

### **APACHE CORPORATION**

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

## AAO Federal SWD #1

(2RP-2678)

## **Termination Request**

API No. 30-015-42549

Release Date: November 12th, 2014

Unit Letter G, Section 1, Township 18S, Range 27E



CONSULTING & SAFETY

PO Box 2948 | Hobbs, NM 88241 | Phone 575.393.2967

#### March 24th, 2015

#### Mike Bratcher

New Mexico Energy, Minerals, & Natural Resources Oil Conservation Division, Environmental Bureau – District 2 811 S. First St. Artesia, NM 88210

> RE: Termination Request Apache AAO Federal SWD #1 (2RP-2678) UL/G sec. 1 T18S R27E API No. 30-015-42549

Mr. Bratcher:

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 9.2 miles east of Atoka, New Mexico at UL/G of sec. 1 T18S R27E. USGS monitor well data suggests that the depth to groundwater is located at approximately +/- 117 ft. However, RECS had previously installed two soil bores near that location. One was located approximately 1.5 miles west of the site, and the other was located 3.5 miles west of the site. Both soil bores were drilled to red bed and left open for over 48 hours. Both soil bores were checked for groundwater and neither returned groundwater in the bores.

On November 12<sup>th</sup>, 2014, during drilling operations, Apache discovered a release of brine water. The well started flowing back at 1,000 barrels per hour into the mud pits. A total of 30 barrels of brine water overflowed the mud pits and covered 13,349 square feet of lease pad. A vacuum truck was called to the site and drained the mud pits. NMOCD and BLM were notified of the release on November 13<sup>th</sup>, 2014, and an initial C-141 was sent to both agencies for approval. NMOCD approved the initial C-141 on December 19<sup>th</sup>, 2014 (Appendix A).

RECS personnel were on site beginning on January 12<sup>th</sup>, 2015, to assess the release. Five points within the release area (Points 1 – 5) were sampled at the surface and three points (Point1, Point 2 and Point 4) were sampled with depth (Figure 1). The samples were field tested for chlorides and organic vapors. Representative samples were then taken to a commercial laboratory for analyses (Appendix B). Based on the laboratory readings, the release area and surrounding pad were scraped down 6 inches. The excavated soil was taken to a NMOCD approved facility for disposal. Once the scrape was completed, samples were taken from the base of the scrape at Point 3, Point 5, Point 6 and Point 7. These samples from 6 inches bgs were field tested for chlorides and organic vapors. The field data returned chloride values below regulatory standards.

A request to backfill the site was sent to NMOCD and BLM on February 3<sup>rd</sup>, 2015. NMOCD approved the request to backfill the site on February 10<sup>th</sup>, 2015. Clean caliche was imported to the site to serve as backfill. The scrape was backfilled and contoured to the surrounding location.

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

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

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,

Lara Weinheimer

JC.W.

Project Scientist

**RECS** 

(575) 441-0431

Attachments:

Figure 1 – Sampling Data

Appendix A – Initial C-141

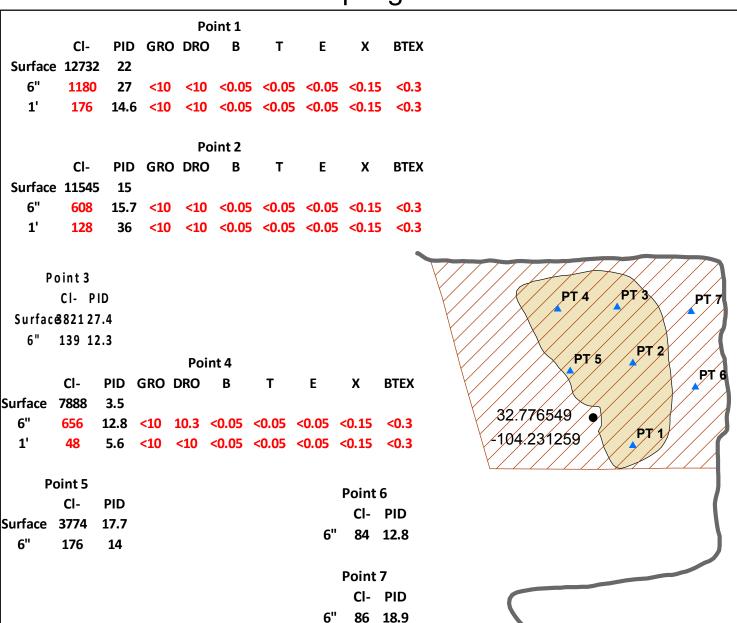
Appendix B – Vertical Lab Data

Appendix C – Photo Documentation

Appendix D – Final C-141

## Figures

### Sampling Data



#### Legend

- SAMPLE POINT
- WELLHEAD

PAD/ROAD EDGE



SCRAPE TO 6 INCHES

CI- FIELD DATA
CI- LAB DATA

53

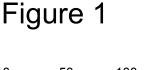
STAIN (13,349 SQ FT)

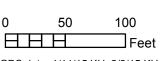
### APACHE AAO SWD #01

Legals: UL/G sec. 1 T-18-S R-27-E EDDY COUNTY, NM

## Landowner: BLM DGW: 117 ft or None







GPS date: 1/14/15 KH, 2/2/15 KH Drawing date: 2/3/15 Drafted by: L. Weinheimer

# 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 Fc, NM 87505

#### State of New Mexico Energy Minerals and Natural Resources

Form C-141
Revised August 8, 2011
hmit 1 Copy to appropriate District Office in

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

**Release Notification and Corrective Action** 

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

Name of Company Apuebe Corporation   \$7.73   Contact Bruce Baker   Apt No. 30-015-42549	NAB14	3535'	2845				<b>OPERAT</b>	ror	[2	Initia	l Report		Final Report	
Surface Owner BLM	Name of Co	mpany A	pache Corpo		873									
Surface Owner BLM					88240				982					
Unit Letter   Section   Township   Range   Peet from the   North/South Line   Feet from the   East/West Line   County   Eddy      Latitude   32.77   44   Longitude   Love   Love   Longitude   Love   Love	Facility Nan	ne AAO I	Federal SWI	)#1			Facility Typ	e SWD						
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Latitude 32.776 49   FNL   2380'   FEL   Eddy    Latitude 32.776 49   Longitude   6 4. 23/335     NATURE OF RELEASE     NATURE OF RELEASE     Yolume Recovered 0 Barrels   Source of Release mud pits   Date and Hour of Occurrence   Date and Hour of Discovery   11/12/14 at 10:00 p.m.   11/12/14 at					LOCA	TIO	N OF REI	LEASE						
NATURE OF RELEASE    Volume Recevered 0 Barrels   Volume Recovered 0 Barrels	1					North							-	
Type of Release brine water  Source of Release mud pits  Was Immediate Notice Given?  Was a Watercourse Reached?  Was a Watercourse Reached?  Yes No  If YES, Volume Impacting the Watercourse.  NM OIL CONSERVATION  ACCEPTED  Well started flowing back at 1000 barrels per hour and overflowed mud pits. Trucks were dispatched and began pumping water from pits and transporting to disposal.  Describe Area Affected and Cleanup Action Taken.  The entire release was contained to the lease pad. Once drilling operations are complete the site will be cleaned up to regulatory standards.  In the entire release was contained to the lease pad. Once drilling operations are complete the site will be cleaned up to regulatory standards.  It 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 groundstray surface with any other federal, state, or local laws and/or regulations.  OIL CONSERVATION DIVISION  Approved by Environmental Specialist:  Approved by Environmental Specialist:  OIL CONSERVATION DIVISION  Approved by Environmental Specialist:  Conditions of Approval:  Remediation per O.C.D. Rules & Guideliniagehed  Lauding Theorem and the results of the conditions of Approval and the condition of Approval and the co				Lat	itude 32.770	649	Longitud	e 10 <sup>C</sup> l. 23	31339					
Date and Hour of Occurrence   Date and Hour of Discovery					NAT	URE	OF RELI	EASE						
Was Immediate Notice Given?    Yes   No   Not Required   Date and Hour 11/13/2014   11/3/2014														
Was Immediate Notice Given?    Yes   No   Not Required   Defery Robertson (BLM) and Heather Patterson (NMOCD)	Source of Rel	lease mud	pits									-		
By Whon? Bruce Baker  Was a Watercourse Reached?  Yes No  NMOIL CONSERVATION  ARTESTA DISTRICT  DEC 196 2014  Describe Cause of Problem and Remedial Action Taken.  Well started flowing back at 1000 barrels per hour and overflowed mud pits. Trucks were dispatched and began pumping water from pits and transporting to disposal.  Describe Area Affected and Cleanup Action Taken.  The entire release was contained to the lease pad. Once drilling operations are complete the site will be cleaned up to regulatory standards.  I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.  OIL CONSERVATION DIVISION  Approved by Environmental Specialist:  Approved by Environmental Specialist:  Approved by Environmental Specialist:  Approved by Environmental Specialist:  Conditions of Approval.  Bemail Address: larry.baker@apachecorp.com  Conditions of Approval.  Conditions of Approval.  Conditions of Approval.	Was Immedia	te Notice (		Van 🗆	No D Mas Da	anirad	If YES, To	Whom?						
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OIL CONSERVATION DIVISION  Approved by Environmental Specialist:  Approved by Environmental Specialist:  Approval Date:  2/19/14   Expiration Date:  Conditions of Approval:  Remediation per O.C.D. Rules & Guidelineshed  SUBMIT REMEDIATION PROPOSAL NO					unce of a C-141 ft	сроп и	oca not renev	c the operator of t	Caponaio	iniy ioi co	лирианос ч	itti any	Other	
Approved by Environmental Specialist:  Printed Name: Bruce Baker  Approved by Environmental Specialist:  Approval Date:  2//9/// Expiration Date:   Conditions of Approval:  Remediation per O.C.D. Rules & Guidelineshed   SUBMIT REMEDIATION PROPOSAL NO						Ī	** ** ***	OIL CONS	SERVA	TION	DIVISIO	)N		
Approved by Environmental Specialist:  Title: Environmental Technician  E-mail Address: larry.baker@apachccorp.com  Date: 12/19/2014  Phone: (432) 631-6982  Approved by Environmental Specialist:  Approved by Environmental Specialist:  Conditions of Approval:  Remediation per O.C.D. Rules & Guidelineshed  SUBMIT REMEDIATION PROPOSAL NO	Cianatura	Bruce	Bules					-		.1		7		
Title: Environmental Technician  E-mail Address: larry.baker@apachecorp.com  Date: 12/19/2014 Phone: (432) 631-6982  Approval Date: /2//9/// Expiration Date: ///  Conditions of Approval:  Remediation per O.C.D. Rules & Guidelineshed  SUBMIT REMEDIATION PROPOSAL NO	элдиациге:	1 10000	J. 0-0-0-(		·			n 1 -		//				
E-mail Address: larry.baker@apachecorp.com  Conditions of Approval:  Remediation per O.C.D. Rules & Guidelineshed  SUBMIT REMEDIATION PROPOSAL NO	Printed Name	: Bruce Ba	ker				Approved by Environmental Specialist:							
E-mail Address: larry.baker@apachecorp.com  Conditions of Approval:  Remediation per O.C.D. Rules & Guidelineshed  Jubula 12/19/2014  Phone: (432) 631-6982  Conditions of Approval:  Remediation per O.C.D. Rules & Guidelineshed  SUBMIT REMEDIATION PROPOSAL NO	Title: Enviro	nmental Ta	echnician				Annroyal Dat	12/19/1	4 0.	miration 1	Into: 4		{	
Date: 12/19/2014 Phone: (432) 631-6982 Remediation per O.C.D. Rules & Guidelineshed L.		;						, ,	( ) EX	рианов 1	Jaie.	1+		
Date: 12/19/2014 Phone: (432) 631-6982   SUBMIT REMEDIATION PROPOSAL NO	E-mail Addres	ss: Jarry.ba	ker@apachec	orp.com			Conditions of	Approval:	Rules	& Guid	Mached			
	Date: 12	2/19/2014		Phor	ie: (432) 631-6982		LIBMIT RE	MEDIATION	PROP	DSAL N	0			
	Attach Addit	ional Shee	ets If Necessa					1 1 1 / 3	15			21	RP-2679	

# Appendix B Vertical Lab Data



January 23, 2015

BRUCE BAKER

APACHE CORP - HOBBS

2350 W. MARLAND BLVD.

HOBBS, NM 88240

RE: AAD SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 01/21/15 11:35.

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 <a href="https://www.tceq.texas.gov/field/ga/lab">www.tceq.texas.gov/field/ga/lab</a> accred certif.html.

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

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

Celey D. Keine

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



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

 Received:
 01/21/2015

 Reported:
 01/23/2015

 Project Name:
 AAD SWD #1

Project Name: AAD SWD #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 01/20/2015

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

#### Sample ID: VERTICAL 1 @ 6" (H500199-01)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050 0.050		01/22/2015	ND	1.62	80.9	2.00	9.70	
Toluene*	<0.050	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4	
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6	
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3	
Total BTEX	<0.300	0.300	01/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 %	61-154	!						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1180	16.0	01/22/2015	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	01/21/2015	ND	192	95.9	200	2.00	
DRO >C10-C28	<10.0	10.0	01/21/2015	ND	191	95.6	200	0.476	
Surrogate: 1-Chlorooctane	102 9	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	115 %	6 52.1-17	6						

Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keine



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

Received: 01/21/2015

01/23/2015

Reported: Project Name: AAD SWD #1 Project Number: NONE GIVEN Project Location: **NOT GIVEN** 

Sampling Date: 01/20/2015

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Celey D. Keene

#### Sample ID: VERTICAL 1 @ 1' (H500199-02)

BTEX 8021B	mg/kg		Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/22/2015	ND	1.62	80.9	2.00	9.70	
Toluene*	< 0.050	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4	
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6	
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3	
Total BTEX	<0.300	0.300	01/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 %	61-154							
Chloride, SM4500Cl-B	mg/kg		Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	01/22/2015	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/21/2015	ND	192	95.9	200	2.00	
DRO >C10-C28	<10.0	10.0	01/21/2015	ND	191	95.6	200	0.476	
Surrogate: 1-Chlorooctane	99.5 9	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	110 %	6 52.1-17	6						

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Celeg D. Freene



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

Received: 01/21/2015

01/23/2015

Project Name: AAD SWD #1
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 01/20/2015

Sampling Type: Soil

Sampling Condition: Cool & Intact
Sample Received By: Celey D. Keene

#### Sample ID: VERTICAL 2 @ 6" (H500199-03)

Reported:

BTEX 8021B	mg/kg		Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/22/2015	ND	1.62	80.9	2.00	9.70	
Toluene*	<0.050	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4	
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6	
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3	
Total BTEX	<0.300	0.300	01/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	100 9	61-154	!						
Chloride, SM4500CI-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	01/22/2015	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	01/21/2015	ND	192	95.9	200	2.00	
DRO >C10-C28	<10.0	10.0	01/21/2015	ND	191	95.6	200	0.476	
Surrogate: 1-Chlorooctane	101 9	% 47.2-15	7						
Surrogate: 1-Chlorooctadecane	111 9	6 52.1-17	6						

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(===)

Received: 01/21/2015 Sampling Date: 01/20/2015

Reported: 01/23/2015 Sampling Type: Soil

Project Name: AAD SWD #1 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Celey D. Keene

Project Location: NOT GIVEN

#### Sample ID: VERTICAL 2 @ 1' (H500199-04)

BTEX 8021B	mg/kg		Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/22/2015	ND	1.62	80.9	2.00	9.70	
Toluene*	<0.050 0.050		01/22/2015	ND	1.58	79.0	2.00	11.4	
Ethylbenzene*	< 0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6	
Total Xylenes*	< 0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3	
Total BTEX	<0.300	0.300	01/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	61-154	!						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	01/22/2015	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	01/21/2015	ND	192	95.9	200	2.00	
DRO >C10-C28	<10.0	10.0	01/21/2015	ND	191	95.6	200	0.476	
Surrogate: 1-Chlorooctane	107 9	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	115 %	6 52.1-17	6						

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

Fax To: (575) 393-2432

Received: 01/21/2015 Reported:

01/23/2015

AAD SWD #1

NONE GIVEN **NOT GIVEN** 

115 %

52.1-176

Sampling Date: 01/20/2015

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Celey D. Keene

#### Sample ID: VERTICAL 4 @ 6" (H500199-05)

Project Name:

Project Number:

Project Location:

Surrogate: 1-Chlorooctadecane

BTEX 8021B	mg/kg		Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/22/2015	ND	1.62	80.9	2.00	9.70	
Toluene*	<0.050	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4	
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6	
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3	
Total BTEX	<0.300	0.300	01/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 9	61-154							
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	01/22/2015	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0 10.0		01/21/2015 ND		192	95.9	200	2.00	
		10.0	01/21/2015	ND	191	95.6	200	0.476	

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

Received: 01/21/2015

Reported: 01/23/2015

Project Name: AAD SWD #1 Project Number: NONE GIVEN Project Location: **NOT GIVEN** 

Sampling Date: 01/20/2015

Sampling Type: Soil

Sampling Condition: Cool & Intact Sample Received By: Celey D. Keene

#### Sample ID: VERTICAL 4 @ 1' (H500199-06)

BTEX 8021B	mg/kg		Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050 0.050		01/22/2015	ND	1.62	80.9	2.00	9.70	
Toluene*	<0.050	0.050	01/22/2015	ND	1.58	79.0	2.00	11.4	
Ethylbenzene*	<0.050	0.050	01/22/2015	ND	1.52	76.1	2.00	10.6	
Total Xylenes*	<0.150	0.150	01/22/2015	ND	4.57	76.2	6.00	11.3	
Total BTEX	<0.300	0.300	01/22/2015	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 %	61-154	!						
Chloride, SM4500Cl-B	mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	01/22/2015	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/21/2015	ND	192	95.9	200	2.00	
DRO >C10-C28	<10.0	10.0	01/21/2015	ND	191	95.6	200	0.476	
Surrogate: 1-Chlorooctane	102 %	6 47.2-15	7						
Surrogate: 1-Chlorooctadecane	115 %	6 52.1-17	6						

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Celey D. Keine



#### **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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Celeg D. Freene

### ARDINAL LABORATORIES

#### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: APacho	BILLTO	ANALYSIS REQUEST
Project Manager: Bruco Baker	P.O. #:	
Address:	Company:	
City: Hobbs State: NM Zip: 88240	Attn:	
Phone #: Fax #:	Address:	
Project #: Project Owner:	City:	
Project Name:	State: Zip:	Chlorides PH 8015 M BTEX exas TPH e Cations/Anions TDS
Project Location: AAQ SUD #2	Phone #:	hloride 1 801 1 801 EXXAS TEX Cation TDS
Sampler Name: Kyle Humphrey	Fax #:	
Lab I.D.   Sample I.D.   MATRIX   MATRIX   Lab I.D.   Sample I.D.   MATRIX   MATRI	PRESERV SAMPLING  CHERT  CHARGE  CHARG	Complete C
PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising whether based in contra analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unities made in writing a service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruption allitiates or successors arising out of or related to the performance of services hereunder by Cardinal, repardless of whythousuch claim.  Relinquished By:  Date:  Received By:  Received By:  Received By:	nd received by Cardinal within 30 days after completion of a, loss of use, or loss of profils incurred by cilent, its subsid is based upon any of the above stated reasons or others.  Phone R. Fax Rest. REMARK.	the applicable flarios, state of the flarios of th
Delivered By: (Circle One) Sample Cond Cool Intact No No N	tion CHECKED BY: Kyones Lweinh Khump	an@rice-ecs.com @riceswd.com; jkamplain@rice-ecs.com hconder@rice-ecs.com; leimer@rice-ecs.com shrey@rice-ecs.com rds@rice-ecs.com,lflores@rice-ecs.com

<sup>†</sup> Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

# Appendix C Photo Documentation

## Apache AAO SWD #1 Unit Letter G, Section 1, T18S, R27E



Initial release area, facing west

1/12/15



Vertical installation, facing east

1/20/15



Initial release area, facing south

1/12/15



Scraping release, facing south

2/2/15



Scraping release, facing north







Site completed, facing southeast

3/4/15



Site completed, facing north

3/4/15

# Appendix D Final 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

Revised August 8, 2011
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Form C-141

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

Santa Pe, NIVI 67303														
Release Notification and Corrective Action														
						<b>OPERA</b>	ГOR		Initial	Report	$\boxtimes$	Final Report		
Name of Co		Apache Con			(	Contact B	ruce Baker							
		farland Blvd		NM 88240		Telephone No. (432) 631-6982								
Facility Nan	ne AAO	Federal SW	D #1		]	Facility Type SWD								
Surface Ow	ner BLM			Mineral C	)wner			I A	API No.	30-015-4	2549			
				LOCA	ATION	OF REI	LEASE							
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/West	t Line	County				
G	1	18S	27E	2470'	F	NL	2380'	FEL	,	Eddy				
				Latitude 32.7	77649	Longitude	-104.231339				-			
	Latitude_32.77649_ Longitude104.231339 NATURE OF RELEASE													
Type of Relea	ase brine v	vater		IVAI	UKE		Release 30 Barr	rels V	olume Re	ecovered (	) Barre	ls		
Source of Re						Date and H	lour of Occurrence	e Da	ate and H	lour of Dis	covery			
XX7 T 1*	. 37	7. 0					t 10:00 p.m.	11	1/12/14 a	t 10:00 p.m	l.			
Was Immedia	ite Notice (		Yes [	No Not Re	equired	If YES, To Jeffery Rol	Whom? bertson (BLM) an	nd Heather I	Patterson	(NMOCD	)			
By Whom?	Bruce Bake	er				Date and F	Iour 11/13/2014							
Was a Water		ched?					olume Impacting t		ourse.					
☐ Yes ☒ No														
If a Watercou	rse was Im	pacted, Descr	ibe Fully.	*										
Describe Cau	se of Probl	em and Reme	dial Actio	n Taken.*□Well	started fl	owing back a	at 1000 barrels pe	r hour and o	overflow	ed mud pits	s. Truc	ks were		
dispatched an	id began pu	mping water	from pits a	and transporting to	o disposa	վ.				-				
Describe Are	a Affected	and Cleanup A	Action Tak	ken.* RECS pers	sonnel w	ere on site be	ginning on Janua	ry 12 <sup>th</sup> , 201	5, to asse	ess the rele	ase. Th	ne release		
Point 4) were	sampled w	ith denth. Re	nresentati	oints within the re ve samples were t	hen take	n to a comme	ercial laboratory f	at the surta for analyses	ice and tr	on the laborate	(Point I	, Point 2 and		
release area a	nd surroun	ding pad were	scraped d	lown 6 inches. The	ne excava	ated soil was	taken to a NMOC	CD approve	d facility	for dispos	al. One	ce the scrape		
was complete	d, samples	were taken fr	om the bas	se of the scrape at	Point 3,	Point 5, Poin	nt 6 and Point 7.	These samp	oles from	6 inches b	gs were	e field tested		
for chlorides	and organic	vapors. The	field data	returned chloride	values a	and below reg	gulatory standards	s. A reques	t to back	fill the site	was ser	at to		
				OCD approved the led and contoured				y 10 <sup></sup> , 2013	5. Clean	caliche wa	s impoi	rted to the		
				e is true and comp				ınderstand t	that pursu	ant to NM	OCD rı	ules and		
regulations al	1 operators	are required t	o report ai	nd/or file certain r	elease no	otifications a	nd perform correct	ctive actions	s for relea	ases which	may en	ndanger		
				ce of a C-141 repo										
				investigate and r										
		ws and/or regi		otance of a C-141	report do	bes not renev	e the operator of	responsibili	ity for co	mpliance v	71th any	other		
							OIL CON	SERVA	TION	DIVISIO	 N			
Signature:	Bruce	c Bah	el				OID COIL	VIII VIII	11011	-111010	-11			
Printed Name						Approved by	Environmental S	pecialist:						
I IIIICU I VAIIIC	. Dide De	411-1				······				***************************************				
Title: Enviro	onmental To	echnician				Approval Dat	te:	Exp	oiration E	Date:				
E-mail Addre	ess: larry.b	aker@apache	corp.com			Conditions of	f Approval:			Attoched				
										Attached				

Date: 3 /24/20/5 Phone: (432) 631-6982

\* Attach Additional Sheets If Necessary