



EXPLORING WHAT'S POSSIBLE

APACHE CORPORATION

P.O.Box 1849
Eunice, NM 88231
Phone 575.394.3159

WBDU #39
(1RP-3422)

Termination Request

API No. 30-025-06441

Release Date: March 27th, 2014

Unit Letter M, Section 9, Township 21S, Range 37E

January 26th, 2015

Dr. Tomáš Oberding, PhD

Environmental Specialist – New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Department
1625 N. French Dr.
Hobbs, NM 88240

**RE: Termination Request
Apache WBDU #39 (1RP-3422)
UL/M sec. 9 T21S R37E
API No. 30-025-06441**

Dr. Oberding:

Apache Corporation (Apache) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site.

Background and Previous Work

The site is located approximately 3.6 miles north of Eunice, New Mexico at UL/M sec. 9 T21S R37E. NM OSE and USGS records indicate that groundwater will likely be encountered at a depth of approximately 76 +/- feet.

On March 27th, 2014, Apache discovered a release of produced water from an injection line. The leak occurred below the isolation valve coupling, releasing 10 barrels of produced water over 22,663 square feet of lease pad and caliche road. The well was shut in, and a vacuum truck was dispatched to the site. A total of 5 barrels of fluid was recovered by the vacuum truck. An initial C-141 was submitted to NMOCD for their approval, and NMOCD approved the initial C-141 on November 13th, 2014 (Appendix A).

RECS personnel were on site beginning on March 28th, 2014, to assess the site. Six points within the release area were sampled at the surface, and 3 of the points, located on the caliche road, were sampled with depth (Figure 1). All samples were field tested for chlorides and organic vapors. The 6 inch samples from the 3 points on the caliche road and the surface samples from Pt. 5 and Pt. 6 were taken to a commercial laboratory for analysis (Appendix B). All 3 samples from the caliche road returned laboratory chloride readings below regulatory standards with Gasoline Range Organics (GRO) readings and Diesel Range Organics (DRO) readings of non-detect. The surface samples from Pt. 5 and Pt. 6 returned elevated laboratory chlorides readings with GRO and DRO readings of non-detect.

Since Pt. 1, located near the well head, returned elevated field chloride readings, the release on the pad was excavated to 2.5 ft bgs. As the excavation was being completed, a vertical, Comp.

Pt. 3, was installed to a depth of 4 ft bgs. Soil samples were taken approximately every 6 inches and field tested for chlorides and organic vapors. The 2 ft through 4 ft samples were taken to a commercial laboratory for analysis (Appendix C). The laboratory chloride readings returned results of 448 mg/kg at 2 ft bgs, 400 mg/kg at 2.5 ft bgs, 240 mg/kg at 3.5 ft bgs and 208 mg/kg at 4 ft bgs. GRO and DRO returned results of non-detect.

The caliche road was scraped down 6 inches from the lease pad to Hill Road. Given the safety concerns of scraping along the road, the release area that abutted Hill Road to the southwest was re-sampled in two places. Pt. 5 and Pt. 6 were sampled for chlorides and organic vapors at the surface and at 6 inches bgs. All samples were taken to a commercial laboratory for analysis and returned laboratory chloride readings of non-detect. These low data indicate that the recent rains flushed the chlorides from this area; therefore, this area did not warrant further action.

All excavated soil was taken to a NMOCD approved facility for disposal. Clean caliche was imported to the site to serve as backfill. The lease pad and caliche road were backfilled with the imported caliche and contoured to the surrounding location.

Photo documentation of the field activities can be found in Appendix D.

Given that Apache removed the contaminated soil and replace it with clean, imported soil, Apache respectfully requests 'remediation termination' and site closure. A final C-141 can be found in Appendix E.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-2967 or me if you have any questions or wish to discuss the site.

Sincerely,

A handwritten signature in dark ink, appearing to read 'L. Weinheimer', with a stylized flourish at the end.

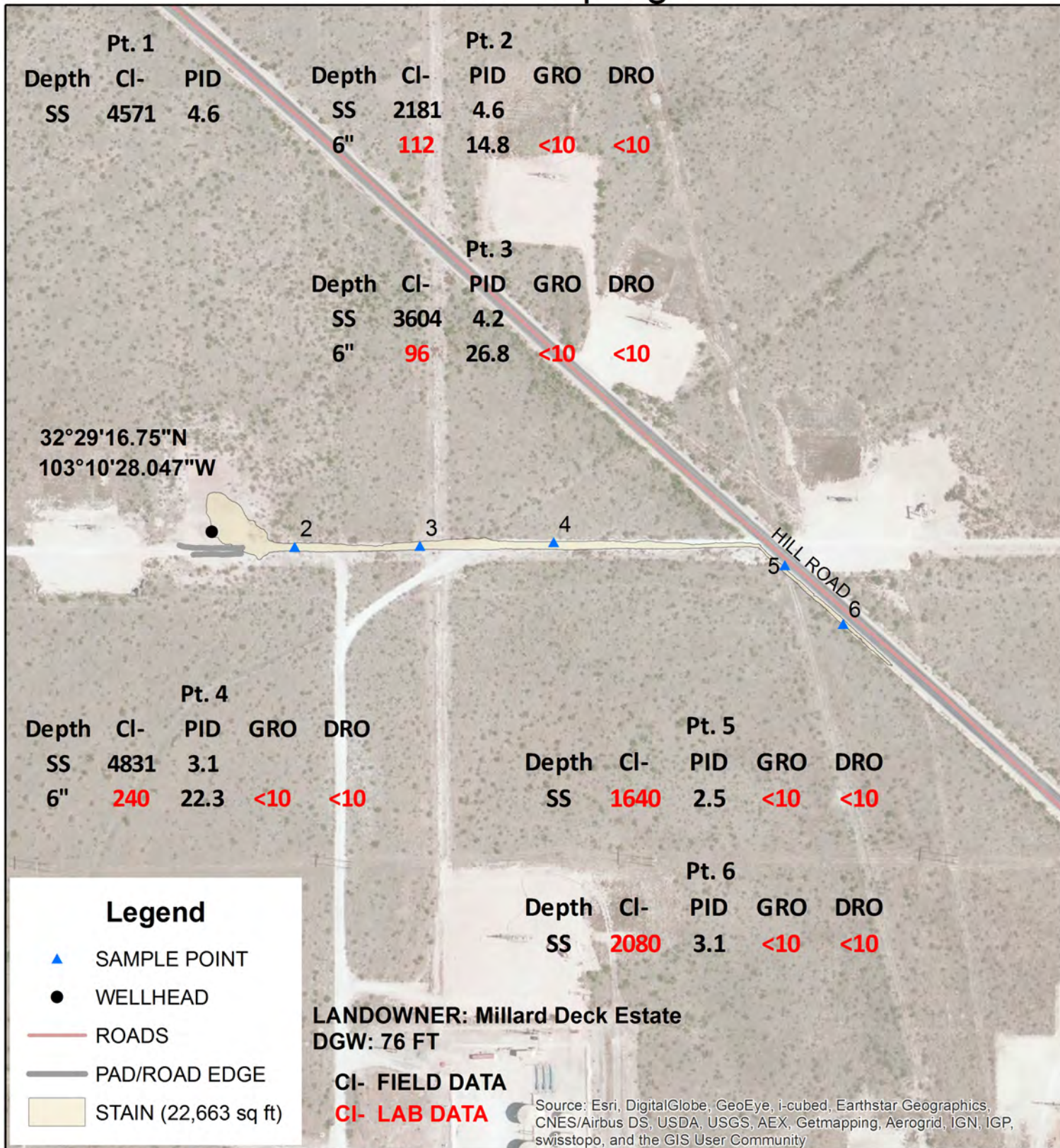
Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

- Figure 1 – Initial Sampling Data
- Figure 2 – Excavation Data
- Appendix A – Initial C-141
- Appendix B – Initial Sampling Lab
- Appendix C – Remediation Labs
- Appendix D – Photo Documentation
- Appendix E – Final C-141

Figures

Initial Sampling Data



**APACHE
WBDU #39**

UL M SECTION 9
T-21-S R-37-E
LEA COUNTY, NM

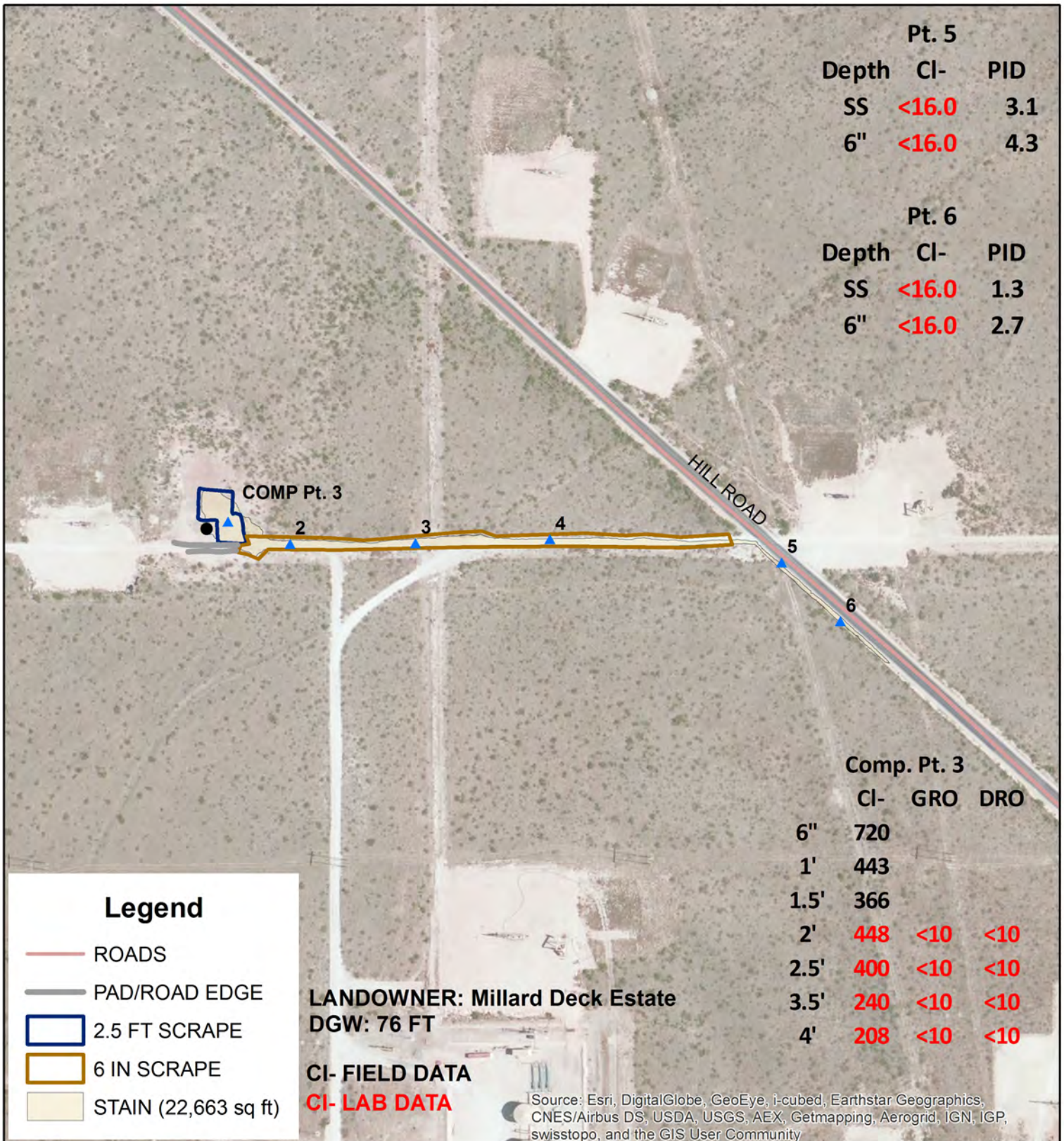
Figure 1



0 140 280
Feet

GPS date: 3/28/14 AG
Drawing date: 5/12/14
Drafted by: L. Weinheimer

Excavation Data



APACHE WBDU #39

UL M SECTION 9
T-21-S R-37-E
LEA COUNTY, NM

Figure 2



0 170 340
Feet

GPS date: 5/2 & 29/14 KH
 Drawing date: 5/30/14
 Drafted by: L. Weinheimer, T. Grieco

Appendix A

Initial C-141

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

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

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Apache Corporation	Contact Bruce Baker
Address 8 Ellison Lane Eunice, NM 88231	Telephone No. 432-631-6982
Facility Name WBDU # 39	Facility Type injection well

Surface Owner Millard Deck Estates	Mineral Owner	API No. 30-025-06441
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LOCATION OF RELEASE

Unit Letter M	Section 9	Township 21S	Range 37E	Feet from the 660'	North/South Line FSL	Feet from the 660'	East/West Line FWL	County Lea
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Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 10 Barrels of water	Volume Recovered 5 Barrels of water
Source of Release injection line	Date and Hour of Occurrence 3/27/14	Date and Hour of Discovery 3/27/14 at 6:00 a.m.
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The release occurred below isolation valve coupling. The well was shut in and a vacuum truck was dispatched to pick-up standing fluid. The valve was replaced.

Describe Area Affected and Cleanup Action Taken.* The entire release was contained to the well pad, lease road and bar ditch near county road approximately 22,000 square feet. The area was mapped and field surface samples collected.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC 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, NMOC 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: <u>Bruce Baker</u>		OIL CONSERVATION DIVISION	
Printed Name: Bruce Baker		Approved by Environmental Specialist:	
Title: Environmental Technician		Approval Date: <u>11-13-14</u>	Expiration Date: <u>1-13-14</u>
E-mail Address: <u>larry.baker@apachecorp.com</u>		Conditions of Approval: <u>State Sample upon Release & include on map NMOC</u>	Attached <input type="checkbox"/> <u>IRP 3422</u>
Date: <u>4/17/14</u>	Phone: <u>(432) 631-6982</u>	<u>guide - Submit full C-141 by 1-13-14.</u>	

* Attach Additional Sheets If Necessary

NOV 14 2014

873
770 193175 4207
770 19 71754375

Appendix B

Initial Sampling Lab

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967



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

April 09, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: WBDU #39

Enclosed are the results of analyses for samples received by the laboratory on 04/03/14 14:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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.

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

Analytical Results For:

APACHE - EUNICE
BRUCE BAKER
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received: 04/03/2014
Reported: 04/09/2014
Project Name: WBDU #39
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 03/28/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 5 @ SURFACE (H401012-01)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1640	16.0	04/07/2014	ND	416	104	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	04/04/2014	ND	163	81.4	200	1.36	
DRO >C10-C28	<10.0	10.0	04/04/2014	ND	181	90.3	200	2.70	
Surrogate: 1-Chlorooctane		125 %	65.2-140						
Surrogate: 1-Chlorooctadecane		125 %	63.6-154						

Sample ID: PT. 6 @ SURFACE (H401012-02)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2080	16.0	04/07/2014	ND	416	104	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	04/04/2014	ND	163	81.4	200	1.36	
DRO >C10-C28	<10.0	10.0	04/04/2014	ND	181	90.3	200	2.70	
Surrogate: 1-Chlorooctane		120 %	65.2-140						
Surrogate: 1-Chlorooctadecane		116 %	63.6-154						

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

54



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

May 12, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: WBDU #39

Enclosed are the results of analyses for samples received by the laboratory on 05/02/14 15:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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.

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Method EPA 524.4	Regulated VOCs (V1, V2, V3)

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Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

APACHE - EUNICE
BRUCE BAKER
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received: 05/02/2014
Reported: 05/12/2014
Project Name: WBDU #39
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 05/01/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 2 @ 6" (H401353-01)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	05/08/2014	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	05/09/2014	ND	197	98.4	200	1.30	
DRO >C10-C28	<10.0	10.0	05/09/2014	ND	215	108	200	2.80	
Surrogate: 1-Chlorooctane	108 %	65.2-140							
Surrogate: 1-Chlorooctadecane	109 %	63.6-154							

Sample ID: PT. 3 @ 6" (H401353-02)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	05/08/2014	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	05/09/2014	ND	197	98.4	200	1.30	
DRO >C10-C28	<10.0	10.0	05/09/2014	ND	215	108	200	2.80	
Surrogate: 1-Chlorooctane	108 %	65.2-140							
Surrogate: 1-Chlorooctadecane	110 %	63.6-154							

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:APACHE - EUNICE
BRUCE BAKER
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425Received: 05/02/2014
Reported: 05/12/2014
Project Name: WBDU #39
Project Number: NONE GIVEN
Project Location: NOT GIVENSampling Date: 05/01/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson**Sample ID: PT. 4 @ 6" (H401353-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	05/08/2014	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	05/09/2014	ND	197	98.4	200	1.30	
DRO >C10-C28	<10.0	10.0	05/09/2014	ND	215	108	200	2.80	
Surrogate: 1-Chlorooctane	102 %	65.2-140							
Surrogate: 1-Chlorooctadecane	101 %	63.6-154							

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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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

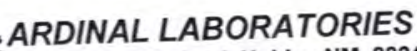
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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Relinquished By: <i>M. L. H. H. H.</i>		Date: <i>5/2/14</i> Time: <i>3:30</i>		Received By: <i>Jodi Henson</i>		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #:	
Relinquished By:		Date:		Received By:		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Fax #:	
Delivered By: (Circle One)		Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		CHECKED BY: <i>[Signature]</i>		REMARKS: <i>Larry. Becker@ApacheCorp.COM</i> email results Knorman@rice-ecs.com Kjones@riceswd.com; jkamplain@rice-ecs.com hconder@rice-ecs.com; Lweinheimer@rice-ecs.com Khumphrey@rice-ecs.com sedwards@rice-ecs.com, lflores@rice-ecs.com	
Sampler - UPS - Bus - Other:							

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#54

Appendix C

Remediation Labs

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967



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

May 12, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: WBDU #39

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Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

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Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

 Received: 05/02/2014
 Reported: 05/12/2014
 Project Name: WBDU #39
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 05/02/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: COMP PT. 3 @ 2' (H401354-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	05/08/2014	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	05/09/2014	ND	197	98.4	200	1.30	
DRO >C10-C28	<10.0	10.0	05/09/2014	ND	215	108	200	2.80	
Surrogate: 1-Chlorooctane		96.9 %	65.2-140						
Surrogate: 1-Chlorooctadecane		97.2 %	63.6-154						

Sample ID: COMP PT. 3 @ 2.5' (H401354-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	05/08/2014	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	05/09/2014	ND	197	98.4	200	1.30	
DRO >C10-C28	<10.0	10.0	05/09/2014	ND	215	108	200	2.80	
Surrogate: 1-Chlorooctane	104 %	65.2-140							
Surrogate: 1-Chlorooctadecane	104 %	63.6-154							

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

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

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Apache</u>				BILL TO				ANALYSIS REQUEST																				
Project Manager: <u>Bruce Decker</u>				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div> </div>																				
Address:				Company:																								
City: Hobbs State: NM Zip: 88240				Attn:																								
Phone #: Fax #:				Address:																								
Project #: Project Owner:				City:																								
Project Name:				State: Zip:																								
Project Location: <u>WBDV # 39</u>				Phone #:																								
Sampler Name: Kyle Humphrey				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:	ICE / COOL	OTHER:	DATE	TIME														
<u>H401354</u>																												
	<u>1 Comp. P+3 @ 2 ft</u>	<u>6</u>				<u>✓</u>				<u>✓</u>			<u>5-2-14</u>	<u>9:00</u>	<u>✓</u>	<u>✓</u>												
	<u>2 Comp. P+3 @ 2.5 ft</u>	<u>6</u>				<u>✓</u>				<u>✓</u>			<u>5-2-14</u>	<u>9:05</u>	<u>✓</u>	<u>✓</u>												

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Relinquished By: <u>Kyle Humphrey</u>	Date: <u>5/4/14</u> Time: <u>3:30</u>	Received By: <u>Jodi Benson</u>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No REMARKS: <u>email results</u> <u>Knorman@rice-ecs.com</u> <u>Kjones@riceswd.com; jkamplain@rice-ecs.com hconder@rice-ecs.com;</u> <u>Lweinheimer@rice-ecs.com</u> <u>Khumphrey@rice-ecs.com</u> <u>sedwards@rice-ecs.com, lflores@rice-ecs.com</u>
Relinquished By:	Date:	Received By:	Add'l Phone #: Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No	CHECKED BY: <u>[Signature]</u>	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#54



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

May 21, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: WBDU #39

Enclosed are the results of analyses for samples received by the laboratory on 05/20/14 10:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 APACHE - EUNICE
 BRUCE BAKER
 P. O. BOX 1849
 EUNICE NM, 88231
 Fax To: 394-2425

 Received: 05/20/2014
 Reported: 05/21/2014
 Project Name: WBDU #39
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 05/19/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: COMP. PT. 3 @ 3.5' (H401534-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	05/21/2014	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	05/21/2014	ND	232	116	200	0.445	
DRO >C10-C28	<10.0	10.0	05/21/2014	ND	260	130	200	1.06	
Surrogate: 1-Chlorooctane	122 %	65.2-140							
Surrogate: 1-Chlorooctadecane	123 %	63.6-154							

Sample ID: COMP. PT. 3 @ 4' (H401534-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	05/21/2014	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	05/21/2014	ND	232	116	200	0.445	
DRO >C10-C28	<10.0	10.0	05/21/2014	ND	260	130	200	1.06	
Surrogate: 1-Chlorooctane	113 %	65.2-140							
Surrogate: 1-Chlorooctadecane	112 %	63.6-154							

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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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

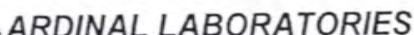
Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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<small>attitudes or successors arising out of or related to the performance of services rendered by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</small>			
Relinquished By: 		Received By: 	
Date: 9/20/14 Time: 10:00		Date: _____ Time: _____	
Relinquished By: 		Received By: _____	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: _____		Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No	
		CHECKED BY:  (Initials)	
		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #: _____ Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Fax #: _____ REMARKS: email results Knorman@rice-ecs.com Kjones@riceswd.com; jkamplain@rice-ecs.com hconder@rice-ecs.com; Lweinheimer@rice-ecs.com Khumphrey@rice-ecs.com sedwards@rice-ecs.com, lflores@rice-ecs.com	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#54



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

October 23, 2014

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: WBDU #039

Enclosed are the results of analyses for samples received by the laboratory on 10/22/14 15:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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.

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

Analytical Results For:

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

Received: 10/22/2014
Reported: 10/23/2014
Project Name: WBDU #039
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/22/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 5 @ 6" (H403259-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/23/2014	ND	400	100	400	0.00	

Sample ID: PT. 6 @ 6" (H403259-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/23/2014	ND	400	100	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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RPD	Relative Percent Difference
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***	Insufficient time to reach temperature.
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Cardinal Laboratories

*=Accredited Analyte

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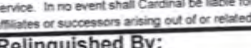


Celey D. Keene, Lab Director/Quality Manager



RDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

Page 4 of 4

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Relinquished By: 		Date: 10/22/14 Time: 3:50	Received By: 	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #: Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Fax #: REMARKS:
Relinquished By:		Date: Time:	Received By:	email results: hconder@rice-ecs.com; knorman@rice-ecs.com; jkamplain@rice-ecs.com; regans@rice-ecs.com; lflores@rice-ecs.com; lweinheimer@rice-ecs.com; kjones@riceswd.com; cursanic@rice-ecs.com environmental tech: agroves@rice-ecs.com company:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		30	Sample Condition Cool - Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No	CHECKED BY: 

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#54



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

October 23, 2014

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: WBDU #039

Enclosed are the results of analyses for samples received by the laboratory on 10/22/14 15:50.

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Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

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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

Analytical Results For:

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

Received: 10/22/2014
Reported: 10/23/2014
Project Name: WBDU #039
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/22/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 5 @ SURFACE (H403260-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	10/23/2014	ND	400	100	400	0.00		

Sample ID: PT. 6 @ SURFACE (H403260-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/23/2014	ND	400	100	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

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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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Celey D. Keene, Lab Director/Quality Manager



RDINAL LABORATORIES
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(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#54

Appendix D

Photo Documentation

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

Apache WBDU #39

Unit Letter M, Section 9, T21S, R37E



Initial site photo, facing northwest

3/28/14



Initial site photo, facing south

3/28/14



Initial site photo, facing east

3/28/14



Initial site photo, facing east

3/28/14



Sampling release area, facing west

3/28/14



Scraping road, facing northwest

5/1/14



Scraping pad, facing southwest

5/2/14



Excavating pad, facing northeast

5/21/14



Exporting soil, facing southeast

5/29/14



Final excavation, facing southeast

5/29/14



Final excavation, facing north

5/29/14



Site backfilled, facing northwest

12/1/14



Site backfilled, facing east

12/1/14



Site backfilled, facing west

12/1/14

Appendix E

Final C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

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 #39	Facility Type	injection well

Surface Owner	Millard Deck Estates	Mineral Owner		API No.	30-025-06441
---------------	----------------------	---------------	--	---------	--------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	9	21S	37E	660'	FSL	660'	FWL	Lea

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	10 Barrels of water	Volume Recovered	5 Barrels of water
Source of Release	injection line	Date and Hour of Occurrence	3/27/14	Date and Hour of Discovery	3/27/14 at 6:00 a.m.
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?		Date and Hour			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*☐ The release occurred below isolation valve coupling. The well was shut in and a vacuum truck was dispatched to pick-up standing fluid. The valve was replaced.

Describe Area Affected and Cleanup Action Taken.*☐ A total of 22,663 square feet of lease pad and caliche road was affected. RECS personnel were on site beginning on March 28th, 2014, to assess the site. Six points within the release area were sampled at the surface, and 3 of the points, located on the caliche road, were sampled with depth. The 6 inch samples from the 3 points on the caliche road and the surface samples from Pt. 5 and Pt. 6 were taken to a commercial laboratory for analysis. Since Pt. 1, located near the well head, returned elevated field chloride readings, the release on the pad was excavated to 2.5 ft bgs. As the excavation was being completed, a vertical, Comp. Pt. 3, was installed to a depth of 4 ft bgs. The 2 ft through 4 ft samples were taken to a commercial laboratory for analysis. The laboratory chloride readings returned results of 448 mg/kg at 2 ft bgs, 400 mg/kg at 2.5 ft bgs, 240 mg/kg at 3.5 ft bgs and 208 mg/kg at 4 ft bgs. GRO and DRO returned results of non-detect. The caliche road was scraped down 6 inches from the lease pad to Hill Road. Given the safety concerns of scraping along the road, the release area that abutted Hill Road to the southwest was re-sampled in two places. Pt. 5 and Pt. 6 were sampled for chlorides and organic vapors at the surface and at 6 inches bgs. All samples were taken to a commercial laboratory for analysis and returned laboratory chloride readings of non-detect. These low data indicate that the recent rains flushed the chlorides from this area; therefore, this area did not warrant further action. All excavated soil was taken to a NMOCD approved facility for disposal. Clean caliche was imported to the site to serve as backfill. The lease pad and caliche road were backfilled with the imported caliche and contoured to the surrounding location.

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

* Attach Additional Sheets If Necessary

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 #39	Facility Type	injection well
Surface Owner	Millard Deck Estates	Mineral Owner	
		API No.	30-025-06441

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	9	21S	37E	660'	FSL	660'	FWL	Lea

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	10 Barrels of water	Volume Recovered	5 Barrels of water
Source of Release	injection line	Date and Hour of Occurrence	3/27/14	Date and Hour of Discovery	3/27/14 at 6:00 a.m.
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?		Date and Hour			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

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Signature: <i>Bruce Baker</i>	OIL CONSERVATION DIVISION		
Printed Name: Bruce Baker	Approved by Environmental Specialist:		
Title: Environmental Technician	Approval Date:	Expiration Date:	
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 1-26-15	Phone: (432) 631-6982		

* Attach Additional Sheets If Necessary