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1 RP-3381
NT01428828724

September 30, 2019

Mr. Bradford Billings
State of New Mexico Oil Conservation Division
1220 South St Francis Drive
Santa Fe, NM 87505

RE: 1 RP-3381 WBDU 211

Mr. Billings,

In compliance with 19.15.29.15(B) NMAC and the agreement submitted by Apache Corporation on November 8, 2018, Apache Corporation is submitting information related to closure for the release occurring September 2, 2014. Apache is respectfully submitting the closure report based on studies occurring in 2019 that demonstrate the site meeting the requirements of the agency. Unless further information is requested by NMOCD, Apache Corporation considers this release closed.

If there are any questions, please feel free to contact me by telephone at 432-818-1615 or by e-mail at David.Feather@ApacheCorp.com.

Sincerely,

David Feather
Environmental Supervisor
Apache Corporation - Permian Basin Region

Attachment: Closure Report Dated August 30, 2019

**1RP-3381
CLOSURE REPORT
WBDU 211
Brine Water Release
Lea County, New Mexico**

Latitude: N 32.49923°
Longitude: W 103.16370°

LAI Project No. 19-0112-50

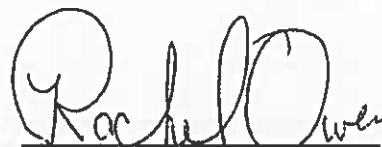
August 30, 2019

Prepared for:
Apache Corporation
2350 W. Marland Blvd
Hobbs, New Mexico 88240

Prepared by:
Larson & Associates, Inc.
507 North Marienfeld Street, Suite 205
Midland, Texas 79701



Mark J. Larson, P.G.
Certified Professional Geologist #10490



Rachel E. Owen
Sr. Geoscientist

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1.0 INTRODUCTION

Larson & Associates, Inc. (LAI) has prepared this closure report on behalf of Apache Corporation (Apache) for submittal to the New Mexico Oil Conservation (OCD) District I for a produced water release at the West Blinbry Drinkard Unit (WBDU) No. 211 located in Unit A (NE/4, NE/4), Section 9, Township 21 South, Range 37 East in Lea County, New Mexico. The geodetic position is North 32.49923° and West -103.16370°. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

1.1 Background

The release occurred on September 2, 2014, when a hydraulic fracturing tank overflowed with brine water. Approximately 25 barrels (bbls) of brine water were released and an unknown volume of fluid was recovered. The fluid was contained to the well pad. The saturated soil was hand dug and disposed of at a NMOCD approved facility. The initial C-141 was submitted on October 14, 2014 and assigned a remediation permit number of 1RP-3381.

1.2 Physical Setting

The physical setting is as follows:

- The surface elevation is approximately 3,478 feet above mean sea level (msl);
- The topography slopes gently towards the southeast;
- There are no surface water features within 1,000 feet of the Site;
- The soils are designated as "Berino-Cacique loamy find sands association, 0 to 3 percent slopes", consisting of 0 to 6 inches of loamy find sand underlain by 6 to 60 inches of sandy clay loam;
- The surface geology consists of Eolian and piedmont deposits (Holocene to middle Pleistocene) - interlayered eolian sands and piedmont-slope deposits;
- Groundwater occurs in the Ogallala formation at 75 feet below ground surface (bgs) based on the New Mexico Office of the State Engineer (NMOSE) website;
- According to the New Mexico Office of the State Engineer (OSE) website the nearest groundwater well is located in Unit L, Section 3, Township 21 South, Range 37 East, approximately 0.75 miles or about 3,966 feet south of the Site.

1.3 Remediation Levels

The following remediation standards are based on closure criteria for soils impacted by a release as presented in Table 1 of 19.15.29 NMAC:

- | | |
|------------|--------------|
| • Benzene | 10 mg/Kg |
| • BTEX | 50 mg/Kg |
| • TPH | 2,500 mg/Kg |
| • Chloride | 10,000 mg/Kg |

Further, 19.15.29.13 NMAC (Restoration, Reclamation and Re-Vegetation) requires the operator to restore the impacted surface area that existed prior to the release or their final land use.

2.0 DELINEATION

On August 5, 2019, Apache personnel used a shovel to collect soil samples at surface and 1 foot below ground surface (bgs). Ten sample locations were evenly spaced within the spill area and labelled SP1

through SP10. Samples were delivered to Cardinal Laboratories in Hobbs, New Mexico, and analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA SW-846 Method 8021B, total petroleum hydrocarbons (TPH), including gasoline range organics (C6-C12), diesel range organics (>C12-C28) and oil range organics (>C28-C35) by EPA SW-846 Method 8015M, and chloride by titration method SM4500CL-B. The laboratory reported BTEX, TPH, and chloride below the remediation action levels of 50 mg/Kg, 2,500 mg/Kg, and 10,000 mg/Kg, respectively. Figure 2 presents the soil sampling locations. Appendix B presents the laboratory report. Appendix C presents the site photographs.

3.0 CLOSURE

Confirmation soil sample concentrations are all below remediation action levels for BTEX, TPH, and chloride therefore, Apache respectfully requests closure for 1RP-3381.

Tables

Table 1
Delineation Soil Sample Analytical Data Summary
Apache Corporation, WBDU 211
Lea County, New Mexico
32.49923 North -103.16370 West

Page 1 of 2

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				10	50				2,500	10,000
SP-1	0	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	16
	1	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<16.0
SP-2	0	8/5/2019	In-Situ	<0.050	<0.30	<10.0	<10.0	<10.0	<10.0	<16.0
	1	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	176
SP-3	0	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32
	1	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32
SP-4	0	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	64
	1	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	80
SP-5	0	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	16
	1	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	16
SP-6	0	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	48
	1	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32
SP-7	0	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	1,010
	1	8/5/2019	In-Situ	<0.050	<0.300	<10.0	68.3	11.5	79.8	304
SP-8	0	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	16
	1	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32
SP-9	0	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	80

Table 1
Delineation Soil Sample Analytical Data Summary
Apache Corporation, WBDU 211
Lea County, New Mexico
32.49923 North -103.16370 West

Page 2 of 2

Sample	Depth (Feet)	Collection Date	Status	Benzene (mg/Kg)	BTEX (mg/Kg)	C6 - C12 (mg/Kg)	C12 - C28 (mg/Kg)	C28 - C35 (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
Remediation Level:				10	50				2,500	10,000
	1	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32
SP-10	0	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32
	1	8/5/2019	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	32

Notes: analysis performed by Cardinal Laboratories, Hobbs, New Mexico by EPA SW-846 Methods 8021B (BTEX), 8015M (TPH), and SM4500CL-B (chloride)

Depth in feet below ground surface (bgs)

mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)

<: denotes concentration less than analytical method reporting limit

Figures

Figure 1

2

Figure 2

10

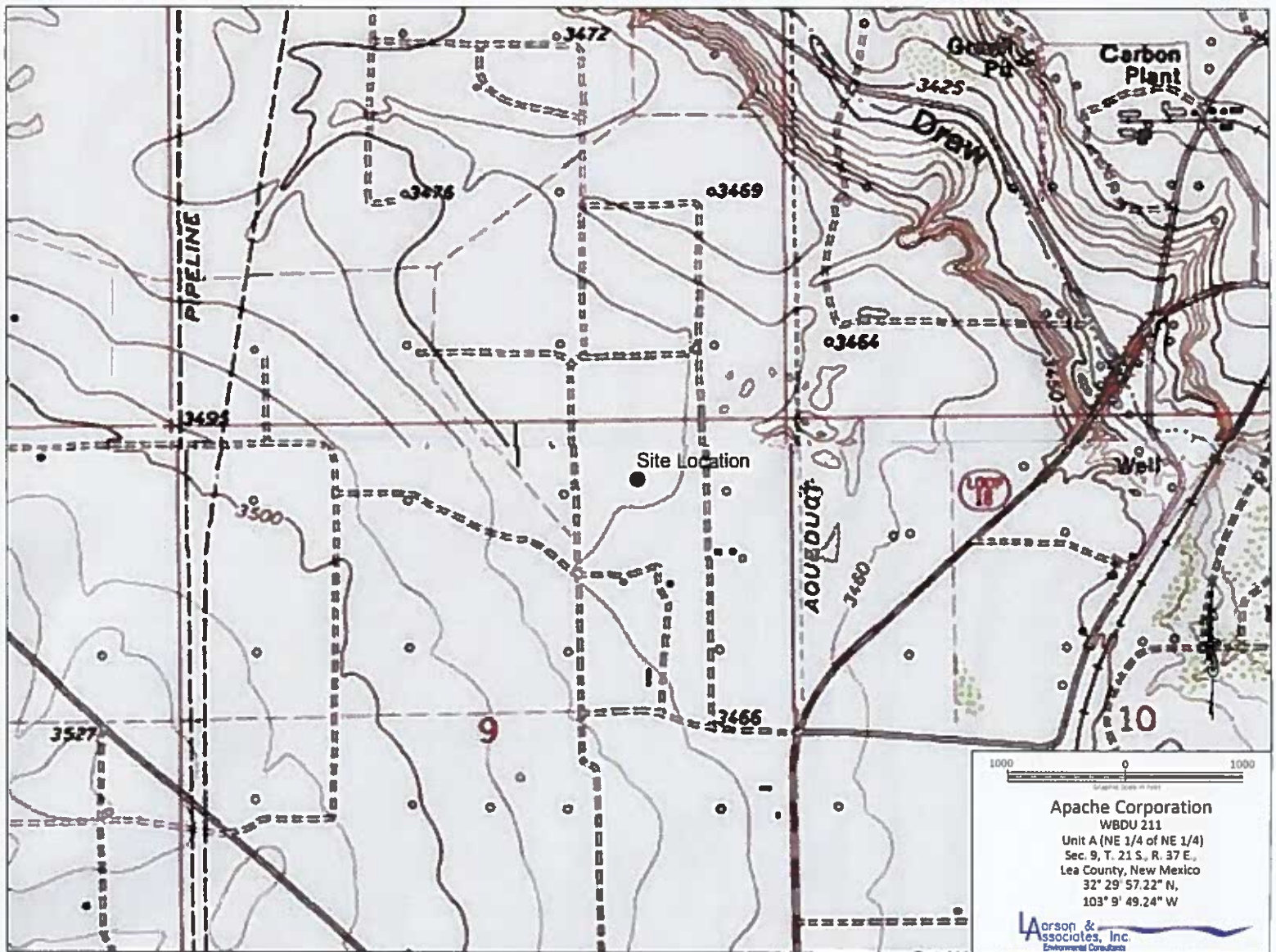


Figure 1 - Topographic Map



Figure 2 - Aerial Map

Appendix A
Initial C-141

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|

|
|

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Arizos 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

HOBBS OGD

OCT 14 2014

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

RECEIVED

Form C-141
Revised August 8, 2011

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Apache Corporation	Contact: Bruce Baker
Address: 2350 W Marland Blvd Hobbs, NM 88240	Telephone No. (432) 631-6982
Facility Name: WBDU 211	Facility Type: Oil Well

Surface Owner: Millard Deck Estates	Mineral Owner:	API No. 30-025-41875
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LOCATION OF RELEASE

Unit Letter A	Section 9	Township 21S	Range 37E	Feet from the 510'	North/South Line FNL	Feet from the 1310'	East/West Line FEL	County Lea
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Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release: brine water	Volume of Release: 25 Barrels of brine water	Volume Recovered: Unknown
Source of Release: Frac Tank	Date and Hour of Occurrence: 9/2/2014 at 8:00 a.m.	Date and Hour of Discovery: 9/2/2014 at 8:00 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Tomas Oberding (NMOCD)	
By Whom? Bruce Baker	Date and Hour: 9/3/2014 at 3:42 p.m. via email	
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.*

A contract transport driver was transferring fluid and overflowed the frac tank with brine water.

Describe Area Affected and Cleanup Action Taken.*

The release was contained to the lease pad. The wet was removed by shovel and disposed of at an NMOCD approved facility.

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.

OIL CONSERVATION DIVISION

Signature: <i>Bruce Baker</i>	Approved by Environmental Specialist:	
Printed Name: Bruce Baker	Approval Date: 10-14-14	Expiration Date: 12-14-14
Title: Environmental Technician	Conditions of Approval: <i>Site specific report Delivered & complete area as per NMOCD guide - Subrio Final C-141 by 12-14-14</i>	Attached <input type="checkbox"/> <i>12P-7381 09/10/873 N-10 1428828724 P-10 1428828921</i>
E-mail Address: larry.baker@apachecorp.com		
Date: 10/14/2014	Phone: (432) 631-6982	

* Attach Additional Sheets If Necessary

OCT 17 2014

Appendix B
Laboratory Reports

11/1/2019

11/1/2019

August 08, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: WBDU #211

Enclosed are the results of analyses for samples received by the laboratory on 08/05/19 14:27.

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/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	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,



Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

 Received: 08/05/2019
 Reported: 08/08/2019
 Project Name: WBDU #211
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/05/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 SURFACE (H902674-01)

BTEX 80218		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/07/2019	ND	1.95	97.3	2.00	4.45	
Toluene*	<0.050	0.050	08/07/2019	ND	1.95	97.5	2.00	2.91	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	2.07	104	2.00	7.85	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	6.43	107	6.00	8.88	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 105 % 73.3-129

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	08/08/2019	ND	416	104	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	08/06/2019	ND	210	105	200	0.746	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	202	101	200	1.51	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					


Surrogate: 1-Chlorooctane 93.5 % 41-142

Surrogate: 1-Chlorooctadecane 95.6 % 37.6-147

Cardinal Laboratories

* = Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

 Received: 08/05/2019
 Reported: 08/08/2019
 Project Name: WBDU #211
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/05/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 2 SURFACE (H902674-02)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/07/2019	ND	1.95	97.3	2.00	4.45	
Toluene*	<0.050	0.050	08/07/2019	ND	1.95	97.5	2.00	2.91	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	2.07	104	2.00	7.85	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	6.43	107	6.00	8.88	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 111 % 73.3-129

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	08/08/2019	ND	416	104	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	08/06/2019	ND	210	105	200	0.746	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	202	101	200	1.51	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					

Surrogate: 1-Chlorooctane 93.7 % 41-142

Surrogate: 1-Chlorooctadecane 95.8 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

 Received: 08/05/2019
 Reported: 08/08/2019
 Project Name: WBDU #211
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/05/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 3 SURFACE (H902674-03)
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	08/07/2019	ND	1.95	97.3	2.00	4.45	
Toluene*	<0.050	0.050	08/07/2019	ND	1.95	97.5	2.00	2.91	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	2.07	104	2.00	7.85	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	6.43	107	6.00	8.88	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 104 % 73.3-129

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/08/2019	ND	416	104	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	08/06/2019	ND	210	105	200	0.746	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	202	101	200	1.51	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					

Surrogate: 1-Chlorooctane 81.2 % 41-142

Surrogate: 1-Chlorooctadecane 82.7 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

APACHE CORP - HOBBS
BRUCE BAKER
2350 W. MARLAND BLVD.
HOBBS NM, 88240
Fax To: (575) 393-2432

Received: 08/05/2019
Reported: 08/08/2019
Project Name: WBDU #211
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 08/05/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 4 SURFACE (H902674-04)

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	08/07/2019	ND	1.95	97.3	2.00	4.45	
Toluene*	<0.050	0.050	08/07/2019	ND	1.95	97.5	2.00	2.91	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	2.07	104	2.00	7.85	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	6.43	107	6.00	8.88	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/08/2019	ND	416	104	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	08/06/2019	ND	210	105	200	0.746	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	202	101	200	1.51	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					

Surrogate: 1-Chlorooctane 89.2 % 41-142

Surrogate: 1-Chlorooctadecane 89.5 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

 Received: 08/05/2019
 Reported: 08/08/2019
 Project Name: WBDU #211
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/05/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 5 SURFACE (H902674-05)

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	08/07/2019	ND	1.95	97.3	2.00	4.45	
Toluene*	<0.050	0.050	08/07/2019	ND	1.95	97.5	2.00	2.91	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	2.07	104	2.00	7.85	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	6.43	107	6.00	8.88	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 73.3-129

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	08/08/2019	ND	416	104	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	08/06/2019	ND	210	105	200	0.746	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	202	101	200	1.51	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					

Surrogate: 1-Chlorooctane 81.7 % 41-142

Surrogate: 1-Chlorooctadecane 81.9 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

APACHE CORP - HOBBS
BRUCE BAKER
2350 W. MARLAND BLVD.
HOBBS NM, 88240
Fax To: (575) 393-2432

Received: 08/05/2019
Reported: 08/08/2019
Project Name: WBDU #211
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 08/05/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 6 SURFACE (H902674-06)
BTEX 80218

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/07/2019	ND	1.95	97.3	2.00	4.45	
Toluene*	<0.050	0.050	08/07/2019	ND	1.95	97.5	2.00	2.91	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	2.07	104	2.00	7.85	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	6.43	107	6.00	8.88	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 73.3-129

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/08/2019	ND	416	104	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	08/06/2019	ND	213	107	200	0.553	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	208	104	200	0.767	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					


Surrogate: 1-Chlorooctane 68.7 % 41-142

Surrogate: 1-Chlorooctadecane 66.3 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

 Received: 08/05/2019
 Reported: 08/08/2019
 Project Name: WBDU #211
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/05/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 7 SURFACE (H902674-07)
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	08/07/2019	ND	1.95	97.3	2.00	4.45	
Toluene*	<0.050	0.050	08/07/2019	ND	1.95	97.5	2.00	2.91	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	2.07	104	2.00	7.85	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	6.43	107	6.00	8.88	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 107 % 73.3-129

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1010	16.0	08/08/2019	ND	416	104	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	08/06/2019	ND	213	107	200	0.553	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	208	104	200	0.767	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					

Surrogate: 1-Chlorooctane 57.2 % 41-142

Surrogate: 1-Chlorooctadecane 53.0 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

 Received: 08/05/2019
 Reported: 08/08/2019
 Project Name: WBDU #211
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/05/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 8 SURFACE (H902674-08)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/07/2019	ND	1.95	97.3	2.00	4.45	
Toluene*	<0.050	0.050	08/07/2019	ND	1.95	97.5	2.00	2.91	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	2.07	104	2.00	7.85	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	6.43	107	6.00	8.88	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 104 % 73.3-129

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	08/08/2019	ND	416	104	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	08/06/2019	ND	213	107	200	0.553	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	208	104	200	0.767	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					

Surrogate: 1-Chlorooctane 68.2 % 41-142

Surrogate: 1-Chlorooctadecane 65.6 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

 Received: 08/05/2019
 Reported: 08/08/2019
 Project Name: WBDU #211
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/05/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 9 SURFACE (H902674-09)

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	08/07/2019	ND	1.95	97.3	2.00	4.45	
	Toluene*	<0.050	0.050	08/07/2019	ND	1.95	97.5	2.00	2.91	
	Ethylbenzene*	<0.050	0.050	08/07/2019	ND	2.07	104	2.00	7.85	
	Total Xylenes*	<0.150	0.150	08/07/2019	ND	6.43	107	6.00	8.88	
	Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 117 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/08/2019	ND	416	104	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	08/06/2019	ND	213	107	200	0.553	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	208	104	200	0.767	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					

Surrogate: 1-Chlorooctane 72.3 % 41-142

Surrogate: 1-Chlorooctadecane 70.1 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

APACHE CORP - HOBBS
BRUCE BAKER
2350 W. MARLAND BLVD.
HOBBS NM, 88240
Fax To: (575) 393-2432

Received: 08/05/2019
Reported: 08/08/2019
Project Name: WBDU #211
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 08/05/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 10 SURFACE (H902674-10)
BTEX 80218

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/07/2019	ND	1.95	97.3	2.00	4.45	
Toluene*	<0.050	0.050	08/07/2019	ND	1.95	97.5	2.00	2.91	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	2.07	104	2.00	7.85	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	6.43	107	6.00	8.88	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 73.3-129

Chloride, SM4500Cl-B

mg/kg

Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/08/2019	ND	416	104	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	08/06/2019	ND	213	107	200	0.553	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	208	104	200	0.767	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					

Surrogate: 1-Chlorooctane 61.9 % 41-142

Surrogate: 1-Chlorooctadecane 59.4 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

APACHE CORP - HOBBS
BRUCE BAKER
2350 W. MARLAND BLVD.
HOBBS NM, 88240
Fax To: (575) 393-2432

Received: 08/05/2019
Reported: 08/08/2019
Project Name: WBDU #211
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 08/05/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 7 @ 1' (H902674-11)

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	08/07/2019	ND	1.95	97.3	2.00	4.45	
Toluene*	<0.050	0.050	08/07/2019	ND	1.95	97.5	2.00	2.91	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	2.07	104	2.00	7.85	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	6.43	107	6.00	8.88	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 117 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	08/08/2019	ND	416	104	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	08/07/2019	ND	213	107	200	0.553	
DRO >C10-C28*	68.3	10.0	08/07/2019	ND	208	104	200	0.767	
EXT DRO >C28-C36	11.5	10.0	08/07/2019	ND					

Surrogate: 1-Chlorooctane 73.4 % 41-142

Surrogate: 1-Chlorooctadecane 65.6 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

 Received: 08/05/2019
 Reported: 08/08/2019
 Project Name: WBDU #211
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/05/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 1 @ 1' (H902674-12)

BTEX 80218			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/07/2019	ND	1.95	97.3	2.00	4.45		
Toluene*	<0.050	0.050	08/07/2019	ND	1.95	97.5	2.00	2.91		
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	2.07	104	2.00	7.85		
Total Xylenes*	<0.150	0.150	08/07/2019	ND	6.43	107	6.00	8.88		
Total BTEX	<0.300	0.300	08/07/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 113 % 73.3-129

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	08/08/2019	ND	416	104	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	08/06/2019	ND	213	107	200	0.553		
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	208	104	200	0.767		
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND						

Surrogate: 1-Chlorooctane 69.1 % 41-142

Surrogate: 1-Chlorooctadecane 66.4 % 37.6-147

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* = Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

APACHE CORP - HOBBS
BRUCE BAKER
2350 W. MARLAND BLVD.
HOBBS NM, 88240
Fax To: (575) 393-2432

Received: 08/05/2019
Reported: 08/08/2019
Project Name: WBDU #211
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 08/05/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 2 @ 1' (H902674-13)

BTEX 80218			mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/07/2019	ND	1.95	97.3	2.00	4.45		
Toluene*	<0.050	0.050	08/07/2019	ND	1.95	97.5	2.00	2.91		
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	2.07	104	2.00	7.85		
Total Xylenes*	<0.150	0.150	08/07/2019	ND	6.43	107	6.00	8.88		
Total BTEX	<0.300	0.300	08/07/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 118 % 73.3-129

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	08/08/2019	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	08/06/2019	ND	213	107	200	0.553		
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	208	104	200	0.767		
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND						

Surrogate: 1-Chlorooctane 69.9 % 41-142

Surrogate: 1-Chlorooctadecane 67.9 % 37.6-147

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*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

APACHE CORP - HOBBS
BRUCE BAKER
2350 W. MARLAND BLVD.
HOBBS NM, 88240
Fax To: (575) 393-2432

Received: 08/05/2019
Reported: 08/08/2019
Project Name: WBDU #211
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 08/05/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 3 @ 1' (H902674-14)

BTEX 80218		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/07/2019	ND	1.97	98.7	2.00	2.19	
Toluene*	<0.050	0.050	08/07/2019	ND	2.01	100	2.00	1.19	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	1.87	93.7	2.00	0.598	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	5.66	94.4	6.00	0.195	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 98.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/08/2019	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	08/06/2019	ND	213	107	200	0.553	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	208	104	200	0.767	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					

Surrogate: 1-Chlorooctane 67.4 % 41-142

Surrogate: 1-Chlorooctadecane 65.1 % 37.6-147

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*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

 Received: 08/05/2019
 Reported: 08/08/2019
 Project Name: WBDU #211
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/05/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 4 @ 1' (H902674-15)

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	08/07/2019	ND	1.97	98.7	2.00	2.19	
Toluene*	<0.050	0.050	08/07/2019	ND	2.01	100	2.00	1.19	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	1.87	93.7	2.00	0.598	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	5.66	94.4	6.00	0.195	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 99.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	08/08/2019	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	08/06/2019	ND	213	107	200	0.553	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	208	104	200	0.767	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					

Surrogate: 1-Chlorooctane 67.7 % 41-142

Surrogate: 1-Chlorooctadecane 63.5 % 37.6-147

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* = Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

 Received: 08/05/2019
 Reported: 08/08/2019
 Project Name: WBDU #211
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/05/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 5 @ 1' (H902674-16)

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	08/07/2019	ND	1.97	98.7	2.00	2.19	
Toluene*	<0.050	0.050	08/07/2019	ND	2.01	100	2.00	1.19	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	1.87	93.7	2.00	0.598	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	5.66	94.4	6.00	0.195	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 73.3-129

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	08/08/2019	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	08/06/2019	ND	213	107	200	0.553	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	208	104	200	0.767	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					

Surrogate: 1-Chlorooctane 67.3 % 41-142

Surrogate: 1-Chlorooctadecane 68.7 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

APACHE CORP - HOBBS
BRUCE BAKER
2350 W. MARLAND BLVD.
HOBBS NM, 88240
Fax To: (575) 393-2432

Received: 08/05/2019
Reported: 08/08/2019
Project Name: WBDU #211
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 08/05/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 6 @ 1' (H902674-17)

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	08/07/2019	ND	1.97	98.7	2.00	2.19		
Toluene*	<0.050	0.050	08/07/2019	ND	2.01	100	2.00	1.19		
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	1.87	93.7	2.00	0.598		
Total Xylenes*	<0.150	0.150	08/07/2019	ND	5.66	94.4	6.00	0.195		
Total BTEX	<0.300	0.300	08/07/2019	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 99.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/08/2019	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	08/06/2019	ND	213	107	200	0.553	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	208	104	200	0.767	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					


Surrogate: 1-Chlorooctane 70.3 % 41-142

Surrogate: 1-Chlorooctadecane 69.9 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

APACHE CORP - HOBBS
BRUCE BAKER
2350 W. MARLAND BLVD.
HOBBS NM, 88240
Fax To: (575) 393-2432

Received: 08/05/2019
Reported: 08/08/2019
Project Name: WBDU #211
Project Number: NONE GIVEN
Project Location: LEA COUNTY, NM

Sampling Date: 08/05/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP 8 @ 1' (H902674-18)

BTEX 80218		mg/kg	Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/07/2019	ND	1.97	98.7	2.00	2.19	
Toluene*	<0.050	0.050	08/07/2019	ND	2.01	100	2.00	1.19	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	1.87	93.7	2.00	0.598	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	5.66	94.4	6.00	0.195	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 99.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/08/2019	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	08/06/2019	ND	213	107	200	0.553	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	208	104	200	0.767	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					


Surrogate: 1-Chlorooctane 74.4 % 41-142

Surrogate: 1-Chlorooctadecane 73.0 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

 Received: 08/05/2019
 Reported: 08/08/2019
 Project Name: WBDU #211
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/05/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 9 @ 1' (H902674-19)

BTEX 80218			mg/kg						
			Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/07/2019	ND	1.97	98.7	2.00	2.19	
Toluene*	<0.050	0.050	08/07/2019	ND	2.01	100	2.00	1.19	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	1.87	93.7	2.00	0.598	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	5.66	94.4	6.00	0.195	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 99.7 % 73.3-129

Chloride, SM4500Cl-B			mg/kg						
			Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/08/2019	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	08/06/2019	ND	213	107	200	0.553	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	208	104	200	0.767	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					


Surrogate: 1-Chlorooctane 73.0 % 41-142

Surrogate: 1-Chlorooctadecane 71.6 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 APACHE CORP - HOBBS
 BRUCE BAKER
 2350 W. MARLAND BLVD.
 HOBBS NM, 88240
 Fax To: (575) 393-2432

 Received: 08/05/2019
 Reported: 08/08/2019
 Project Name: WBDU #211
 Project Number: NONE GIVEN
 Project Location: LEA COUNTY, NM

 Sampling Date: 08/05/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: SP 10 @ 1' (H902674-20)

BTEX 80218			mg/kg		Analyzed By: ms				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/07/2019	ND	1.97	98.7	2.00	2.19	
Toluene*	<0.050	0.050	08/07/2019	ND	2.01	100	2.00	1.19	
Ethylbenzene*	<0.050	0.050	08/07/2019	ND	1.87	93.7	2.00	0.598	
Total Xylenes*	<0.150	0.150	08/07/2019	ND	5.66	94.4	6.00	0.195	
Total BTEX	<0.300	0.300	08/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 99.6 % 73.3-129

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	08/08/2019	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	08/06/2019	ND	213	107	200	0.553	
DRO >C10-C28*	<10.0	10.0	08/06/2019	ND	208	104	200	0.767	
EXT DRO >C28-C36	<10.0	10.0	08/06/2019	ND					

Surrogate: 1-Chlorooctane 75.4 % 41-142

Surrogate: 1-Chlorooctadecane 75.0 % 37.6-147

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

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

[illegible]

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

Company Name: APACHE		BILL TO		ANALYSIS REQUEST	
Project Manager: Self Brown		P.O. #:			
Address:		Company:			
City: Hobbs		State: NM		Zip: 88240	
Phone #:		Fax #:			
Project #:		Project Owner:			
Project Name:		City:			
Project Location: WSDA #211		State:		Zip:	
Sampler Name: See Quade		Phone #:			
FOR LAB USE ONLY		Fax #:			

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	CI	BTEX	EXT TPH
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE					
149026M	SD 4 Surface Q1'	G1	1								8/5	11:36	1		
58 11	SD 1 Q1'														
12	SD 1 Q1'														
13	SD 2 Q1'														
14	SD 3 Q1'														
15	SD 4 Q1'														
16	SD 5 Q1'														
17	SD 6 Q1'														
18	SD 7 Q1'														
19	SD 8 Q1'														
20	SD 9 Q1'														
	SD 10 Q1'														
	SD 11 Q1'														
	SD 12 Q1'														
	SD 13 Q1'														
	SD 14 Q1'														
	SD 15 Q1'														
	SD 16 Q1'														
	SD 17 Q1'														
	SD 18 Q1'														
	SD 19 Q1'														
	SD 20 Q1'														

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Relinquished By: See Quade	Date: 8/5	Received By: Samira Alamy
Relinquished By:	Date:	Received By:
Delivered By: (Circle One) Q.3c	#97	Sample Condition
Sampler - UPS - Bus - Other:	Counted 0.78	Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		Checked BY: (Initials) Yes

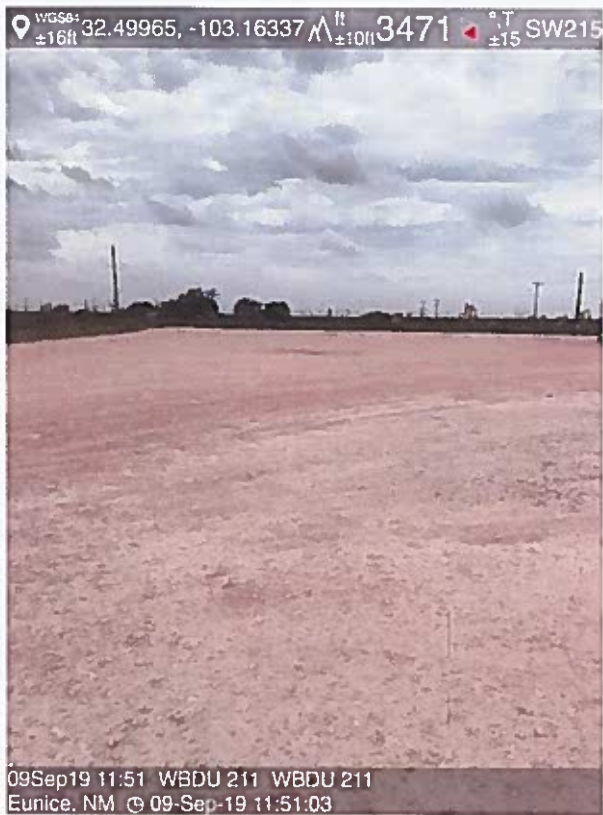
Phone Result: ☐ Yes ☐ No Add'l Phone #: _____
Fax Result: ☐ Yes ☐ No Add'l Fax #: _____

REMARKS: **Email Results**

Appendix C
Photographs







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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party Apache Corporation	OGRID 873
Contact Name Bruce Baker	Contact Telephone 432-631-6982
Contact email Larry.Baker@apachecorp.com	Incident # (assigned by OCD) IRP-3381
Contact mailing address 2350 West Marland Blvd. Hobbs, New Mexico 88240	

Location of Release Source

Latitude 32.49923° N

Longitude -103.16370° W

(NAD 83 in decimal degrees to 5 decimal places)

Site Name WBDU 211	Site Type Oil Well
Date Release Discovered 9/2/2014	API# (if applicable) 30-025-41875

Unit Letter	Section	Township	Range	County
A	9	21S	37E	Lea

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (Name: Millard Deck Estates)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input checked="" type="checkbox"/> Other (describe)	Volume/Weight Released (provide units) 25 bbls of brine water	Volume/Weight Recovered (provide units) unknown volume of brine water

Cause of Release

A hydraulic fracturing tank overflowed with brine water.

State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? The release volume was 25 bbls of fluid.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notice was given to Tomas Oberding by Bruce Baker via email on 9/3/2014.	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.	
Printed Name: <u>Bruce Baker</u>	Title: <u>Sr. Environmental Tech</u>
Signature: <u>Bruce Baker</u>	Date: <u>8/30/2019</u>
email: <u>Larry.Baker@apachecorp.com</u>	Telephone: <u>432-631-6982</u>
OCD Only Received by: _____ Date: _____	

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Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>75</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

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Printed Name: Bruce BakerTitle: Sr. Environmental TechSignature: Bruce BakerDate: 8/30/2019email: Larry.Baker@apachecorp.comTelephone: 432-631-6982**OCD Only**

Received by: _____

Date: _____

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Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Bruce Baker Title: Sr. Environmental Tech
Signature: Bruce Baker Date: 8/30/2019
email: Larry.Baker@apachecorp.com Telephone: 432-631-6982

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Bradford Billings Date: 05/22/2020
Printed Name: Bradford Billings Title: E. Spec. A

NOTE: Significant sampling on pad will be needed as per Section 13 of Rule 29 at time of P&A.