



October 6, 2020

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

RE: 1RP-4924 WBDU 85

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 January 2, 2018. Apache is respectfully submitting the closure report based on remediation and 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 432-631-6982 or by e-mail at [larry.baker@apachecorp.com](mailto:larry.baker@apachecorp.com)

Sincerely,

*Larry Baker*

Larry Baker  
Environmental Technician SR.  
Apache Corporation

Attachment: Closure Report Dated October 6, 2020



303 Veterans Airpark Lane Midland, TX 79705

## **Closure Report**

October 6, 2020

Re: WBDU 85  
API# 30-025-06652  
Case # 1RP-4924

On January 2, 2018 Apache Corporation personal discovered an area of contamination on the east side of the well pad. The source of the release was a third party truck unloaded illegally from the pad into the pasture. An initial C-141 was submitted to NMOCD on January 9, 2018. The release area is located north of Eunice New Mexico (GPS Coordinates 32.4734573 - 103.1786652) in unit letter P section 17 Township 21S Range 37E. A search radius of 2000 meters for groundwater wells was conducted utilizing data from the NMOSE and USGS. Two USGS wells located within 2,000 feet of the release area estimate groundwater to be 71 feet. A corrective action plan was submitted and approved by OCD on July 20, 2018.

The release area was excavated in accordance with the OCD approved corrective action plan. 200 cubic yards of excavated soil was stockpiled on plastic at a height of one foot to allow for bio remediation in accordance with the OCD approved corrective action plan. The excavated soil that was not stockpiled was hauled to an OCD approved disposal facility. On February 5, 2019 final wall and bottom grab samples were collected and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. Laboratory results were above table one standards at W9 and W10. On February 19, 2019 W9 was further excavated laterally and a final sample was collected and submitted to a commercial laboratory for analysis for chloride, TPH, and BTEX. On May 29, 2019 final grab samples were collected on the stockpiled soil and submitted to a commercial laboratory for analysis of chloride, TPH, and BTEX. Beginning on May 26, 2019 additional wall samples were collected and submitted to a commercial laboratory for chloride, TPH, and BTEX. Laboratory results for W23 were above table one standards. W23 was a 1 foot wall between the 6 foot and 5 foot excavation. W23 was dug to 6 feet and a final bottom sample (B11) was collected and submitted to a commercial laboratory for chloride.

The deeper excavation was backfilled to a depth of 2 feet with clean imported top soil. The top 2 feet was backfilled with the stockpiled top soil from the excavation and contoured to the surrounding area. The disturbed area was re-seeded in accordance with the surface landowner.

Apache Corporation has completed remediation to table one standards for release 51-100 feet to groundwater and respectfully request closure for event 1RP-4924.

Enclosed: C-141, Maps, Sample Data, Laboratory Data, and Photos.

Submitted by;

*Bruce Baker*

**Environmental Technician**

*larry.baker@apachecorp.com*

**Cell# 432-631-6982**

**Off# 575-393-7106**

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

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised August 8, 2011

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

## Release Notification and Corrective Action

### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Apache Corporation	Contact Bruce Baker
Address 2350 W Marland Street, Hobbs, NM 88240	Telephone No. (432) 631-6982
Facility Name WBDU 85	Facility Type Injection Well
Surface Owner Private	Mineral Owner Private
API No. 30-025-06652	

### LOCATION OF RELEASE

Unit Letter P	Section 17	Township 21S	Range 37E	Feet from the 660'	North/South Line FSL	Feet from the 660'	East/West Line FEL	County Lea
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Latitude 32.4734573 Longitude -103.1786652

### NATURE OF RELEASE

Type of Release Produce Water	Volume of Release 120 Barrels	Volume Recovered 0
Source of Release Unknown Truck	Date and Hour of Occurrence unknown	Date and Hour of Discovery 1/2/2018 at 7:32 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Olivia Yu (NMOCD)	
By Whom? Bruce Baker	Date and Hour 1/2/2018 at 1:52 p.m.	
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.\*

**RECEIVED**

**By Olivia Yu at 3:28 pm, Jan 10, 2018**

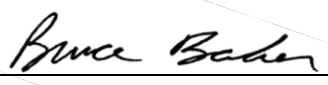

Describe Cause of Problem and Remedial Action Taken.\*

On the morning of 1/2/2018 contamination was discovered on the northeast corner of the pad and the pasture east of the pad. Tire tracks give the appearance that a vacuum truck backed up on the edge of the well pad and illegally unloaded the truck into the pasture.

Describe Area Affected and Cleanup Action Taken.\*

The majority of the contamination is in the pasture east and northeast of the pad location. A small portion of contamination was on the well pad.

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

Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Bruce Baker	Approved by Environmental Specialist: 	
Title: Environmental Technician	Approval Date: 1/10/2018	Expiration Date:
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval:	Attached <input checked="" type="checkbox"/>
Date: 1/9/2018 Phone: (432) 631-6982	see attached directive	

\* Attach Additional Sheets If Necessary

1RP-4924

nOY1801055905

pOY1801056219

Incident ID	
District RP	
Facility ID	
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.

**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: Larry Baker Title: Environmental Tech SR.  
Signature: Larry Baker Date: 10/6/2020  
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: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_





Google earth

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© 2020 Google

Google earth

50 ft



## Final Bottom Samples

Date	Map ID	Lab ID	Depth	Lab Cl-	Benzene	Toluene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS
2/5/2019	B1	SP 1 @ 6'	6'	96.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473679, -103.178458
2/5/2019	B2	SP 2 @ 1'	1'	32.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	15.7	<10.0	32.473552, -103.178384
2/5/2019	B3	SP2 # 2 @1'	1'	80.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473571, -103.178466
2/5/2019	B4	SP2 # 3 @1'	1'	384	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	336	17.5	32.473547, -103.178509
2/5/2019	B5	SP 3 @ 5'	5'	464	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473730, -103.178326
2/5/2019	B6	SP 3 # 2 @ 5'	5'	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473664, -103.178320
2/5/2019	B7	SP 4 @ 3'	3'	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473856, -103.178513
2/5/2019	B8	SP 4 # 2 @ 3'	3'	576	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473780, -103.178559
2/5/2019	B9	SP 4 #3 @ 3'	3'	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473686, -103.178555
2/5/2019	B10	SP 5 @ 1.5'	1.5'	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473646, -103.178598
7/8/2019	B11	BS # 3 @ 6'	6'	640									32.473643, -103.178396







## Final Wall Samples

Date	Map ID	Lab ID	Lab Cl-	Benzene	Toluene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO	GPS
2/5/2019	W1	SP1 N Wall	592	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473727, -103.178458
2/5/2019	W2	SP 1 S Wall	208	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473609, -103.178479
2/5/2019	W3	SP1 E Wall	496	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473683, -103.178427
2/5/2019	W4	SP1 W Wall	560	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	12.3	<10.0	32.473675, -103.178505
2/5/2019	W5	SP 2 N Wall	16.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473571, -103.178386
2/5/2019	W6	SP 2 S Wall	<16.0	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473534, -103.178378
2/5/2019	W7	SP 2 # 2 E Wall	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473580, -103.178443
2/5/2019	W8	SP 2 # 2 W Wall	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473588, -103.178523
2/5/2019	W9	SP 2 # 3 W Wall	320	<0.050	<0.050	0.472	<0.150	0.472	108	3260	427	32.473525, -103.178529
2/19/2019		SP 3 W Wall @ 1'	192	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	
2/5/2019	W10	SP 2 # 3 E Wall	1040	<0.050	<0.050	0.062	0.365	0.427	28	1200	182	32.473531, -103.178491
2/5/2019	W11	SP 3 N Wall	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473784, -103.178392
2/5/2019	W12	SP 3 E Wall	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473708, -103.178309
2/5/2019	W13	SP 3 S Wall	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473630, -103.178331
2/5/2019	W14	SP 3 W Wall	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473704, -103.178337
2/5/2019	W15	SP 4 E Wall	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	118	<10.0	32.473789, -103.178513



2/5/2019	W16	SP 4 W Wall	80	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473788, -103.178605
2/5/2019	W17	SP5 N Wall	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473681, -103.178606
2/5/2019	W18	SP 5 S Wall	32	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	12.3	<10.0	32.473601, -103.178592
2/5/2019	W19	SP 5 E Wall	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473647, -103.178576
2/5/2019	W20	SP 5 W Wall	112	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473637, -103.178621
6/26/2019	W21	Wall Point 1	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473637, -103.178336
6/26/2019	W22	Wall Point 2	16	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473510, -103.178475
6/27/2019	W23	Wall Point 3	13400	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473643, -103.178396
6/27/2019	W24	Wall Point 4	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473715, -103.178420
6/26/2019	W25	Wall Point 5	64	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	23.4	<10.0	32.473736, -103.178398
6/26/2019	W26	Wall Point 6	48	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	32.473896, -103.178483
7/8/2019	W27	NW # 3 @ 6'	352									32.473666, -103.178380







## Spoil Pile Final Samples

Date	Map ID	Lab ID	Lab Cl-	Benzene	Toluene	Ethybenzene	Total Xylenes	Total BTEX	GRO	DRO	EXT DRO
5/29/2019	S1	NW Corner	304	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	233	<10.0
5/29/2019	S2	SW Corner	224	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	157	<10.0
5/29/2019	S3	SE Corner	160	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	38	<10.0
5/29/2019	S4	NE Corner	416	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	38	<10.0



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

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February 13, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: WEDU #85

Enclosed are the results of analyses for samples received by the laboratory on 02/05/19 16:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 1 @ 6' (H900435-01)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2019	ND	1.88	93.9	2.00	0.925	
Toluene*	<0.050	0.050	02/10/2019	ND	1.77	88.3	2.00	0.381	
Ethylbenzene*	<0.050	0.050	02/10/2019	ND	1.71	85.4	2.00	2.49	
Total Xylenes*	<0.150	0.150	02/10/2019	ND	5.16	86.0	6.00	2.09	
Total BTX	<0.300	0.300	02/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	96.0	16.0	02/11/2019	ND	400	100	400	7.69	

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	02/11/2019	ND	195	97.3	200	0.894	
DRO >C10-C28*	<10.0	10.0	02/11/2019	ND	195	97.6	200	1.64	
EXT DRO >C28-C36	<10.0	10.0	02/11/2019	ND					

Surrogate: 1-Chlorooctane 83.5 % 41-142

Surrogate: 1-Chlorooctadecane 82.6 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim 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 Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 1 N WALL (H900435-02)**

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	02/10/2019	ND	1.88	93.9	2.00	0.925	
Toluene*	<0.050	0.050	02/10/2019	ND	1.77	88.3	2.00	0.381	
Ethylbenzene*	<0.050	0.050	02/10/2019	ND	1.71	85.4	2.00	2.49	
Total Xylenes*	<0.150	0.150	02/10/2019	ND	5.16	86.0	6.00	2.09	
Total BTEx	<0.300	0.300	02/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	02/11/2019	ND	400	100	400	7.69	

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	02/11/2019	ND	195	97.3	200	0.894	
DRO >C10-C28*	<10.0	10.0	02/11/2019	ND	195	97.6	200	1.64	
EXT DRO >C28-C36	<10.0	10.0	02/11/2019	ND					

Surrogate: 1-Chlorooctane 91.8 % 41-142

Surrogate: 1-Chlorooctadecane 91.9 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim 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 Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 1 S WALL (H900435-03)**

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	02/10/2019	ND	1.88	93.9	2.00	0.925	
Toluene*	<0.050	0.050	02/10/2019	ND	1.77	88.3	2.00	0.381	
Ethylbenzene*	<0.050	0.050	02/10/2019	ND	1.71	85.4	2.00	2.49	
Total Xylenes*	<0.150	0.150	02/10/2019	ND	5.16	86.0	6.00	2.09	
Total BTEX	<0.300	0.300	02/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	208	16.0	02/11/2019	ND	400	100	400	7.69	

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	02/11/2019	ND	195	97.3	200	0.894	
DRO >C10-C28*	<10.0	10.0	02/11/2019	ND	195	97.6	200	1.64	
EXT DRO >C28-C36	<10.0	10.0	02/11/2019	ND					

Surrogate: 1-Chlorooctane 89.8 % 41-142

Surrogate: 1-Chlorooctadecane 89.6 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 1 E WALL (H900435-04)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2019	ND	1.88	93.9	2.00	0.925	
Toluene*	<0.050	0.050	02/10/2019	ND	1.77	88.3	2.00	0.381	
Ethylbenzene*	<0.050	0.050	02/10/2019	ND	1.71	85.4	2.00	2.49	
Total Xylenes*	<0.150	0.150	02/10/2019	ND	5.16	86.0	6.00	2.09	
Total BTX	<0.300	0.300	02/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.5 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	496	16.0	02/11/2019	ND	400	100	400	7.69	

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	02/11/2019	ND	195	97.3	200	0.894	
DRO >C10-C28*	<10.0	10.0	02/11/2019	ND	195	97.6	200	1.64	
EXT DRO >C28-C36	<10.0	10.0	02/11/2019	ND					

Surrogate: 1-Chlorooctane 91.6 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 1 W WALL (H900435-05)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2019	ND	1.88	93.9	2.00	0.925	
Toluene*	<0.050	0.050	02/10/2019	ND	1.77	88.3	2.00	0.381	
Ethylbenzene*	<0.050	0.050	02/10/2019	ND	1.71	85.4	2.00	2.49	
Total Xylenes*	<0.150	0.150	02/10/2019	ND	5.16	86.0	6.00	2.09	
Total BTX	<0.300	0.300	02/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	02/11/2019	ND	400	100	400	7.69	

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	02/11/2019	ND	195	97.3	200	0.894	
DRO >C10-C28*	12.3	10.0	02/11/2019	ND	195	97.6	200	1.64	
EXT DRO >C28-C36	<10.0	10.0	02/11/2019	ND					

Surrogate: 1-Chlorooctane 88.2 % 41-142

Surrogate: 1-Chlorooctadecane 88.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 @ 1' (H900435-06)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/10/2019	ND	1.88	93.9	2.00	0.925	
Toluene*	<0.050	0.050	02/10/2019	ND	1.77	88.3	2.00	0.381	
Ethylbenzene*	<0.050	0.050	02/10/2019	ND	1.71	85.4	2.00	2.49	
Total Xylenes*	<0.150	0.150	02/10/2019	ND	5.16	86.0	6.00	2.09	
Total BTEx	<0.300	0.300	02/10/2019	ND					

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

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	02/11/2019	ND	400	100	400	7.69	

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	02/11/2019	ND	195	97.3	200	0.894	
DRO >C10-C28*	15.7	10.0	02/11/2019	ND	195	97.6	200	1.64	
EXT DRO >C28-C36	<10.0	10.0	02/11/2019	ND					

Surrogate: 1-Chlorooctane 92.1 % 41-142

Surrogate: 1-Chlorooctadecane 92.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 N WALL (H900435-07)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTX	<0.300	0.300	02/11/2019	ND					

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

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	02/11/2019	ND	400	100	400	7.69	

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	02/11/2019	ND	195	97.3	200	0.894	
DRO >C10-C28*	<10.0	10.0	02/11/2019	ND	195	97.6	200	1.64	
EXT DRO >C28-C36	<10.0	10.0	02/11/2019	ND					

Surrogate: 1-Chlorooctane 85.7 % 41-142

Surrogate: 1-Chlorooctadecane 86.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 S WALL (H900435-08)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTX	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.0 % 73.3-129

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	02/11/2019	ND	400	100	400	7.69	

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	02/11/2019	ND	195	97.3	200	0.894	
DRO >C10-C28*	<10.0	10.0	02/11/2019	ND	195	97.6	200	1.64	
EXT DRO >C28-C36	<10.0	10.0	02/11/2019	ND					

Surrogate: 1-Chlorooctane 87.8 % 41-142

Surrogate: 1-Chlorooctadecane 88.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 #2 @ 1' (H900435-09)**

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	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTEX	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	02/11/2019	ND	400	100	400	7.69	

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	02/11/2019	ND	195	97.3	200	0.894	
DRO >C10-C28*	<10.0	10.0	02/11/2019	ND	195	97.6	200	1.64	
EXT DRO >C28-C36	<10.0	10.0	02/11/2019	ND					

Surrogate: 1-Chlorooctane 88.0 % 41-142

Surrogate: 1-Chlorooctadecane 88.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 #2 E WALL (H900435-10)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTEx	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.3-129

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	02/11/2019	ND	400	100	400	7.69	

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	02/11/2019	ND	195	97.3	200	0.894	
DRO >C10-C28*	<10.0	10.0	02/11/2019	ND	195	97.6	200	1.64	
EXT DRO >C28-C36	<10.0	10.0	02/11/2019	ND					

Surrogate: 1-Chlorooctane 92.7 % 41-142

Surrogate: 1-Chlorooctadecane 92.9 % 37.6-147

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**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 #2 W WALL (H900435-11)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTX	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.1 % 73.3-129

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	02/11/2019	ND	400	100	400	7.69		

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	02/11/2019	ND	195	97.3	200	0.894	
DRO >C10-C28*	<10.0	10.0	02/11/2019	ND	195	97.6	200	1.64	
EXT DRO >C28-C36	<10.0	10.0	02/11/2019	ND					

Surrogate: 1-Chlorooctane 86.9 % 41-142

Surrogate: 1-Chlorooctadecane 86.2 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 #3 @ 1' (H900435-12)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTX	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	02/11/2019	ND	400	100	400	7.69	

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	02/11/2019	ND	195	97.3	200	0.894	
DRO >C10-C28*	336	10.0	02/11/2019	ND	195	97.6	200	1.64	
EXT DRO >C28-C36	17.5	10.0	02/11/2019	ND					

Surrogate: 1-Chlorooctane 82.8 % 41-142

Surrogate: 1-Chlorooctadecane 89.8 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 #3 W WALL (H900435-13)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	0.472	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTEx	0.472	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 84.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	320	16.0	02/11/2019	ND	400	100	400	7.69	

TPH 8015M		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	108	10.0	02/11/2019	ND	195	97.3	200	0.894	
DRO >C10-C28*	3260	10.0	02/11/2019	ND	195	97.6	200	1.64	
EXT DRO >C28-C36	427	10.0	02/11/2019	ND					

Surrogate: 1-Chlorooctane 92.5 % 41-142

Surrogate: 1-Chlorooctadecane 182 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 2 #3 E WALL (H900435-14)**

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	0.062	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	0.365	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTEX	0.427	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 123 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1040	16.0	02/11/2019	ND	400	100	400	7.69		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	28.0	10.0	02/11/2019	ND	195	97.3	200	0.894	
DRO >C10-C28*	1200	10.0	02/11/2019	ND	195	97.6	200	1.64	
EXT DRO >C28-C36	182	10.0	02/11/2019	ND					

Surrogate: 1-Chlorooctane 93.2 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 3 @ 5' (H900435-15)**

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	02/11/2019	ND	2.06	103	2.00	3.99		
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58		
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74		
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23		
Total BTEx	<0.300	0.300	02/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 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	464	16.0	02/11/2019	ND	400	100	400	7.69		

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	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	<10.0	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 89.6 % 41-142

Surrogate: 1-Chlorooctadecane 96.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 3 N WALL (H900435-16)**

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	02/11/2019	ND	2.06	103	2.00	3.99		
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58		
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74		
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23		
Total BTEX	<0.300	0.300	02/11/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 73.3-129

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	02/11/2019	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	<10.0	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 87.3 % 41-142

Surrogate: 1-Chlorooctadecane 93.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 3 E WALL (H900435-17)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTX	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/11/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	<10.0	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 80.9 % 41-142

Surrogate: 1-Chlorooctadecane 87.4 % 37.6-147

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**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 3 #2 @ 5' (H900435-18)**

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	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTEx	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 73.3-129

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	02/11/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	<10.0	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 79.9 % 41-142

Surrogate: 1-Chlorooctadecane 86.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 3 S WALL (H900435-19)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTX	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/11/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	<10.0	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 85.4 % 41-142

Surrogate: 1-Chlorooctadecane 93.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 3 W WALL (H900435-20)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTX	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 73.3-129

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	02/11/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	<10.0	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 87.4 % 41-142

Surrogate: 1-Chlorooctadecane 91.7 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 4 @ 3' (H900435-21)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTX	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	02/11/2019	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	<10.0	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 4 #2 @ 3' (H900435-22)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTX	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	02/11/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	<10.0	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 82.6 % 41-142

Surrogate: 1-Chlorooctadecane 89.1 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 4 #3 @ 3' (H900435-23)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTX	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.8 % 73.3-129

Chloride, SM4500CI-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	02/11/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	<10.0	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 89.8 % 41-142

Surrogate: 1-Chlorooctadecane 96.5 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 4 E WALL (H900435-24)**

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	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTEx	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

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	02/11/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	118	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 83.1 % 41-142

Surrogate: 1-Chlorooctadecane 93.2 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 4 W WALL (H900435-25)**

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTX	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 73.3-129

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	02/11/2019	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	<10.0	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 91.5 % 41-142

Surrogate: 1-Chlorooctadecane 98.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 5 @ 1.5' (H900435-26)**

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	02/11/2019	ND	2.06	103	2.00	3.99	
Toluene*	<0.050	0.050	02/11/2019	ND	2.12	106	2.00	4.58	
Ethylbenzene*	<0.050	0.050	02/11/2019	ND	2.06	103	2.00	5.74	
Total Xylenes*	<0.150	0.150	02/11/2019	ND	6.13	102	6.00	3.23	
Total BTEx	<0.300	0.300	02/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/11/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	<10.0	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 90.5 % 41-142

Surrogate: 1-Chlorooctadecane 99.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 5 N WALL (H900435-27)**

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	02/12/2019	ND	2.07	103	2.00	0.807	
Toluene*	<0.050	0.050	02/12/2019	ND	1.94	97.1	2.00	0.796	
Ethylbenzene*	<0.050	0.050	02/12/2019	ND	1.90	95.0	2.00	1.18	
Total Xylenes*	<0.150	0.150	02/12/2019	ND	5.69	94.9	6.00	1.47	
Total BTEx	<0.300	0.300	02/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.8 % 73.3-129

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	02/11/2019	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	<10.0	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 84.5 % 41-142

Surrogate: 1-Chlorooctadecane 93.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 5 S WALL (H900435-28)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/12/2019	ND	2.07	103	2.00	0.807	
Toluene*	<0.050	0.050	02/12/2019	ND	1.94	97.1	2.00	0.796	
Ethylbenzene*	<0.050	0.050	02/12/2019	ND	1.90	95.0	2.00	1.18	
Total Xylenes*	<0.150	0.150	02/12/2019	ND	5.69	94.9	6.00	1.47	
Total BTX	<0.300	0.300	02/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 73.3-129

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	02/11/2019	ND	432	108	400	3.64	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	12.3	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 84.0 % 41-142

Surrogate: 1-Chlorooctadecane 94.3 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 5 E WALL (H900435-29)**

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	02/12/2019	ND	2.07	103	2.00	0.807		
Toluene*	<0.050	0.050	02/12/2019	ND	1.94	97.1	2.00	0.796		
Ethylbenzene*	<0.050	0.050	02/12/2019	ND	1.90	95.0	2.00	1.18		
Total Xylenes*	<0.150	0.150	02/12/2019	ND	5.69	94.9	6.00	1.47		
Total BTEx	<0.300	0.300	02/12/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	48.0	16.0	02/11/2019	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	<10.0	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 90.7 % 41-142

Surrogate: 1-Chlorooctadecane 96.4 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 02/05/2019  
 Reported: 02/13/2019  
 Project Name: WEDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 02/05/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP 5 W WALL (H900435-30)**

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	02/12/2019	ND	2.07	103	2.00	0.807	
Toluene*	<0.050	0.050	02/12/2019	ND	1.94	97.1	2.00	0.796	
Ethylbenzene*	<0.050	0.050	02/12/2019	ND	1.90	95.0	2.00	1.18	
Total Xylenes*	<0.150	0.150	02/12/2019	ND	5.69	94.9	6.00	1.47	
Total BTEx	<0.300	0.300	02/12/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	02/11/2019	ND	432	108	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/09/2019	ND	210	105	200	0.121	
DRO >C10-C28*	<10.0	10.0	02/09/2019	ND	228	114	200	3.36	
EXT DRO >C28-C36	<10.0	10.0	02/09/2019	ND					

Surrogate: 1-Chlorooctane 89.0 % 41-142

Surrogate: 1-Chlorooctadecane 97.3 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

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### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

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Celey D. Keene, Lab Director/Quality Manager





## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>Apex</u>		P.O. #:		BILL TO								ANALYSIS REQUEST							
Project Manager: <u>Grace Buleer</u>		Company:																	
Address:		Attn:																	
City: <u>Hobbs</u>		State: <u>ND</u>		Zip: <u>88240</u>															
Phone #:		Fax #:		Address:															
Project #:		Project Owner:		City:		State:		Zip:											
Project Name:																			
Project Location: <u>Well 85</u>		Phone #:																	
Sample Name: <u>See Description</u>		Fax #:																	
FOR LAB USE ONLY																			
Lab I.D.		Sample I.D.																	
H900935																			
1 SP 1 @ 6'		(G)RAB (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		SLUDGE		OTHER:		ACID/BASE:			
2 SP 1 @ well		1		1		1		1		1		1		1		1			
3 SP 1 @ well		1		1		1		1		1		1		1		1			
4 SP 1 @ well		1		1		1		1		1		1		1		1			
5 SP 1 @ well		1		1		1		1		1		1		1		1			
6 SP 2 @ 1'		1		1		1		1		1		1		1		1			
7 SP 2 @ well		1		1		1		1		1		1		1		1			
8 SP 2 @ well		1		1		1		1		1		1		1		1			
9 SP 2 @ 1'		1		1		1		1		1		1		1		1			
10 SP 2 @ 1'		1		1		1		1		1		1		1		1			
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ANALYSIS REQUEST

+ Cardinal cannot prevent verbal change. Please for written change to (K75) 202-2222





ANALYSIS REQUEST



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

February 25, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: WBDU #85

Enclosed are the results of analyses for samples received by the laboratory on 02/19/19 15:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received:	02/19/2019	Sampling Date:	02/19/2019
Reported:	02/25/2019	Sampling Type:	Soil
Project Name:	WBDU #85	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

**Sample ID: SP 3 W WALL @ 1' (H900648-01)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/22/2019	ND	1.76	88.2	2.00	1.44	
Toluene*	<0.050	0.050	02/22/2019	ND	1.76	88.2	2.00	0.983	
Ethylbenzene*	<0.050	0.050	02/22/2019	ND	1.77	88.3	2.00	0.536	
Total Xylenes*	<0.150	0.150	02/22/2019	ND	5.13	85.4	6.00	0.367	
Total BTEX	<0.300	0.300	02/22/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.0 % 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	192	16.0	02/21/2019	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	02/21/2019	ND	192	96.1	200	1.37	
DRO >C10-C28*	<10.0	10.0	02/21/2019	ND	222	111	200	13.6	
EXT DRO >C28-C36	<10.0	10.0	02/21/2019	ND					

Surrogate: 1-Chlorooctane 99.2 % 41-142

Surrogate: 1-Chlorooctadecane 99.3 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

---

### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager

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

+ Cardinal cannot accept verbal changes. Please for written changes to (K75) 202.2226



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

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June 04, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: WBDU #85

Enclosed are the results of analyses for samples received by the laboratory on 05/29/19 15:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 05/29/2019  
 Reported: 06/04/2019  
 Project Name: WBDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 05/29/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: NW CORNER (H901896-01)**

BTEX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/31/2019	ND	1.90	95.0	2.00	2.08	
Toluene*	<0.050	0.050	05/31/2019	ND	2.05	103	2.00	4.89	
Ethylbenzene*	<0.050	0.050	05/31/2019	ND	1.95	97.5	2.00	3.06	
Total Xylenes*	<0.150	0.150	05/31/2019	ND	5.92	98.6	6.00	2.92	
Total BTEX	<0.300	0.300	05/31/2019	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	06/03/2019	ND	400	100	400	3.92		

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	05/31/2019	ND	189	94.6	200	1.62	
DRO >C10-C28*	233	10.0	05/31/2019	ND	195	97.5	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	05/31/2019	ND					

Surrogate: 1-Chlorooctane 94.0 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 05/29/2019  
 Reported: 06/04/2019  
 Project Name: WBDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 05/29/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SW CORNER (H901896-02)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/31/2019	ND	1.90	95.0	2.00	2.08	
Toluene*	<0.050	0.050	05/31/2019	ND	2.05	103	2.00	4.89	
Ethylbenzene*	<0.050	0.050	05/31/2019	ND	1.95	97.5	2.00	3.06	
Total Xylenes*	<0.150	0.150	05/31/2019	ND	5.92	98.6	6.00	2.92	
Total BTX	<0.300	0.300	05/31/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	06/03/2019	ND	400	100	400	3.92	

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	05/31/2019	ND	189	94.6	200	1.62	
DRO >C10-C28*	157	10.0	05/31/2019	ND	195	97.5	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	05/31/2019	ND					

Surrogate: 1-Chlorooctane 86.8 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 05/29/2019  
 Reported: 06/04/2019  
 Project Name: WBDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 05/29/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SE CORNER (H901896-03)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/31/2019	ND	1.90	95.0	2.00	2.08		
Toluene*	<0.050	0.050	05/31/2019	ND	2.05	103	2.00	4.89		
Ethylbenzene*	<0.050	0.050	05/31/2019	ND	1.95	97.5	2.00	3.06		
Total Xylenes*	<0.150	0.150	05/31/2019	ND	5.92	98.6	6.00	2.92		
Total BTX	<0.300	0.300	05/31/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	06/03/2019	ND	400	100	400	3.92		

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	05/31/2019	ND	189	94.6	200	1.62	
DRO >C10-C28*	38.0	10.0	05/31/2019	ND	195	97.5	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	05/31/2019	ND					

Surrogate: 1-Chlorooctane 93.9 % 41-142

Surrogate: 1-Chlorooctadecane 97.7 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 05/29/2019  
 Reported: 06/04/2019  
 Project Name: WBDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 05/29/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: NE CORNER (H901896-04)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/31/2019	ND	1.90	95.0	2.00	2.08	
Toluene*	<0.050	0.050	05/31/2019	ND	2.05	103	2.00	4.89	
Ethylbenzene*	<0.050	0.050	05/31/2019	ND	1.95	97.5	2.00	3.06	
Total Xylenes*	<0.150	0.150	05/31/2019	ND	5.92	98.6	6.00	2.92	
Total BTX	<0.300	0.300	05/31/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	416	16.0	06/03/2019	ND	400	100	400	3.92		

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	05/31/2019	ND	189	94.6	200	1.62	
DRO >C10-C28*	135	10.0	05/31/2019	ND	195	97.5	200	1.42	
EXT DRO >C28-C36	<10.0	10.0	05/31/2019	ND					

Surrogate: 1-Chlorooctane 86.1 % 41-142

Surrogate: 1-Chlorooctadecane 94.7 % 37.6-147

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

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

---

### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



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

## Final Results



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

June 28, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: WBDU #85

Enclosed are the results of analyses for samples received by the laboratory on 06/26/19 16:12.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 06/26/2019  
 Reported: 06/28/2019  
 Project Name: WBDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 06/26/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: WALL POINT 1 (H902190-01)**

BTEX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	06/27/2019	ND	2.04	102	2.00	0.644		
Toluene*	<0.050	0.050	06/27/2019	ND	2.08	104	2.00	0.380		
Ethylbenzene*	<0.050	0.050	06/27/2019	ND	1.94	96.9	2.00	1.34		
Total Xylenes*	<0.150	0.150	06/27/2019	ND	5.95	99.1	6.00	1.78		
Total BTEX	<0.300	0.300	06/27/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 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	48.0	16.0	06/27/2019	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	06/28/2019	ND	214	107	200	1.29	
DRO >C10-C28*	<10.0	10.0	06/28/2019	ND	228	114	200	0.919	
EXT DRO >C28-C36	<10.0	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 91.6 % 41-142

Surrogate: 1-Chlorooctadecane 98.0 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 06/26/2019  
 Reported: 06/28/2019  
 Project Name: WBDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 06/26/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: WALL POINT 2 (H902190-02)**

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	06/27/2019	ND	2.04	102	2.00	0.644		
Toluene*	<0.050	0.050	06/27/2019	ND	2.08	104	2.00	0.380		
Ethylbenzene*	<0.050	0.050	06/27/2019	ND	1.94	96.9	2.00	1.34		
Total Xylenes*	<0.150	0.150	06/27/2019	ND	5.95	99.1	6.00	1.78		
Total BTEx	<0.300	0.300	06/27/2019	ND						

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

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	06/27/2019	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	06/28/2019	ND	214	107	200	1.29	
DRO >C10-C28*	<10.0	10.0	06/28/2019	ND	228	114	200	0.919	
EXT DRO >C28-C36	<10.0	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 87.2 % 41-142

Surrogate: 1-Chlorooctadecane 95.2 % 37.6-147

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 06/26/2019  
 Reported: 06/28/2019  
 Project Name: WBDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 06/26/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: WALL POINT 6 (H902190-03)**

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	06/27/2019	ND	2.04	102	2.00	0.644		
Toluene*	<0.050	0.050	06/27/2019	ND	2.08	104	2.00	0.380		
Ethylbenzene*	<0.050	0.050	06/27/2019	ND	1.94	96.9	2.00	1.34		
Total Xylenes*	<0.150	0.150	06/27/2019	ND	5.95	99.1	6.00	1.78		
Total BTEx	<0.300	0.300	06/27/2019	ND						

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/27/2019	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	06/28/2019	ND	214	107	200	1.29	
DRO >C10-C28*	<10.0	10.0	06/28/2019	ND	228	114	200	0.919	
EXT DRO >C28-C36	<10.0	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 85.3 % 41-142

Surrogate: 1-Chlorooctadecane 90.3 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim 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 Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 06/26/2019  
 Reported: 06/28/2019  
 Project Name: WBDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 06/26/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: WALL POINT 5 (H902190-04)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2019	ND	2.04	102	2.00	0.644	
Toluene*	<0.050	0.050	06/27/2019	ND	2.08	104	2.00	0.380	
Ethylbenzene*	<0.050	0.050	06/27/2019	ND	1.94	96.9	2.00	1.34	
Total Xylenes*	<0.150	0.150	06/27/2019	ND	5.95	99.1	6.00	1.78	
Total BTX	<0.300	0.300	06/27/2019	ND					

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

Chloride, SM4500CI-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	06/27/2019	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	06/28/2019	ND	214	107	200	1.29	
DRO >C10-C28*	23.4	10.0	06/28/2019	ND	228	114	200	0.919	
EXT DRO >C28-C36	<10.0	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 87.1 % 41-142

Surrogate: 1-Chlorooctadecane 91.6 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

---

### Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



ANALYSIS REQUEST

2. Jeffrey Brown of Apple Corp. (www)



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

---

July 01, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: WBDU #85

Enclosed are the results of analyses for samples received by the laboratory on 06/27/19 14:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 06/27/2019  
 Reported: 07/01/2019  
 Project Name: WBDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 06/27/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: WALL POINT 4 (H902217-01)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/28/2019	ND	1.93	96.3	2.00	2.58	
Toluene*	<0.050	0.050	06/28/2019	ND	1.93	96.7	2.00	1.70	
Ethylbenzene*	<0.050	0.050	06/28/2019	ND	1.85	92.6	2.00	1.64	
Total Xylenes*	<0.150	0.150	06/28/2019	ND	5.60	93.3	6.00	1.49	
Total BTX	<0.300	0.300	06/28/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	160	16.0	06/28/2019	ND	400	100	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	06/28/2019	ND	203	102	200	1.94	
DRO >C10-C28*	<10.0	10.0	06/28/2019	ND	198	99.1	200	3.56	
EXT DRO >C28-C36	<10.0	10.0	06/28/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

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

Received: 06/27/2019  
 Reported: 07/01/2019  
 Project Name: WBDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 06/27/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: WALL POINT 3 (H902217-02)**

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	06/28/2019	ND	1.93	96.3	2.00	2.58	
Toluene*	<0.050	0.050	06/28/2019	ND	1.93	96.7	2.00	1.70	
Ethylbenzene*	<0.050	0.050	06/28/2019	ND	1.85	92.6	2.00	1.64	
Total Xylenes*	<0.150	0.150	06/28/2019	ND	5.60	93.3	6.00	1.49	
Total BTEx	<0.300	0.300	06/28/2019	ND					

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	13400	16.0	06/28/2019	ND	400	100	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	06/29/2019	ND	189	94.3	200	3.68	
DRO >C10-C28*	<10.0	10.0	06/29/2019	ND	191	95.3	200	4.28	
EXT DRO >C28-C36	<10.0	10.0	06/29/2019	ND					

Surrogate: 1-Chlorooctane 87.5 % 41-142

Surrogate: 1-Chlorooctadecane 87.5 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



---

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

---

### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

# BILL TO

ANALYSIS REQUEST

Company Name:		Apache	
Project Manager:		Jeffrey Brown	
Address:			
City:		Hobbs	
Phone #:		State: NM zip: 88240	
Project #:		Fax #:	
Project Name:		Project Owner:	
Project Location:		WB06 85	
Sampler Name:		Joe Musula	
FOR LAB USE ONLY		MATRIX	
PRESERV		SAMPLING	

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	
PRESERV	SAMPLING

[illegible]

**PLEASE NOTE:** Liability and Charges. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: 	Date: 6-27-19	Received By: 
	Time: 14:50	
Relinquished By:	Date:	Received By:

Phone Result: ☐ Yes ☐ No Add'l Phone #:  
Fax Result: ☐ Yes ☐ No Add'l Fax #:  
REMARKS: Error! Jeff mery

Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #:
Fax Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Fax #:
REMARKS:			

Corel Jethmey

Delivered By: (Circle One)	Sample Condition	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Bedford Room @ Academy Corp. 10m



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

---

July 09, 2019

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: WBDU #85

Enclosed are the results of analyses for samples received by the laboratory on 07/08/19 14:08.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

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

Received: 07/08/2019  
 Reported: 07/09/2019  
 Project Name: WBDU #85  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 07/08/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: BS #3 @ 6' (H902315-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	640	16.0	07/09/2019	ND	400	100	400	3.92		

**Sample ID: NW #3 @ 6' (H902315-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	352	16.0	07/09/2019	ND	400	100	400	3.92		

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

---

### Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

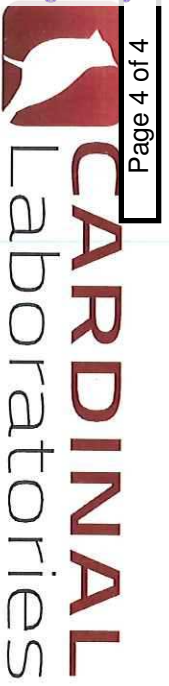
\*=Accredited Analyte

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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

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: <u>Apache</u>		<b>BILL TO</b>		ANALYSIS REQUEST																																					
Project Manager: <u>Jerry Brown</u>		P.O. #:																																							
Address:		Company:																																							
City: <u>Hobbs</u>		Attn:																																							
State: <u>NM</u> Zip: <u>88240</u>		Address:																																							
Phone #:		City:																																							
Project #:		State:																																							
Project Name:		Zip:																																							
Project Location: <u>WBDU #85</u>		Phone #:																																							
Sampler Name: <u>Steve Counselor</u>		Fax #:																																							
FOR LAB USE ONLY		MATRIX		PRESERV.		SAMPLING																																			
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICS / COOL		OTHER :		DATE		TIME													
<u>H902315</u>		<u>RS # 3 @ 6'</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>1</u>		<u>12:34</u>		<u>12:36</u>													
<u>2 NW # 3 @ 6'</u>		<u>61</u>		<u>61</u>		<u>61</u>		<u>61</u>		<u>61</u>		<u>61</u>		<u>61</u>		<u>61</u>		<u>61</u>		<u>61</u>		<u>61</u>		<u>61</u>		<u>61</u>		<u>61</u>													



Photos













Incident ID	NOY1801055905
District RP	
Facility ID	
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.

**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: Larry Baker Title: Environmental Tech SR.  
Signature: Larry Baker Date: 10/6/2020  
email: larry.baker@apachecorp.com Telephone: 432-631-6982

**OCD Only**

Received by: Robert Hamlet Date: 3/9/2021

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: Robert Hamlet Date: 3/9/2021  
Printed Name: Robert Hamlet Title: Environmental Specialist - Advanced

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
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**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

CONDITIONS  
  
Action 10547

**CONDITIONS OF APPROVAL**

Operator:			OGRID:	Action Number:	Action Type:
#1000	APACHE CORPORATION	303 Veterans Airpark Ln	873	10547	C-141
	Midland, TX79705				

OCD Reviewer	Condition
rhamlet	We have received your closure report and final C-141 for Incident #NOY1801055905 WBDU 85, thank you. This closure is approved.