



1 RP-3381 NTO1428828724

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

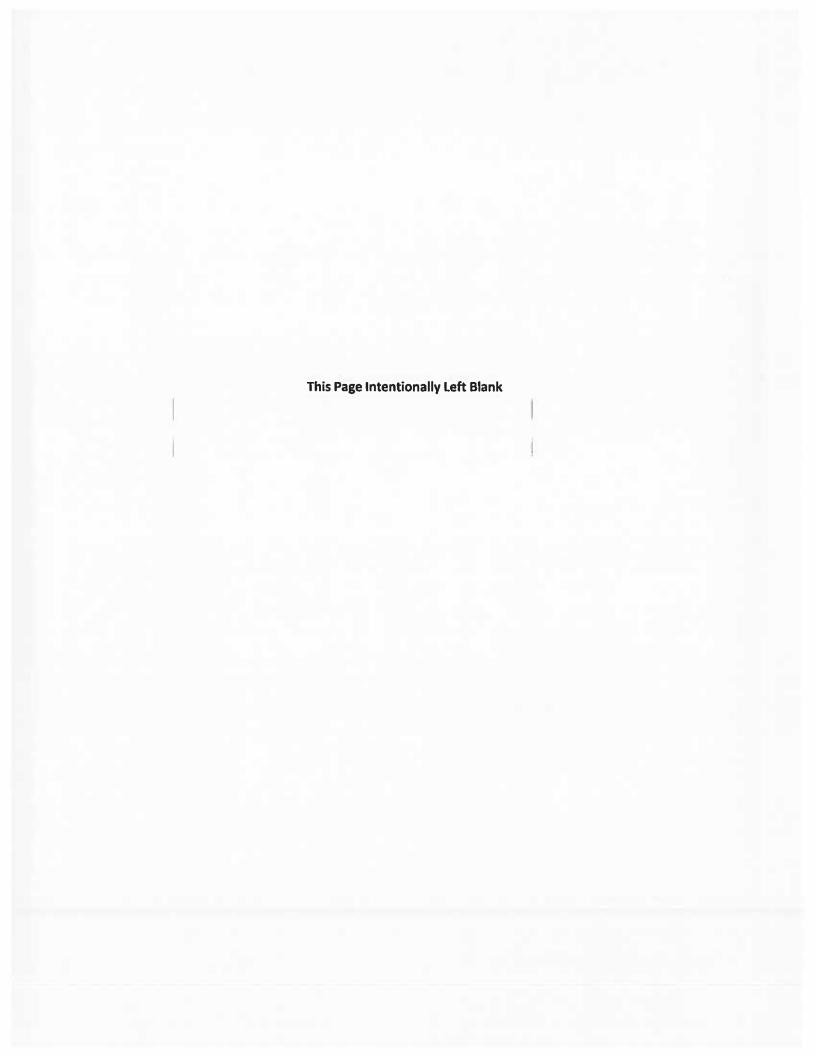


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1.0 INTRODUCTION

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 Blinebry 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) interlayed 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

1RP-3381 Closure Report WBDU 211 August 30, 2019

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.



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
т.	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 8/5/2019	In-Situ In-Situ	<0.050 <0.050	<0.300 <0.300	<10.0 <10.0	<10.0 <10.0	<10.0 <10.0	<10.0 <10.0	32 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

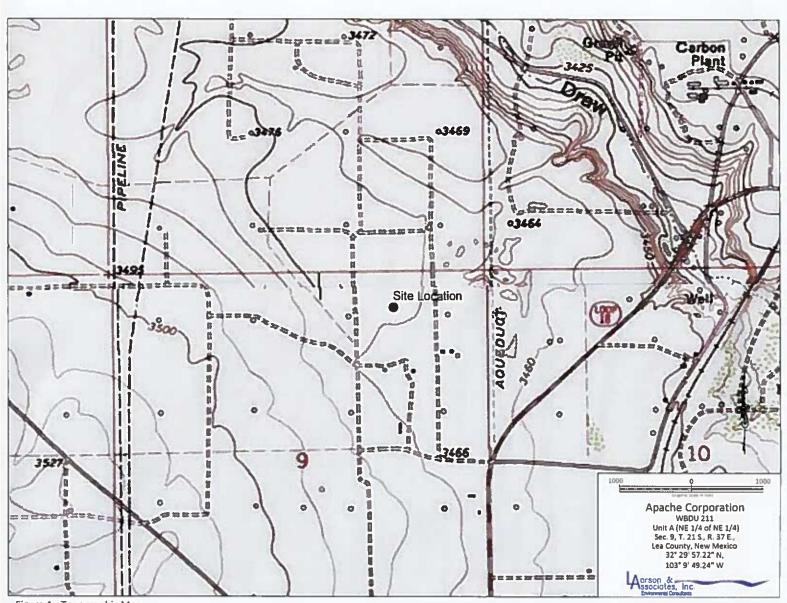


Figure 1 - Topographic Map

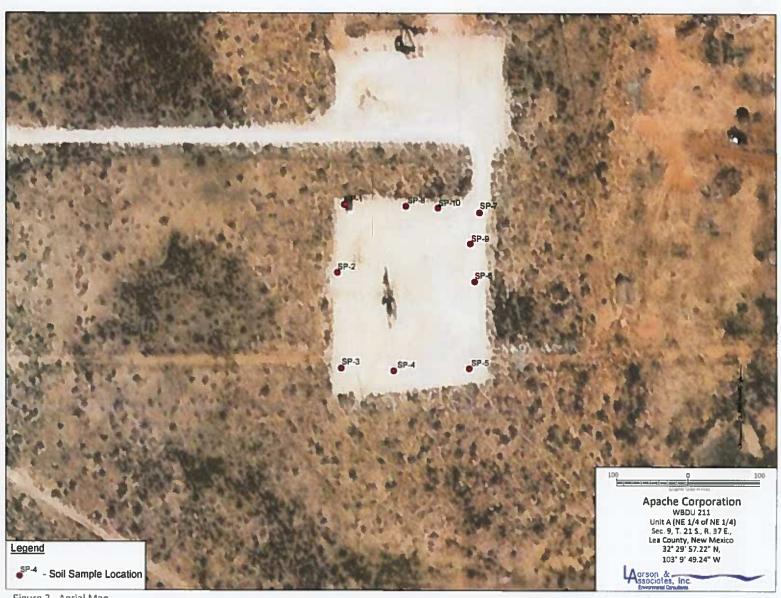


Figure 2 - Aerial Map

Appendix A

Initial C-141

HARBES-GED

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

DOCT 11 4 2014

Form C-141 Revised August 8, 2011

Oil Conservation Division
1220 South St. Francis Dr.

DECET

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

RECEIVED

			Rele	ease Notific	•	and Co		ction		4		
	16				******	OPERA'		CHUI		al Report		Final Report
Name of Co	ompany: A	Apache Corp	oration			Contact Br						
Address: 2	350 W Ma	rland Blvd I		M 88240			No. (432) 631-0	5982				
Facility Na	ne WBD	U 21!				Facility Typ	e: Oil Well					
Surface Ow	ner Milla	rd Deck Esta	tes	Mineral O	wner				API No	. 30-025-4	1875	
				LOCA	TIOI	OF RE	LEASE					
Unit Letter A	Section 9	Township 21S	Range 37E	Feet from the 510'	North FNL	South Line	Feet from the 1310'	East/1	West Line	County Lea	_	
			La	titude		_ Longitud	e					
				NAT	URE	OF REL				8tS		
Type of Rele	ase: brine t	water				Volume of brine water	Release 25 Barre	ls of	Volume I	Recovered (Jnknov	ทา
Source of Re	lease: Frac	Tank				Date and F 9/2/2014 a	our of Occurrent	ce		Hour of Dis		
Was Immedi	nte Notice (, [If YES, To	Whom?		31212014	at 6,00 a.m.		
D 110 0	D D 1		Yes _	No Not Re	quired	1	erding (NMOCD)					
Was a Water	By Whom? Bruce Baker Was a Watercourse Reached?						our 9/3/2014 at					-
With a William	LOWISC RCRE		Yes 🗵	No		11 1150, 40	umie mpacinig	ilic wai	CICUMISC,			
A contract tra	ansport driv a Affected a vas containe	and Cleanup A	rring fluid action Tak pad, The	and overflowed the	by show	vel and dispo	sed of at an NMO				OCD n	ulos and
regulations al public health should their o	I operators or the envir perations h nment. In a	are required to conment. The ave failed to a ddition, NMO	report an acceptanc dequately CD accep	d/or file certain re e of a C-141 repor investigate and re tance of a C-141 n	lease no n by the mediak	otifications as NMOCD m contaminati	nd perform correct arked as "Final R on that pose a thr	ctive net eport" c ent to g	ions for rel loes not rel round wate	eases which ieve the ope r, surface wa	may er rator of iter, hu	danger liability man health
	1	0	,				OIL CON	SER V	<u>MOITA</u>	DIVISIO	N	
Signature: Bruce Pouler						-		7				
Printed Name	: Bruce Ba	ker				Approved by	Environmental S	pecialis	t;			
Title: Enviro	nmental Te	chnician				Approval Dat	e: (0-14-1	4	Expiration	Date: /2-	14-19	,
E-mail Addre	ss: larry.ba	ker@apachee	orp.com_			Conditions of	Approval:			Attached	П	
Date: 10/14/				ie: (432) 631-698	2	Deline	Stratute	مرم ح	a se	12		381 - 873
Attach Addit	ional Shee	ts If Necessi	ігу			full full	5,7e5-pl 18, molute 1000 gm 6-141 mg	Mee. 12-14	Subio	N-1		873 8828724

Appendix B

Laboratory Reports



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 accredited certif.html.

Cardinal Laboratories is accreditated 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.

Whe South

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



APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. **HOBBS NM, 88240**

Fax To:

(575) 393-2432

Received:

08/05/2019

Reported: Project Name: 08/08/2019 WBDU #211 NONE GIVEN

Project Number: 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 8021B	mg/	kg	Analyze	d 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 (PIL	105	% 73.3-12	9						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/08/2019	ND	416	104	400	0.00	
TPH 8015M	mg/	/kg	Analyze	d 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		100			3310		
Surrogate 1-Chlorooctadecane	95.6	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

PLEASE MOTE: Liabetry and Damages. Cardnel's Rebitry and chem's exclusive remady for any claim arising, whether based in contract or tort, shall be leveted to the amount paid by clear for analyses. All claims, including those for negligence and any other cause whitesoever shall be deemed waved unless made in writing and received by Cardnel within thirty (30) days after completion of the applicable service. In no event shall Cardnel be labele for incidental or consequential damages, including, welfour, imitation, business entermybons, loss of use, or loss of profits incurred by claim, as approached in the performance of the services hereunder by Cardnel, regardless of whether such claims is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardnel Libourstones.

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

Fax To:

Received:

08/05/2019

Reported: Project Name:

08/08/2019 WBDU #211 **NONE GIVEN**

Project Number: Project Location:

LEA COUNTY, NM

Sampling Date:

08/05/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: SP 2 SURFACE (H902674-02)

BTEX 8021B	mg/	kg	Analyze	d 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 (PIL	111 9	6 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d 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	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	B5	% 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		1505	97772				- PARTIE
Surrogate: 1-Chlorooctadecane	95.8	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

PLEASE MOTE: Liability and Demages. Cardinal's liability and cleants exclusive network for any clear ansing, whether based in contract or tort, shall be limited to the amount paid by cleant for analyses. All claims, including those for negligence and any other cause whitesoner shall be deemed waived unless made in writing and incoved by Cardinal within thirty (36) days after completion of the applicable service. In no event shall Cardinal be labele for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of use, or loss of use, or loss of prefits incurred by cleant, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise, Results ristee only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

whe South



APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received: Reported: 08/05/2019 08/08/2019

Project Name: Project Number:

Project Location:

WBDU #211 NONE GIVEN LEA COUNTY, NM Sampling Date:

Sampling Type:

Sampling Condition: Sample Received By: 08/05/2019 Soil

Cool & Intact Tamara Oldaker

Sample ID: SP 3 SURFACE (H902674-03)

BTEX 8021B	mg,	/kg	Analyze	d 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 Chloride, SM4500Cl-B	104 % 73.3-1. 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 8y: 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	NĐ	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

PLEASE NOTE: Usefully and Damages. Cardinal's liability and client's exclusive remody for any claim arrang, whether based in contract or tort, shall be limited to the amount paid by cleint for analyses. All claims, including those for negligence and any other cause whitesoners that the deemed weived unless made in writing and received by Cardinal within their y(30) days after completion of the applicable service. In no event shall Cardinal be Bable for Incidential Cardinal be Bable for Incidential Cardinal by Cardinal arranges, limitation, white the samples in the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated measons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laborations.

unde Smel



APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received:

08/05/2019 08/08/2019 WBDU #211 Sampling Date: Sampling Type: 08/05/2019

Reported: Project Name:

DTEV OASID

NONE GIVEN

Sampling Condition:

Soil Cool & Intact

Project Number: Project Location:

LEA COUNTY, NM

Sample Received By:

Tamara Oldaker

Sample ID: SP 4 SURFACE (H902674-04)

BTEX 80218	mg,	/kg	Analyze	d 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 (PIL	106	% 73,3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d 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	Analyze	d 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	% 37.6-14	7						

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muse Sugar



APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received: Reported: 08/05/2019 08/08/2019

Project Name: Project Number: Project Location: WBDU #211 NONE GIVEN 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 80218	mg/	kg	Analyze	d 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	106	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d 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	Analyze	d 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				00.100	1134-3		
Surrogate: 1-Chlorooctadecane	81.9	% 37.6-14	7						

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Fax To:

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Received:

08/05/2019 08/08/2019

Reported: Project Name:

WBDU #211 NONE GIVEN

Project Number: Project Location:

LEA COUNTY, NM

Sampling Date:

Sampling Type:

08/05/2019 Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: SP 6 SURFACE (H902674-06)

BTEX 80218	mg/l	(g	Analyze	d 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	NĐ					
Surrogate: 4-Bromofluorobenzene (PIE	106 %	73.3-12	9						
Chloride, SM4500CI-B	mg/l	(g	Analyze	d 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/l	(g	Analyze	d 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	МĐ	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 %	6 41-142	11111	100.0	0.02				
Surrogate: 1-Chlorooctadecane	66.3 %	37,6-14	7						

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Fax To:

(575) 393-2432

Received:

08/05/2019 08/08/2019 **WBDU #211** Sampling Date: Sampling Type: 08/05/2019 Soil

Reported: Project Name:

NONE GIVEN

Sampling Condition:

Cool & Intact

Project Number: Project Location:

LEA COUNTY, NM

Sample Received By:

Tamara Oldaker

Sample ID: SP 7 SURFACE (H902674-07)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	B\$	% 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	% 73.3-12	9						
Chloride, SM4500CI-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	Analyze	d 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	2.44						
Surrogate: 1-Chlorooctadecane	53.0	% 37.6-14	7						

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APACHE CORP - HOBBS **BRUCE BAKER** 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received: Reported: 08/05/2019

08/08/2019

Project Name: Project Number: WBDU #211 NONE GIVEN

Project Location:

LEA COUNTY, NM

Sampling Date:

08/05/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: SP 8 SURFACE (H902674-08)

BTEX 8021B	mg/l	kg	Analyze	d 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 (PIL	104 %	6 73.3-12	9						
Chloride, SM4500CI-B	mg/l	kg	Analyze	d 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/l	kg	Analyze	d 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 %	6 41-142	?						
Surrogate: 1-Chlorooctadecane	65.6 %	6 37.6-14	7						

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Received: Reported: 08/05/2019 08/08/2019

Project Name: Project Number:

Project Location:

WBDU #211 NONE GIVEN LEA COUNTY, NM Sampling Date:

08/05/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

Sample ID: SP 9 SURFACE (H902674-09)

BTEX 8021B	mg,	/kg	Analyze	d 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 (PIL	117	% 73.3-12	9						
Chloride, SM4500CI-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	Analyze	d 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	% 37.6-14	7						

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Received:

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Reported:

08/08/2019

Project Name: Project Number: WBDU #211 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 8021B	mg/	kg	Analyze	d 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 (PIL	106	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d 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	Analyze	d 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				1810			
Surrogate: 1-Chlorooctadecane	59.4	% 37.6-14	7						

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APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

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Received:

08/05/2019

Reported:

08/08/2019

Project Name: Project Number: WBDU #211 NONE GIVEN

Project Location:

LEA COUNTY, NM

Sampling Date:

pling bate:

08/05/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

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

BTEX 8021B	mg/	kg	Analyze	d 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 (PIL	117 9	6 73.3-12	9						
Chloride, SM4500CI-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	Analyze	d 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 9	% 41-142	?						
Surrogate: 1-Chlorooctadecane	65.65	% 37.6-14	7						

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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: Project Number: WBDU #211 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 8021B	mg/	kg	Analyze	d 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 (PIL	113 9	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d 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	Analyze	d 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	?	- 210					
Surrogate: 1-Chlorooctadecane	66.4	% 37.6-14	7						

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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: Project Number: WBDU #211 NONE GIVEN

Project Location:

LEA COUNTY, NM

Sampling Date:

08/05/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

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

BTEX 8021B	mg/	kg	Analyze	d By: MS		la la			
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 (PIL	118	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	/kg	Analyze	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	Analyze	d 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	% 41-14:	?		22.000			20.00	
Surrogate 1-Chlorooctadecane	67.9	% 37.6-14	17						

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muse South



APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received: Reported: 08/05/2019 08/08/2019

Project Name: Project Number: Project Location: WBDU #211 NONE GIVEN 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 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
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	98.0	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d 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	Analyze	d 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: I-Chlorooctane	67.4	% 41-142	2	1,5000			Digital Control		
Surrogate: 1-Chlorooctadecane	65.1	% 37.6-14	7						

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APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received: Reported: 08/05/2019 08/08/2019

Project Name: Project Number: WBDU #211 NONE GIVEN

Project Location:

LEA COUNTY, NM

Sampling Date:

08/05/2019 Soil

Sampling Type: Sampling Condition:

Sample Received By:

Cool & Intact

Tamara Oldaker

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

BTEX 80218	mg/	kg	Analyze	d 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	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d 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	Analyze	d 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	?					A	10.00
Surrogate 1-Chlorooctadecane	63.5	% 37.6-14	7						

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APACHE CORP - HOBBS **BRUCE BAKER** 2350 W. MARLAND BLVD. **HOBBS NM, 88240**

Fax To:

(575) 393-2432

Received:

08/05/2019

Reported: Project Name: 08/08/2019 WBDU #211

Project Number:

NONE GIVEN

Project Location:

LEA COUNTY, NM

Sampling Date:

08/05/2019

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Tamara Oldaker

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

BTEX 8021B	mg/	kg	Analyze	d 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 STEX	<0.300	0.300	08/07/2019	ND					
Surrogate: 4-Bromofluorobenzene (PIC	101	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	kg	Analyze	d 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	Analyze	d 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	?				TTI-		
Surrogate: 1-Chlorooctadecane	68.7	% 37.6-14	7						

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APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. **HOBBS NM, 88240**

Fax To:

(575) 393-2432

Received:

08/05/2019 08/08/2019 Sampling Date: Sampling Type: 08/05/2019

Reported:

WBDU #211

Sampling Condition:

Soil Cool & Intact

Project Name: Project Number: Project Location:

NONE GIVEN LEA COUNTY, NM

Sample Received By:

Tamara Oldaker

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

BTEX 8021B	mg,	/kg	Analyze	d 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 (PIL	99.3	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d 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	Analyze	d By: MS					
Analyte	Result	Reporting Umit	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		37.10		-0			
Surrogate: 1-Chlorooctadecane	69.9	% 37.6-14	7						

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APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. **HOBBS NM, 88240**

Fax To:

(575) 393-2432

Received: Reported: 08/05/2019 08/08/2019

Project Name:

WBDU #211 NONE GIVEN

Project Number: 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	Analyze	d 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 (PIL	99.9	% 73.3-12	9						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d 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	Analyze	d 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				- 200		12.00	
Surrogate: 1-Chlorooctadecane	73.0	% 37.6-14	7						

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

Page 19 of 24



APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. **HOBBS NM, 88240**

Fax To:

(575) 393-2432

Received: Reported: 08/05/2019 08/08/2019 WBDU #211

Project Name: Project Number: Project Location:

NONE GIVEN LEA COUNTY, NM Sampling Date:

08/05/2019 Soil

Sampling Type: Sampling Condition:

Cool & Intact

Sample Received By: Tamara Oldaker

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

BTEX 8021B	mg/	kg	Analyze	d 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	% 73.3-12	9						
Chloride, SM4500CI-B	mg/	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	Analyze	d 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	- 2 1/3	7.7					
Surrogate: 1-Chlorooctadecane	71.6	% 37.6-14	7						

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APACHE CORP - HOBBS BRUCE BAKER 2350 W. MARLAND BLVD. HOBBS NM, 88240

Fax To:

(575) 393-2432

Received: Reported: 08/05/2019 08/08/2019

Project Name:

BTEV 00340

WBDU #211 NONE GIVEN

Project Number: 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 8021B	mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	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 (PIL	99.6%	á 73.3-12	9						
Chloride, SM4500CI-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 %	6 41-142			- 7023				
Surrogate: 1-Chlorooctadecane	75.0 %	6 37.6-14	7						

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*=Accredited Analyte

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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 SM4500CI-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



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: See 1-10-1-10	An object on the control of the cont	911110	ANALYSIS REQUEST
Project Manager: College College	P.O. #:		
	Сотрапу:	iny:	
city: Hobbs State: UII	1) Zip: 88240 Attn:		
Phone #: Fax #:	Address:	15	
Project #: Project Owner:			
ame:		Zip:	
Project Location:	Phone #:		
Sampler Name:), Choose Por	Fax #:		
	MATRIX	PRESERV. SAMPLING	y
	ERS ATER		TPN 'X
Lab I.D. Sample I.D.	JOGE HER : ID/BASE:	HER:	I/ BIE
1 501 5:00		\rightarrow	
	1 3	06:1(>1 8	
		17:24	4
SPS Surface		11:26	
5		1:22	
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		11:28:11	
& Sex Suthance		11.32	
20 /0 SP TO 100 Sulter	\$\cdot\	8/25/1:30	//-
ger se	l'i to any dant mening wayther issaed in contract or lent, shall be lamited to the amend and by the cleent to me all be deermed web-ed univers mode in webing and received by Contrals within 20 days after comprison of the applicable shalling without illustration, business infampations, journ of tea, or loss of profits incurred by cleent, its autocidations,	be limited to the ameunt paid by the clent Cardinel within 30 days after completion o r loss of profits incurred by clent, its subsi	dar me da
Relinguished By:	Received By:	Phone Result:	RESET D Yes □ No Add'I Phone #:
Mul Suyed Time: H: 27	Received By	REMARKS:	C N
			Email B
Delivered By: (Circle One) 8,3	#97 Sample Condition Cool Intact	CHECKED BY: (Initials)	men i well !
Sampler - UPS - Bus - Other: Postatel 0.7	No No Y	9	



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Monche	1	BILL TO		ANALYSIS RE	RECHEST
Project Manager:	Sep Broom	P.O. #:	- 1			
Address:		Com	Company:			
City: Hobbs		State: 1/2 Zip: 88 & 40 Attn:				
Phone #:	Fax #:		ess:			
Project #:	Project Owner:	ner: City:				
Project Name:		State:	c Zip:			
Project Location:	Wash noom	Phone #:	e #:			
Sampler Name:	Soc duero	Fax #:				
FOR LAB USE DALY	Contract of the Contract of th	MATRIX	PRESERV SAMPLING		4	
Lab I.D.	Sample I.D.	AB OR (C)OMP. NTAINERS JNDWATER FEWATER GE R: BASE:	R:	TEX	TP	
11 BC.	SOM Sulfame al		-1	1.32.11		
12	(P)	1	-	1 803		
iii	10 CM			0.5:2)		
19 6	10 20			25		
15	DW1			13 54		
160	や中への一			17.56		
17 5	DA 6 0 1			05.72		
18 #	O# 5 (6)			8 14		
19 6	O W O O O	1		402		
20 5			28.9	1404		
PLEASE NOTE: Leading and Damage analyses. All chims including those to	PLEASE HOTE; Loabily and Damages, Carchel's leadily and clant's exclusive namery for any claim artishy whether based in contract or lent, shall be firmed to the arrivant paid by the cleent but in a saveyase. All claims including those for registeries and any other cause whatsower shall be deemed waived unless made in writing and received by Carcinst within 30 days after completion of the applicable	s. Cardhal's leadily and client's exclusive remany for any claim entang whether based in contract or lent, ahall be finned to the enfound paid by the cleant for the resistance and any other cause whatsower shall be deemed waived unless made in writing and received by Cardinal within 30 days plant completion of the e	all be limited to the amount paid by Cardinal within 30 days jafler	by the client for the applicable		
service. In no event shell Card	service. In no event shell Cardinal be liable for incidental or consequental darmosts, including service lim	direction between intermedians has of the	or been of combin increased by of	Section of the Sectio		

Revoquished By:

Time: (27

Received By:

Received

Phone Result: Fax Result: REMARKS:

☐ Yes ☐ No Add'i Phone #:

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

0.30

Sample Condition
Cool Intact
Ces Tes

CHECKED BY: (Initials)

Email Results

Time:

Relinquished By:

Appendix C

Photographs











District 1
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 Apacl	ne Corporation		OGRID 8	73
Contact Nam	ne Bruce Ba	ıker		Contact Te	elephone 432-631-6982
Contact emai	il Larry.Bak	er@apachecorp.co	m	Incident #	(assigned by OCD) 1RP-3381
Contact mail	ing address	2350 West Marlane	d Blvd. Hobbs, No	ew Mexico 88240	
Latitude 32.4	19923° N			of Release So Longitude _ imal degrees to 5 decin	-103.16370° W
Site Name W	BDU 211			Site Type	Oil Well
Date Release	Discovered	9/2/2014		API# (if app	olicable) 30-025-41875
Unit Letter	Section	Township	Range	Cour	ntv
A				Lea	
Crude Oi		Volume Released	that apply and attach	Volume of l	volume Recovered (bbls)
Produced Water Volume Released (bbls) Is the concentration of total dissolved solids (TDS)			on of total dissolv		Volume Recovered (bbls) Yes No
in the produced water >10,000 mg/l? Condensate Volume Released (bbls)				117	Volume Recovered (bbls)
☐ Natural G					Volume Recovered (Mcf)
▼ Other (describe) Volume/Weight Released (provide units) 25 bbls of brine water				units)	Volume/Weight Recovered (provide units) unknown volume of brine water
Cause of Rel	ease				
A hydraulic f	fracturing tar	nk overflowed with	brine water.		

State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major	If YES, for what reason(s) does the response	onsible party consider this a major release?
release as defined by 19.15.29.7(A) NMAC?	The release volume was 25 bbls o	f fluid.
X Yes □ No		
		whom? When and by what means (phone, email, etc)?
Notice was given to	Tomas Oberding by Bruce Baker vi	a emial on 9/3/2014.
	Initial F	Response
The responsible	party must undertake the following actions immediat	ely unless they could create a safety hazard that would result in injury
X The source of the rel	ease has been stopped.	
	as been secured to protect human health an	d the environment.
Released materials h	ave been contained via the use of berms or	dikes, absorbent pads, or other containment devices.
X All free liquids and r	ecoverable materials have been removed a	nd managed appropriately.
If all the actions describe	d above have <u>not</u> been undertaken, explain	why:
has begun, please attach	a narrative of actions to date. If remedia	remediation immediately after discovery of a release. If remediation lefforts have been successfully completed or if the release occurred please attach all information needed for closure evaluation.
regulations all operators are public health or the environ failed to adequately investig	required to report and/or file certain release no ment. The acceptance of a C-141 report by the gate and remediate contamination that pose a th	e best of my knowledge and understand that pursuant to OCD rules and tifications and perform corrective actions for releases which may endanger OCD does not relieve the operator of liability should their operations have reat to groundwater, surface water, human health or the environment. In f responsibility for compliance with any other federal, state, or local laws
Printed Name: Bruce Ba	ker	Title: Sr. Environmental Tech
Signature:	e Baher	Date: 8/30/2019
email: Larry.Baker@apa	checorp.com	Telephone: 432-631-6982
OCD Only		
Received by:	-	Date:

State of New Mexico Oil Conservation Division

What is the shallowest depth to groundwater beneath the area affected by the release?

Did this release impact groundwater or surface water?

Incident ID	
District RP	
Facility ID	
Application ID	

75 (ft bgs)

Yes X No

Site Assessment/Characterization

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

Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	Yes X 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)?	Yes X No	
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ※ 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?	☐ Yes X No	
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	Yes X No	
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No	
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes 🗓 No	
Are the lateral extents of the release overlying a subsurface mine?	Yes X No	
Are the lateral extents of the release overlying an unstable area such as karst geology?		
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes X No	
Did the release impact areas not on an exploration, development, production, or storage site?	☐ Yes X No	
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vercontamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	rtical extents of soil	
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 ½-mile of the lateral extents of the release Boring or excavation logs		
Photographs including date and GIS information Topographic/Aerial maps		
X 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.

State of New Mexico Oil Conservation Division

Incident ID	
District RP	
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Application ID	

State of New Mexico Oil Conservation Division

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

X A scaled site and sampling diagram as described in 19.15.29.11 NMAC

Incident ID	
District RP	
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Application ID	

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.

X 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)	
X Laboratory analyses of final sampling (Note: appropriate Ol	DC District office must be notified 2 days prior to final sampling)
X Description of remediation activities	
and regulations all operators are required to report and/or file cert may endanger public health or the environment. The acceptance should their operations have failed to adequately investigate and a human health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regurestore, reclaim, and re-vegetate the impacted surface area to the accordance with 19.15.29.13 NMAC including notification to the Printed Name: Bruce Baker Signature: Bruce Baker	Title: Sr. Environmental Tech 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 par remediate contamination that poses a threat to groundwater, surface party of compliance with any other federal, state, or local laws an	ty of liability should their operations have failed to adequately investigate and se water, human health, or the environment nor does not relieve the responsible d/or regulations.
Closure Approved by: Bradford Billings	Date: 05/22/2020
Printed Name: Bradford Billings	Title: E. Spec. A
100	Title: 2. opos. 71

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