76.7		10.0	mg/kg wet	10	B706234	JDA	29-Jun-17	EPA300.0	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### TT -1 3' H701601-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062201	MS	22-Jun-17	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			101 %	72-148		7062201	MS	22-Jun-17	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
<i>Surrogate: 1-Chlorooctane</i>			91.5 %	28.3-164		7062104	MS	22-Jun-17	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			79.9 %	34.7-157		7062104	MS	22-Jun-17	8015B	

#### Green Analytical Laboratories

#### Soluble (DI Water Extraction)

Chloride	285		10.0	mg/kg wet	10	B706234	JDA	29-Jun-17	EPA300.0	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### TT -1 4' H701601-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			101 %	72-148		7062201	MS	22-Jun-17	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctane			91.5 %	28.3-164		7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctadecane			79.9 %	34.7-157		7062104	MS	22-Jun-17	8015B	

#### Green Analytical Laboratories

#### Soluble (DI Water Extraction)

Chloride	113		10.0	mg/kg wet	10	B706234	JDA	29-Jun-17	EPA300.0	
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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### TT -1 9' H701601-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

##### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062201	MS	22-Jun-17	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			99.6 %	72-148		7062201	MS	22-Jun-17	8021B	

##### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctane			93.7 %	28.3-164		7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctadecane			79.1 %	34.7-157		7062104	MS	22-Jun-17	8015B	

#### Green Analytical Laboratories

##### Soluble (DI Water Extraction)

Chloride	26.7		10.0	mg/kg wet	10	B706234	JDA	30-Jun-17	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### TT -1 14' H701601-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7062201	MS	23-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062201	MS	23-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062201	MS	23-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062201	MS	23-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062201	MS	23-Jun-17	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			99.9 %	72-148		7062201	MS	23-Jun-17	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
<i>Surrogate: 1-Chlorooctane</i>			93.9 %	28.3-164		7062104	MS	22-Jun-17	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			77.5 %	34.7-157		7062104	MS	22-Jun-17	8015B	

#### Green Analytical Laboratories

#### Soluble (DI Water Extraction)

Chloride	27.0		10.0	mg/kg wet	10	B706234	JDA	30-Jun-17	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### TT -2 1' H701601-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7062201	MS	23-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062201	MS	23-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062201	MS	23-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062201	MS	23-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062201	MS	23-Jun-17	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			100 %	72-148		7062201	MS	23-Jun-17	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
<i>Surrogate: 1-Chlorooctane</i>			95.5 %	28.3-164		7062104	MS	22-Jun-17	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			81.5 %	34.7-157		7062104	MS	22-Jun-17	8015B	

#### Green Analytical Laboratories

#### Soluble (DI Water Extraction)

Chloride	10.2		10.0	mg/kg wet	10	B706234	JDA	29-Jun-17	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### TT -2 3' H701601-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			99.5 %	72-148		7062202	MS	23-Jun-17	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
DRO >C10-C28	16.7		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctane			90.8 %	28.3-164		7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctadecane			83.3 %	34.7-157		7062104	MS	22-Jun-17	8015B	

#### Green Analytical Laboratories

#### Soluble (DI Water Extraction)

Chloride	12.0		10.0	mg/kg wet	10	B706234	JDA	29-Jun-17	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 Safety & Environmental Solutions  
 703 East Clinton  
 Hobbs NM, 88240

 Project: CBR -16 -001  
 Project Number: NONE GIVEN  
 Project Manager: Bob Allen  
 Fax To: (575) 393-4388

 Reported:  
 30-Jun-17 16:38

**TT -2 4'**  
**H701601-08 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories**
**Volatile Organic Compounds by EPA Method 8021**

Benzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062202	MS	23-Jun-17	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			101 %	72-148		7062202	MS	23-Jun-17	8021B	

**Petroleum Hydrocarbons by GC FID**

GRO C6-C10	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
<i>Surrogate: 1-Chlorooctane</i>			90.6 %	28.3-164		7062104	MS	22-Jun-17	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			79.2 %	34.7-157		7062104	MS	22-Jun-17	8015B	

**Green Analytical Laboratories**
**Soluble (DI Water Extraction)**

Chloride	174		10.0	mg/kg wet	10	B706234	JDA	29-Jun-17	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### TT -2 9' H701601-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062202	MS	23-Jun-17	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			99.7 %	72-148		7062202	MS	23-Jun-17	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
<i>Surrogate: 1-Chlorooctane</i>			90.6 %	28.3-164		7062104	MS	22-Jun-17	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			78.0 %	34.7-157		7062104	MS	22-Jun-17	8015B	

#### Green Analytical Laboratories

#### Soluble (DI Water Extraction)

Chloride	82.3		10.0	mg/kg wet	10	B706234	JDA	29-Jun-17	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### TT -2 14' H701601-10 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			100 %	72-148		7062202	MS	23-Jun-17	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctane			98.0 %	28.3-164		7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctadecane			79.9 %	34.7-157		7062104	MS	22-Jun-17	8015B	

#### Green Analytical Laboratories

#### Soluble (DI Water Extraction)

Chloride	27.8		10.0	mg/kg wet	10	B706234	JDA	30-Jun-17	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### TT -4 1' H701601-11 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			99.9 %	72-148		7062202	MS	23-Jun-17	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctane			90.5 %	28.3-164		7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctadecane			79.0 %	34.7-157		7062104	MS	22-Jun-17	8015B	

#### Green Analytical Laboratories

#### Soluble (DI Water Extraction)

Chloride	<10.0		10.0	mg/kg wet	10	B706234	JDA	29-Jun-17	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### TT -4 3' H701601-12 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			99.3 %	72-148		7062202	MS	23-Jun-17	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctane			92.6 %	28.3-164		7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctadecane			82.4 %	34.7-157		7062104	MS	22-Jun-17	8015B	

#### Green Analytical Laboratories

#### Soluble (DI Water Extraction)

Chloride	16.6		10.0	mg/kg wet	10	B706234	JDA	30-Jun-17	EPA300.0	
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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### TT -4 4' H701601-13 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			100 %	72-148		7062202	MS	23-Jun-17	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctane			95.8 %	28.3-164		7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctadecane			80.5 %	34.7-157		7062104	MS	22-Jun-17	8015B	

#### Green Analytical Laboratories

#### Soluble (DI Water Extraction)

Chloride	<10.0		10.0	mg/kg wet	10	B706232	JDA	29-Jun-17	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### TT -4 9' H701601-14 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			99.6 %	72-148		7062202	MS	23-Jun-17	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctane			88.5 %	28.3-164		7062104	MS	22-Jun-17	8015B	
Surrogate: 1-Chlorooctadecane			76.1 %	34.7-157		7062104	MS	22-Jun-17	8015B	

#### Green Analytical Laboratories

#### Soluble (DI Water Extraction)

Chloride	78.6		10.0	mg/kg wet	10	B706232	JDA	29-Jun-17	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### TT -4 14' H701601-15 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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#### Cardinal Laboratories

#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7062202	MS	23-Jun-17	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			101 %	72-148		7062202	MS	23-Jun-17	8021B	

#### Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7062105	MS	21-Jun-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7062105	MS	21-Jun-17	8015B	
Surrogate: 1-Chlorooctane			91.6 %	28.3-164		7062105	MS	21-Jun-17	8015B	
Surrogate: 1-Chlorooctadecane			95.3 %	34.7-157		7062105	MS	21-Jun-17	8015B	

#### Green Analytical Laboratories

#### Soluble (DI Water Extraction)

Chloride	<100		100	mg/kg wet	100	B706232	JDA	29-Jun-17	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### Volatile Organic Compounds by EPA Method 8021 - Quality Control

#### Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 7062201 - Volatiles

##### Blank (7062201-BLK1)

Prepared & Analyzed: 22-Jun-17

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	ND		mg/kg	0.0500		98.6	72-148			

##### LCS (7062201-BS1)

Prepared & Analyzed: 22-Jun-17

Benzene	2.17	0.050	mg/kg	2.00		109	79.5-124			
Toluene	2.00	0.050	mg/kg	2.00		99.8	75.5-127			
Ethylbenzene	2.03	0.050	mg/kg	2.00		101	77.7-125			
Total Xylenes	5.87	0.150	mg/kg	6.00		97.9	70.9-124			
Surrogate: 4-Bromofluorobenzene (PID)	0.0495		mg/kg	0.0500		98.9	72-148			

##### LCS Dup (7062201-BS1)

Prepared & Analyzed: 22-Jun-17

Benzene	2.20	0.050	mg/kg	2.00		110	79.5-124	1.21	6.5	
Toluene	2.03	0.050	mg/kg	2.00		101	75.5-127	1.55	7.02	
Ethylbenzene	2.09	0.050	mg/kg	2.00		105	77.7-125	3.17	7.83	
Total Xylenes	6.06	0.150	mg/kg	6.00		101	70.9-124	3.22	7.78	
Surrogate: 4-Bromofluorobenzene (PID)	0.0498		mg/kg	0.0500		99.6	72-148			

#### Batch 7062202 - Volatiles

##### Blank (7062202-BLK1)

Prepared: 22-Jun-17 Analyzed: 23-Jun-17

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0504		mg/kg	0.0500		101	72-148			

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Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### Volatile Organic Compounds by EPA Method 8021 - Quality Control

#### Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 7062202 - Volatiles

##### LCS (7062202-BS1)

Prepared: 22-Jun-17 Analyzed: 23-Jun-17

Benzene	2.17	0.050	mg/kg	2.00		109	79.5-124			
Toluene	1.99	0.050	mg/kg	2.00		99.6	75.5-127			
Ethylbenzene	2.04	0.050	mg/kg	2.00		102	77.7-125			
Total Xylenes	5.88	0.150	mg/kg	6.00		98.0	70.9-124			
Surrogate: 4-Bromofluorobenzene (PID)	0.0515		mg/kg	0.0500		103	72-148			

##### LCS Dup (7062202-BSD1)

Prepared: 22-Jun-17 Analyzed: 23-Jun-17

Benzene	2.17	0.050	mg/kg	2.00		108	79.5-124	0.261	6.5	
Toluene	1.98	0.050	mg/kg	2.00		98.8	75.5-127	0.837	7.02	
Ethylbenzene	2.03	0.050	mg/kg	2.00		101	77.7-125	0.580	7.83	
Total Xylenes	5.85	0.150	mg/kg	6.00		97.5	70.9-124	0.547	7.78	
Surrogate: 4-Bromofluorobenzene (PID)	0.0507		mg/kg	0.0500		101	72-148			

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### Petroleum Hydrocarbons by GC FID - Quality Control

#### Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 7062104 - General Prep - Organics

##### Blank (7062104-BLK1)

Prepared & Analyzed: 21-Jun-17

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	45.2		mg/kg	50.0		90.4	28.3-164			
Surrogate: 1-Chlorooctadecane	40.0		mg/kg	50.0		80.1	34.7-157			

##### LCS (7062104-BS1)

Prepared & Analyzed: 21-Jun-17

GRO C6-C10	177	10.0	mg/kg	200		88.6	76.6-119			
DRO >C10-C28	182	10.0	mg/kg	200		90.9	81.4-124			
Total TPH C6-C28	359	10.0	mg/kg	400		89.8	79.4-121			
Surrogate: 1-Chlorooctane	48.8		mg/kg	50.0		97.6	28.3-164			
Surrogate: 1-Chlorooctadecane	43.6		mg/kg	50.0		87.1	34.7-157			

##### LCS Dup (7062104-BSD1)

Prepared & Analyzed: 21-Jun-17

GRO C6-C10	183	10.0	mg/kg	200		91.4	76.6-119	3.03	7.94	
DRO >C10-C28	186	10.0	mg/kg	200		92.9	81.4-124	2.24	9.83	
Total TPH C6-C28	369	10.0	mg/kg	400		92.1	79.4-121	2.63	8.57	
Surrogate: 1-Chlorooctane	50.7		mg/kg	50.0		101	28.3-164			
Surrogate: 1-Chlorooctadecane	42.0		mg/kg	50.0		84.0	34.7-157			

#### Batch 7062105 - General Prep - Organics

##### Blank (7062105-BLK1)

Prepared & Analyzed: 21-Jun-17

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	45.9		mg/kg	50.0		91.8	28.3-164			
Surrogate: 1-Chlorooctadecane	48.1		mg/kg	50.0		96.1	34.7-157			

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### Petroleum Hydrocarbons by GC FID - Quality Control

#### Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 7062105 - General Prep - Organics

##### LCS (7062105-BS1)

Prepared & Analyzed: 21-Jun-17

GRO C6-C10	212	10.0	mg/kg	200		106	76.6-119			
DRO >C10-C28	225	10.0	mg/kg	200		112	81.4-124			
Total TPH C6-C28	437	10.0	mg/kg	400		109	79.4-121			
Surrogate: 1-Chlorooctane	50.7		mg/kg	50.0		101	28.3-164			
Surrogate: 1-Chlorooctadecane	50.0		mg/kg	50.0		100	34.7-157			

##### LCS Dup (7062105-BS1)

Prepared & Analyzed: 21-Jun-17

GRO C6-C10	215	10.0	mg/kg	200		107	76.6-119	1.15	7.94	
DRO >C10-C28	229	10.0	mg/kg	200		114	81.4-124	1.83	9.83	
Total TPH C6-C28	444	10.0	mg/kg	400		111	79.4-121	1.50	8.57	
Surrogate: 1-Chlorooctane	52.0		mg/kg	50.0		104	28.3-164			
Surrogate: 1-Chlorooctadecane	49.4		mg/kg	50.0		98.9	34.7-157			

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

Safety & Environmental Solutions  
703 East Clinton  
Hobbs NM, 88240

Project: CBR -16 -001  
Project Number: NONE GIVEN  
Project Manager: Bob Allen  
Fax To: (575) 393-4388

Reported:  
30-Jun-17 16:38

### Soluble (DI Water Extraction) - Quality Control

### Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch B706232 - General Prep - Wet Chem

##### Blank (B706232-BLK1)

Prepared: 27-Jun-17 Analyzed: 28-Jun-17

Chloride	ND	10.0	mg/kg wet							
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##### LCS (B706232-BS1)

Prepared: 27-Jun-17 Analyzed: 28-Jun-17

Chloride	241	10.0	mg/kg wet	250		96.3	85-115			
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##### LCS Dup (B706232-BSD1)

Prepared: 27-Jun-17 Analyzed: 28-Jun-17

Chloride	243	10.0	mg/kg wet	250		97.1	85-115	0.798	20	
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#### Batch B706234 - General Prep - Wet Chem

##### Blank (B706234-BLK1)

Prepared: 27-Jun-17 Analyzed: 29-Jun-17

Chloride	ND	10.0	mg/kg wet							
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##### LCS (B706234-BS1)

Prepared: 27-Jun-17 Analyzed: 29-Jun-17

Chloride	239	10.0	mg/kg wet	250		95.8	85-115			
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##### LCS Dup (B706234-BSD1)

Prepared: 27-Jun-17 Analyzed: 29-Jun-17

Chloride	240	10.0	mg/kg wet	250		96.2	85-115	0.396	20	
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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager









# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

**BILL TO**

ANALYSIS REQUEST

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## **Appendix B**

### **Site Photos**



**Cross Border Resources  
Sunray State Tank Battery  
5-31-2017**



























**Cross Border Resources**  
**Sunray State Tank Battery**  
**11-9-17**







# **Appendix C**

## **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 Cross Border Resources	Contact Ross Pearson	
Address 2515 McKinney Avenue Suite 900	Telephone No. 214-871-0400 ext. 1019	
Facility Name Sunray State Battery	Facility Type Tank Battery	
Surface Owner New Mexico State Lands	Mineral Owner New Mexico State Lands	API No. 30-005-21036

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	16	8S	31E	1980'	North	1650'	West	Chaves

Latitude 33.6217 Longitude -103.7831

#### NATURE OF RELEASE

Type of Release Oil	Volume of Release Unknown	Volume Recovered None
Source of Release Tank Battery, Heater Treater	Date and Hour of Occurrence N/A	Date and Hour of Discovery 10/17/2014
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

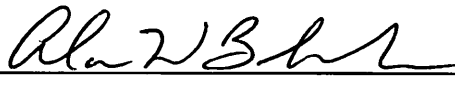
Describe Cause of Problem and Remedial Action Taken.\*

Rupture in the Heater-Treater Separator to the water tank. Line has been fixed. Spill area has been fenced in. Samples have been taken. Please find attached report from Hall Environmental.

Describe Area Affected and Cleanup Action Taken.\*

A 35' by 70' area has been affected with spilled oil. Plan to till contaminated soil with micro-blaze and water affected area until hydrocarbon levels get down to an acceptable level per NMOCD guidelines. Once soil reaches acceptable hydrocarbon levels, plan to seed the soil with native grasses.

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: Alan Barksdale	Approved by Environmental Specialist:		
Title: Chairman	Approval Date:	Expiration Date:	
E-mail Address: alan@redmountainresources.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 4/13/2015	Phone: 214-871-0400		

\* Attach Additional Sheets If Necessary