#### **HOBBS OCD**

District 1
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

\* Attach Additional Sheets If Necessary

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe. NM 87505 APR 0 3 2014

Form C-141 Revised August 8, 2011

Submit 1 Copy to appropriate District Office in RECEIVED NMAC.

*		Rele	ease Notific		n and Co		ction	 )	<del></del>		
		2001			OPERA				ial Report	[X]	Final Report
Name of Company Address 8 Ellison Facility Name Ch	Lane, Eunice,		31		Contact Br	uce Baker Vo. 432-631-69	82				
			114		1 donly 13p	C Battery		ADIN	- 20.025	06672	
Surface Owner	itate		Mineral (					APIN	o. 30-025 <b>-</b>	06672	
Unit Letter   Section	n Township	Range	LOCA Feet from the		N OF REI	Feet from the	Fact/\	West Line	County		
				TOTAL							
N 19	218	37E	300'	1	FSL	2209'	Ļ	FWL	Lea		
		La	titude		Longitud	e					
			NAT	'URE	OF RELI				<del></del>	•••	·
Type of Release Of Source of Release H	and Produced \	Vater				Release 15 Barr			Recovered		10/19/13 at
					10/19/13		- :	2:45 a.m			10/17/17 ///
Was Inunediate Noti		Yes 🗵	No Not Re	equired	If YES, To	Whom?					,
By Whom?					Date and H						
Was a Watercourse B		Yes 🛭	No		If YES, Vo	lume Impacting t	he Wate	ercourse.			and the second s
If a Watercourse was	Impacted, Descr	ibe Fully.*	•	<del>-</del>	<u> </u>		DAI	N = 10	8,		
Describe Cause of Pr Treater was isolated and						er corroded releasin				ater. 71	10 Heater-
Describe Area Affect beginning on October 2 commercial laboratory felloride levels dropped 192 mg/kg at 1.5 ft bgs Range Organics (DRO) RECS met with NMOC! around Point 2 be scrapt 1.5 ft bgs and to leave the Point 1 was hand excave 608 mg/kg, a GRO valudown 6 inches bgs. At serve a backfill. A samp new berms were installe 1 hereby certify that II	*, 2013 to assess to analysis. At Porton 4,640 mg/kg at 2 dropped at all samp D — District I on D d down 6 inches a cremainder of the ted to a depth of I of non-detect and mple from the bot of 60 yards of le of the imported I around the heater	the site. Thr nt 1, the lab at the surfac ft bgs. Gas bling points ecember 6 <sup>th</sup> and the area a contaminate ft bgs. A sea a DRO value contaminate contaminate caliche was -treater.	ree points within the poratory chloride leve to 1,260 mg/kg at soline Range Organ from readings abov, 2013 to determine around Point 3 need ion until site abandample from the bott ue of 2,800 mg/kg, crape was taken to ed soil was taken to taken to a commer	release a release a release for the second of the comment.  The area a comment a NMOC cial labor	nea were sampled from 1,040 bgs. At Point 1) dropped at all lory standards a rward for the si excavated until On January 31 <sup>n</sup> e scrape was tak around Point 2 reial taboratory for analys atory for analys	ed at the surface an mg/kg at the surface 3, the laboratory cht sampling points to the surface to belo te. Based on the lat clean. At Point 1, 1, 2014, scraping acten to a commercial was scraped down for analysis and retiility for disposal. Zilis and returned a ch	d with de to 352 doride lee non-deto we regula boratory the area of the lee ar	lepth. Repre- mg/kg at 1. wels dropped ect at the bastory standar analysis, N needed to be egan at the s ory for analy s bgs. The a chloride val- f 24 yards o alue of 48 m	sentative sam 5 feet bgs. At 1 from 512 mgs of each aug rds at the base MOCD reques excavated by site. As requential sample around Poue of 48 mg/k feather was 19/kg. The sit	ples wer Point 2, /kg at the ur point, of each sted that hand to sted by ited a chicker 3 was g and GI imported e was ba	e taken to a the laboratory te surface to Diesel augur point. the area a depth of 1 - NMOCD, oride value of s also scraped RO and DRO to the site to ckrilled and
regulations all operate public health or the en should their operation or the environment. I federal, state, or local	rs are required to vironment. The shave failed to a addition, NMC	o report an acceptance dequately ICD accept	d/or file certain re e of a C-141 repo investigate and re	elease ne of by the emediate	otifications and NMOCD ma contamination	d perform correct arked as "Final Re on that pose a thre	tive acti eport" d eat to gr	ions for rel loes not rel round wate	eases which leve the ope r, surface wa	may en rator of iter, hui	danger liability van bealth
Signature: Bru	ce Bahur					OIL CONS	KLLE	WW.			OM
Printed Name: Bruce	Baker				Approved by	Environmental Sp ———————	neciatis	WHOIIM	enen 20		3L
Title: Environmenta	Technician				Approval Date	: 4/03/14	. ]	Expiration	Date:		
E-mail Address: larry	.baker@apachec	orp.com			Conditions of	Approval: —			Attached		
Date: 3-14-	14	Phone:	432-631-6982						IRP-1	2-13	,-2998

NSAD 14168357750.

1



HOBBS OCD

APR 0 3 2014

RECEIVED

### APACHE CORPORATION

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

Environmental Specialist
NMOCD - DIST I
4103114

# CK State Battery

(1RP-12-13-2998)

# Termination Request

API 30-025-06672

Release Date: October 19<sup>th</sup>, 2013

Unit Letter N, Section 19, Township 21S, Range 37E

#### Rice Environmental Consulting & Safety

P.O. Box 2948, Hobbs, NM 88241 Phone 575.393.2967

March 14th, 2014

#### **Geoffrey Leking**

New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau – District 1
1625 N. French Dr.
Hobbs, NM 88240-9273

RE: Termination Request Apache Corporation – CK State Battery (1RP-12-13-2998) UL/N sec. 19 T21S R37E API No. 30-025-06672

Mr. Leking:

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 2.7 miles northwest of Eunice, New Mexico at UL/N sec. 19 T21S R37E. NM OSE and USGS records indicate that groundwater will likely be encountered at a depth of approximately 99 +/- feet.

On October 19<sup>th</sup>, 2013, Apache discovered a release of oil and produced water coming from a corroded gasket on a heater-treater. The heater-treater released a total of 15 barrels of oil and produced water over 4,813 square feet of bermed facility, lease pad and road. A vacuum truck was called to the site and recovered 10 barrels of fluid. An initial C-141 was submitted to NMOCD and approved on November 15<sup>th</sup>, 2013 (Appendix A).

RECS personnel were on site beginning on October 21<sup>st</sup>, 2013 to assess the site. Three points within the release area were sampled at the surface and with depth (Figure 1). Representative samples were taken to a commercial laboratory for analysis (Appendix B). At Point 1, the laboratory chloride levels dropped from 1,040 mg/kg at the surface to 352 mg/kg at 1.5 feet bgs. At Point 2, the laboratory chloride levels dropped from 4,640 mg/kg at the surface to 1,260 mg/kg at 6 inches bgs. At Point 3, the laboratory chloride levels dropped from 512 mg/kg at the surface to 192 mg/kg at 1.5 ft bgs and 176 mg/kg at 2 ft bgs. Gasoline Range Organics (GRO) dropped at all sampling points to non-detect at the base of each augur point. Diesel Range Organics (DRO) dropped at all sampling points from readings above regulatory standards at the surface to below regulatory standards at the base of each augur point.

RECS met with NMOCD – District 1 on December 6<sup>th</sup>, 2013 to determine a path forward for the site. Based on the laboratory analysis, NMOCD requested that the area around Point 2 be scraped down 6 inches and the area around Point 3 needed to be excavated

until clean. At Point 1, the area needed to be excavated by hand to a depth of 1 - 1.5 ft bgs and to leave the remainder of the contamination until site abandonment.

On January 31<sup>st</sup>, 2014, scraping activities began at the site. As requested by NMOCD, Point 1 was hand excavated to a depth of 1 ft bgs (Figure 2). A sample from the bottom of the scrape was taken to a commercial laboratory for analysis and returned a chloride value of 608 mg/kg, a GRO value of non-detect and a DRO value of 2,800 mg/kg (Appendix C). The area around Point 2 was scraped down 6 inches bgs. The area around Point 3 was also scraped down 6 inches bgs. A sample from the bottom of the scrape was taken to a commercial laboratory for analysis and returned a chloride value of 48 mg/kg and GRO and DRO value of non-detect. A total of 36 yards of contaminated soil was taken to a NMOCD approved facility for disposal. A total of 36 yards of caliche was imported to the site to serve a backfill. A sample of the imported caliche was taken to a commercial laboratory for analysis and returned a chloride value of 48 mg/kg. The site was backfilled and new berms were installed around the heater-treater.

Photo documentation of all activities can be found in Appendix D.

Given that the contaminated soil was removed from the site as requested by NMOCD and replaced with clean, imported soil, Apache respectfully seeks '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,

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

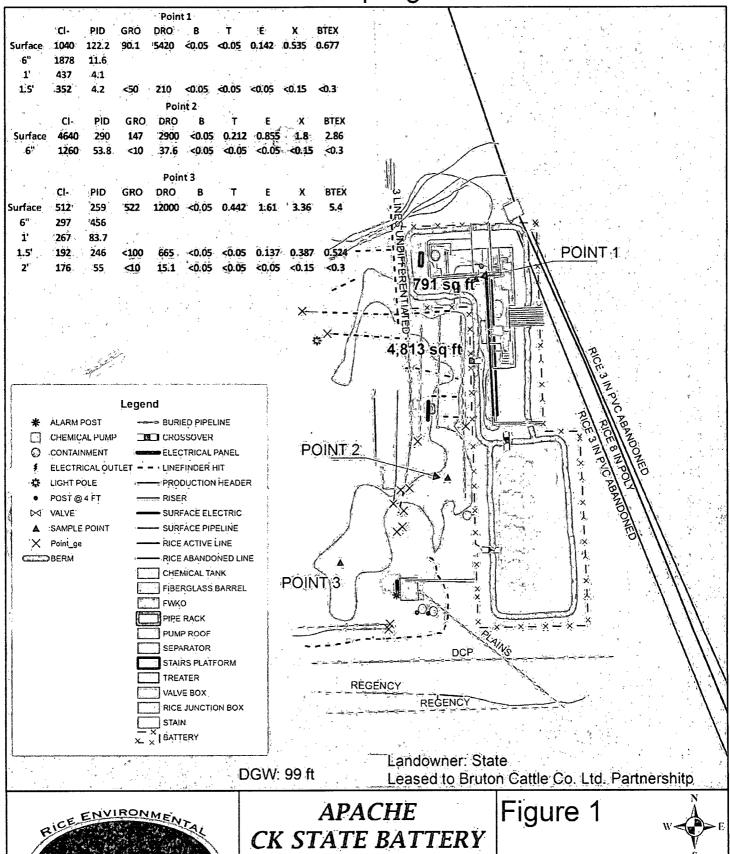
Appendix C – Excavation Sampling Labs

Appendix D – Photo Documentation

Appendix E - Final C-141



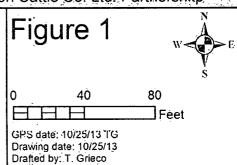
Initial Sampling Data



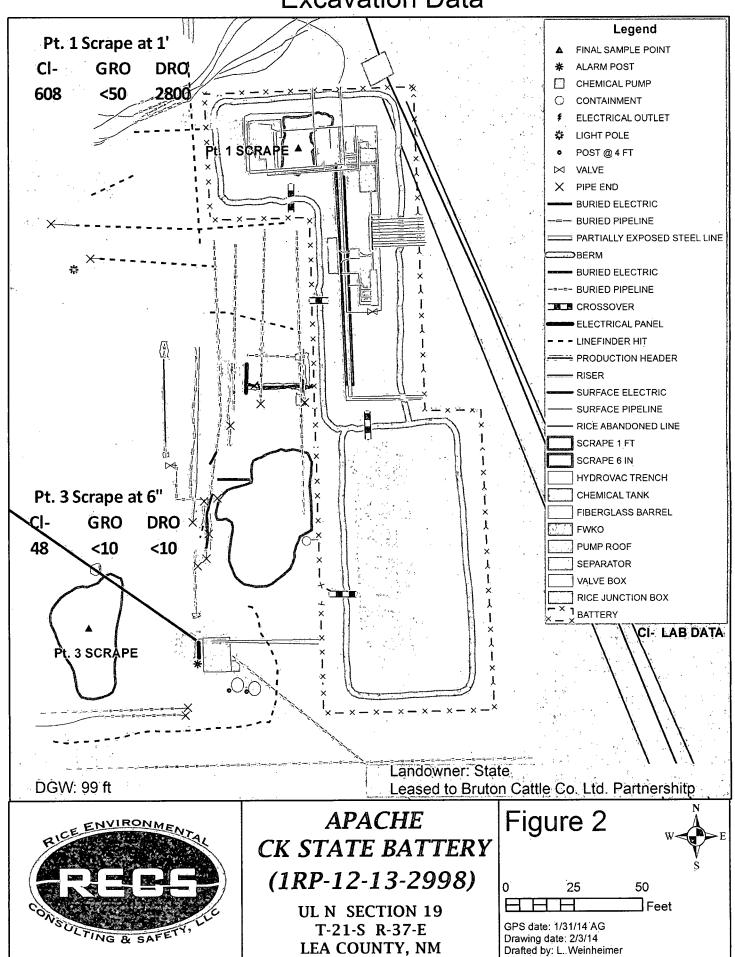


# IRP-12-13-2998

UL N SECTION 19 T-21-S R-37-E LEA COUNTY, NM



### **Excavation Data**





#### HOBBS OCD

District 1
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

## State of New Mexico Energy Minerals and Natural Resources 1 5 2013

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Summer Copy to appropriate District Onice in accordance with 19.15.29 NMAC.

RECEIVED

Release	Notification	and	Corrective	Action

						OPERAT	ľOR	🔀 Ini	tial Report		Final Repo				
Name of Comp						Contact Bri		•							
Address 8 Elli			M 88231				lo. 432-631-698	32							
Facility Name	CK Sta	te Battery				Facility Typ	e Battery		~~~~						
Surface Owner	r State			Mineral O	wner	,		API No. 30-025-06672							
Out the Other	1 Billio				111101			[7311]	10. 30-023-	30012					
				LOCA	<u>TIO</u>	N OF REI	LEASE								
	Section	Township	Range	Feet from the	North	VSouth Line	Feet from the	East/West Lin		Cour	ty				
N	19	21S	37E	300'		FSL	22091	FWL		Lea	l				
	1			į											
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True of Daluara	0!! 4	DJ £ 117-		NAT	UKE	OF RELI		1 1 1 1 1	<u> </u>	<u> </u>	•				
Type of Release Source of Release			ler				Release 15 Barre		Recovered I						
Source of Refere	se mener	reater				10/19/13	out of Occurrenc		a rioul of Dis 3 at 2:45 a.m.						
Was Immediate	Notice G	iven?				If YES, To	Whom?	1	o at at to atta						
			Yes 🛚	No 🗌 Not Rec	quired										
By Whom?						Date and H	our								
Was a Watercou	irse Reacl					If YES, Vo	lume Impacting t	he Watercourse.	-						
			Yes 🛛	No											
If a Watercourse	was Imp	acted, Descri	be Fully.*												
Describe Cause of The gasket on the dispatched to pic	e Heater	Treater corro	ded releas	ing 15 barrels of o	il and	produced wate	er. The Heater Tr	eater was isolate	d and a vacuu	m true	c was				
collected.	oted <b>4,81</b> 3	square feet i	nside the	bermed facility an											
regulations all op public health or t	perators a the enviro rations ha ent. In ad	re required to nment. The a ve failed to a dition: NMO	report an acceptance dequately CD accept	is true and comple d/or file certain releaf a C-141 repor investigate and rel ance of a C-141 re	lcase n t∙by≔th mediat	notifications and NMOCD mate contamination	d perform correct arked as #Final-Re on that pose a thre	tive actions for r eport!! does not r eat to ground wa	cleases which elieve the ope ter, surface w	may e rator o ater, hu	ndanger Hiability man health				
	,						OIL CONS	SERVATIO	DIVISIO	)N.					
D		2./					<u> </u>	10, 11/12	101	Daa	A_a_				
Signature:	uce Pa	races					J	(APPA) X 1 mm	A		XX				
Printed Name: B	Bruce Bak	er				Approved by	Environmental Sp	ecielistvironn	erital Spec	ialist	<u> </u>				
Title: Environme	ental Tecl	mician				Approval Date	: 11/15/13	Expiratio	n Date: 51	5	3				
E-mail Address:	larry.bak	ст@арасьесс	rp.com				Approval: SUB		- Attached						
Date: 11/15/13			Pli	one: 432-631-698	2	C-141 E	A 0111211	13			-2998				

Appendix B
Initial Sampling Lab



November 19, 2013

**BRUCE BAKER** 

APACHE - EUNICE

P. O. BOX 1849

**EUNICE, NM 88231** 

RE: CK STATE BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 11/13/13 11:10.

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/qa/lab">www.tceq.texas.gov/field/qa/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)

Accreditation applies to public drinking water matrices.

Celey D. Keine

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

Received:

11/13/2013

Reported:

11/19/2013

Project Name:

CK STATE BATTERY

Project Number: Project Location: NONE GIVEN NOT GIVEN

Sampling Date:

11/01/2013

Sampling Type:

Soil

Sampling Condition:

\*\* (See Notes)

Sample Received By:

Jodi Henson

#### Sample ID: PT. 1 SURFACE (H302766-01)

TEX 8021B  Analyte	mg/	kg	Analyze	d By: MS				_	S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/14/2013	ND	1.75	87.5	2.00	13.2	
Toluene*	<0.050	0.050	11/14/2013	ND	1.75	87.4	2.00	13.0	
Ethylbenzene*	0.142	0.050	11/14/2013	ND	1.74	87.1	2.00	13.2	
Total Xylenes*	0.535	0.150	11/14/2013 ND		5.12	85.3	6.00	12.7	
Total BTEX	0.677	0.300	11/14/2013	ND					
Surrogate: 4-Bromofluorobenzene (PIL	153 9	% 89.4-12	6						
Chloride, SM4500CI-B	153 % 89.4-126 mg/kg		Analyze	d By: AP				. =	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1040	16.0	11/15/2013	ND	416	104	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS		14.50			S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	90.1	50.0	11/13/2013	ND	217	108	200	4.00	
DRO >C10-C28	5420	50.0	11/13/2013	ND	215	107	200	6.89	
Surrogate: 1-Chlorooctane	113 9	65.2-14	0	- W-					
Surrogate: 1-Chlorooctadecane	191 9	63.6-15	4						

\*=Accredited Analyte Cardinal Laboratories

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim ansing, 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 fiable for incidental or consequential damages, including, without kimitation, business interruptions, loss of use, or loss of use, or loss of profits incurred by client, its subsidianes, 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.

Celley D. Keene

Celey D. Keene, Lab Director/Quality Manager



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

Received:

11/13/2013

Reported:

11/19/2013

Project Name:

CK STATE BATTERY

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

11/01/2013

Sampling Type:

Soil

Sampling Condition: Sample Received By: \*\* (See Notes)

Jodi Henson

Sample ID: PT. 1 @ 1.5' (H302766-02)

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	11/14/2013	ND	1.75	87.5	2.00	13.2	
Toluene*	<0.050	0.050	11/14/2013	ND	1.75	87.4	2.00	13.0	
Ethylbenzene*	<0.050	0.050	11/14/2013	ND	1.74	87.1	2.00	13.2	
Total Xylenes*	<0.150	0.150	11/14/2013	ND	5.12	85.3	6.00	12.7	
Total BTEX	<0.300	0.300	11/14/2013	ND					
Surrogate: 4-Bromofluorobenzene (PIE	106 %	6 89.4-12	6						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					- 15
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	11/15/2013	ND	416	104	400	3.92	
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	<50.0	50.0	11/13/2013	ND	217	108	200	4.00	
DRO >C10-C28	210	50.0	11/13/2013	ND	215	107	200	6.89	
Surrogate: 1-Chlorooctane	91.4	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	127 9	63.6-15	4						

#### Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keine



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

Received:

11/13/2013

Reported:

11/19/2013

Project Name: Project Number: CK STATE BATTERY

Project Location:

NOT GIVEN

NONE GIVEN

Sampling Date:

11/01/2013

Sampling Type:

Soil

Sampling Condition:

\*\* (See Notes)

Sample Received By:

Jodi Henson

#### Sample ID: PT. 2 SURFACE (H302766-03)

BTEX 8021B	mg/	kg	Analyze	d By: MS					S-04
<sup>,</sup> Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/14/2013	ND	1.75	87.5	2.00	13.2	
Toluene*	0.212	0.050	11/14/2013	ND	1.75	87.4	2.00	13.0	
Ethylbenzene*	0.855	0.050	11/14/2013	ND	1.74	87.1	2.00	13.2	
Total Xylenes*	1.80	0.150	11/14/2013	ND	5.12	85.3	6.00	12.7	
Total BTEX	2.86	0.300	11/14/2013	ND					
Surrogate: 4-Bromofluorobenzene (PIE	147 %	6 89.4-12	6						
Chloride, SM4500CI-B			Analyze	Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4640	16.0	11/15/2013	ND	416	104	400	3.92	
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	147	50.0	11/13/2013	ND	217	108	200	4.00	
DRO >C10-C28	2900	50.0	11/13/2013	ND	215	107	200	6.89	
Surrogate: 1-Chlorooctane	77.8 5	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	133 %	63.6-15	4						

#### 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 whistoever 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 incoental or consequential damages, including, without limitation, business interruptions, loss of or profits incurred by client, its subsidiaries, affiliates or successors arising out to 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. Keine



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

Received:

11/13/2013

Reported:

11/19/2013

Project Name:

CK STATE BATTERY

Project Number: Project Location: NONE GIVEN

Sampling Date:

11/01/2013

Sampling Type:

Sampling Condition:

\*\* (See Notes)

Sample Received By:

Jodi Henson

NOT GIVEN

Sample ID: PT. 2 @ 6" (H302766-04)

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	11/14/2013	ND	1.75	87.5	2.00	13.2	
Toluene*	<0.050	0.050	11/14/2013	ND	1.75	87.4	2.00	13.0	
Ethylbenzene*	<0.050	0.050	11/14/2013	ND	1.74	87.1	2.00	13.2	
Total Xylenes*	<0.150	0.150	11/14/2013	ND	5.12	85.3	6.00	12.7	
Total BTEX	<0.300	0.300	11/14/2013	ND					
Surrogate: 4-Bromofluorobenzene (PIL	108 9	% 89.4-12	6						
Chloride, SM4500CI-B	. 108 % 89.4-12 mg/kg		Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1260	16.0	11/15/2013	ND	416	104	400	3.92	
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	11/13/2013	ND	217	108	200	4.00	
DRO >C10-C28	37.6	10.0	11/13/2013	ND	215	107	200	6.89	
Surrogate: 1-Chlorooctane	106 9	65.2-14	0						
Surrogate: 1-Chlorooctadecane	120 9	63.6-15	4						

#### Cardinal Laboratories

\*=Accredited Analyte

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Celeg & Keene



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

Received:

11/13/2013

Reported:

11/19/2013

Project Name:

CK STATE BATTERY

Project Number: Project Location:

NONE GIVEN

NOT GIVEN

Sampling Date:

11/01/2013

Sampling Type:

Soil

Sampling Condition:

\*\* (See Notes)

Sample Received By:

Jodi Henson

Sample ID: PT. 3 SURFACE (H302766-05)

BTEX 8021B	mg/	kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/14/2013	ND	1.75	87.5	2.00	13.2	
Toluene*	0.442	0.050	11/14/2013	ND	1.75	87.4	2.00	13.0	
Ethylbenzene*	1.61	0.050	11/14/2013	ND	1.74	87.1	2.00	13.2	
Total Xylenes*	3.36	0.150	11/14/2013	ND	5.12	85.3	6.00	12.7	
Total BTEX	5.40	0.300	11/14/2013	ND					
Surrogate: 4-Bromofluorobenzene (PIL	163 9	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	11/15/2013	ND	416	104	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	522	50.0	11/13/2013	ND	217	108	200	4.00	
DRO >C10-C28	12000	50.0	11/13/2013	ND	215	107	200	6.89	
Surrogate: 1-Chlorooctane	185 9	65.2-14	0						
Surrogate: 1-Chlorooctadecane	294 9	63.6-15	4						

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Celeg & Keine



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

Received:

11/13/2013

Reported:

11/19/2013

Project Name:

CK STATE BATTERY

Project Number: Project Location: NONE GIVEN

NOT GIVEN

Sampling Date:

11/01/2013

Sampling Type:

Soil

Sampling Condition:

\*\* (See Notes)

Sample Received By:

Jodi Henson

Sample ID: PT. 3 @ 1.5' (H302766-06)

BTEX 8021B	mg/	kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BŞ	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/15/2013	ND	1.75	87.5	2.00	13.2	
Toluene*	<0.050	0.050	11/15/2013	ND	1.75	87.4	2.00	13.0	
Ethylbenzene*	0.137	0.050	11/15/2013	ND	1.74	87.1	2.00	13.2	
Total Xylenes*	0.387	0.150	11/15/2013	ND	5.12	85.3	6.00	12.7	
Total BTEX	0.524	0.300	11/15/2013	ND					
Surrogate: 4-Bromofluorobenzene (PIL	132 9	% 89.4-12	6						
Chloride, SM4500CI-B			Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	11/15/2013	ND	416	104	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS			· · · · ·		S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	11/14/2013	ND	182	91.1	200	5.05	
DRO >C10-C28	665	100	11/14/2013	ND	182	90.8	200	6.00	
Surrogate: 1-Chlorooctane	96.1	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	231 9	% 63.6-15	4						

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Celey D. Kune



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

Received:

11/13/2013

Reported:

11/19/2013

Project Name:

CK STATE BATTERY

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

11/01/2013

Sampling Type:

Soil

Sampling Condition:

\*\* (See Notes)

Sample Received By:

Jodi Henson

#### Sample ID: PT. 3 @ 2' (H302766-07)

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	11/14/2013	ND	1.75	87.5	2.00	13.2	
Toluene*	<0.050	0.050	11/14/2013	ND	1.75	87.4	2.00	13.0	
Ethylbenzene*	<0.050	0.050	11/14/2013	ND	1.74	87.1	2.00	13.2	
Total Xylenes*	<0.150	0.150	11/14/2013	ND	5.12	85.3	6.00	12.7	
Total BTEX	<0.300	0.300	11/14/2013	ND					
Surrogate: 4-Bromofluorobenzene (PIL	107 9	89.4-12	6				,		
Chloride, SM4500CI-B	mg/	0.300 7 % 89.4-126 g/kg  Reporting Limit 16.0	Analyze	Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	11/15/2013	ND	416	104	400	3.92	
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	11/14/2013	ND	182	91.1	200	5.05	
DRO >C10-C28	15.1	10.0	11/14/2013	ND	182	90.8	200	6.00	
Surrogate: 1-Chlorooctane	107 9	65.2-14	0						
Surrogate: 1-Chlorooctadecane	129 9	63.6-15	4						

#### Cardinal Laboratories

\*=Accredited Analyte

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Celeg D. Keine



#### **Notes and Definitions**

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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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Celey D. Kune

# RDINAL 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:	Aparhe	٠.			- 1					Bį	LL TO						ANAI	LYSI	S RE	QUE	ST			
Project Manager								P.(	O. #:				]											T
Address:				· .			÷	Со	mpan	y:		• .		<u> </u>			က္ခ							
City: Hobbs	State: NM	Zip	: 88	240·				Att	n:					1 18		ĺ	E		1	ŀ				
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Phone Result: Relinguished By: Received By: ☐ Yes ☑ No Fax Result: ☐ Yes ☑ No REMARKS:

Add'l Phone #: Add'l Fax #:

email results Bruce Baker, Kyle Norman, Lara Weinheimer, Hack Conder

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

Relinguished By:

Sample Condition Cool Intact

Ves Wes

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

Time:

Appendix C
Excavation Sampling Labs



February 10, 2014

**BRUCE BAKER** 

APACHE - EUNICE

P. O. BOX 1849

**EUNICE, NM 88231** 

RE: APACHE C. K. STATE BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/05/14 11:07.

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)

Accreditation applies to public drinking water matrices.

Celey D. Keens

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

Received:

02/05/2014

Sampling Date:

02/04/2014

Reported:

02/10/2014

Sampling Type:

Soil

Project Name:

APACHE C. K. STATE BATTERY

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sample Received By:

Jodi Henson

#### Sample ID: PT. 1 @ 1' (H400362-01)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	608	16.0	02/10/2014	ND	416	104	400	0.00		
TPH 8015M	mg	/kg	Analyze	d By: ms					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<50.0	50.0	02/07/2014	ND	194	96.8	200	5.70		
DRO >C10-C28	2800	50.0	02/07/2014	ND	187	93.5	200	10.0		
Surrogate: 1-Chlorooctane	109	% 65.2-14	0							
Surrogate: 1-Chlorooctadecane	157	% 63.6-15	4							

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keine Celey D. Keene, Lab Director/Quality Manager



#### **Notes and Definitions**

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or

matrix interference's.

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. Keine

### 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	ompany Name: Apacho roject Manager: Bruce Paker  ddress: Larg. Paker & Apachecorf. Com								EILETTO				ANALYSIS REQUEST											
Project Manage	" Bruce Pe	KP		•		· · · · · · · · · · · · · · · · · · ·		P.O. #:								٠.				1				
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City: Hobbs		State: NM	Zip:	88	240			Attn:			<u> </u>	·			<u> </u>			-	<b> </b>					
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Project #:	Project #: Project Owner:						Ci	ty:		· '	• • •	_ ر	≥		I	1/8								
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	Kyle Humphrey				/			Fa	x #:				] 은	₩	B I	(g)	1	=		ļ ,				
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<sup>†</sup> Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2446



February 10, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

**EUNICE, NM 88231** 

RE: APACHE C. K. STATE BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/05/14 11:07.

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)

Accreditation applies to public drinking water matrices.

Celeg D. Keine

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

Received:

02/05/2014

Sampling Date:

02/04/2014

Reported:

Sampling Type:

Soil

02/10/2014

Sampling Condition:

Cool & Intact

Project Name:

APACHE C. K. STATE BATTERY

Sample Received By:

Jodi Henson

Project Number: Project Location: NONE GIVEN

NOT GIVEN

Sample ID: PT. 3 - 6" SCRAPE (H400363-01)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/10/2014	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	02/07/2014	ND	194	96.8	200	5.70	
DRO >C10-C28	<10.0	10.0	02/07/2014	ND	187	93.5	200	10.0	
Surrogate: 1-Chlorooctane	99.1	% 65.2-14	0						

99.1 %

Surrogate: 1-Chlorooctadecane

102 %

63.6-154

\*=Accredited Analyte Cardinal Laboratories

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. 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

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 waved 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 cleint, its subscilaines, affiliates or successions arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

# D.

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

#### ARDINAL 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

Company Name	(303) 333-2320 FAX (303) 333-24	70 (3	20,010-1001 1			9			<del></del> -		3/016		<del></del>			<del>-</del>	
	1100	<u> </u>	<del> </del>		LL FO	ANALYSIS REQUEST											
Project Manage	Bruce Baker	ruce Baker P.O. #:								. * :			, 107, 17,				
Address: Lo	My, Beker-@Apechaconf	Cov	n):	Company:	<u></u>					ns	÷						
City: Hobbs	State: NM	Zip:_88	3240	_ Attn:						<u></u>							
Phone #:	Fax #:			Address:						⋾	"					Ì	
Project #:	Project Owner:	5,5 <sup>1</sup> , 5	<u> </u>	City:		,,	Σ		工	1/5		.					
Project Name:			· · · · · · · · · · · · · · · · · · ·	State:	Zip:	<u>ğ</u>	5	×	<u>a</u>	ü		• :					
Project Location	: Apache CKState Va	4+01	· n	Phone #:		Chlorides	PH 801	BTEX	Texas TPH	Cations/A	TDS		ŀ			· ·	
	Kyle Humphrey		<u> </u>	Fax #:		[은	32	B	X	Ö	=						
FOR LAB USE ONLY			MATRIX	PRESERV	SAMPLING	] [	ᆸ		<u>6</u>	te			: -			]	
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H400363		(G)RA	GROUNDWATE WASTEWATER SOIL OIL SLUDGE	OTHER: ACID/BASE ICE / COO! OTHER:	DATE TIME								:				
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PLEASE NOTE: Liability an	nd Damages, Cardinal's liability and client's exclusive remedy for an	iy ciaim ans	ang whether based in contract	t or tort, snall be limited	to the amount paid by the client for	r the											

PLEASE NOTE: Liability and Damages, Cardina's liability and client's exclusive remedy for any daim arising whether based in contract or tori, shall be limited to the amount paid by the client for the analyses. All calms 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 consequental 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinguished By:	Date:	Received By:		Phone Result: ☐ Yes ☑ No Add'I Phone #:
	2-5-14	Men d M	مدا .	Fax Result: ☐ Yes ☑ No Add'l Fax #:
Kele toning	Time :01	Man Sil	Moon	REMARKS:
Relinguished By:	Date:	Received By:		email results
		<b>U</b>		Knorman@rice-ecs.com
	Time:			Kjones@riceswd.com; jkamplain@rice-ecs.com hconder@rice-ecs.com;
Delivered By: (Circle One)		Sample Condition	CHEÇKED BY:	Lweinheimer@rice-ecs.com
Sampler - UPS - Bus - Other:	1,11	Cool Intact Ves Ves No No	(flitfald)	Khumphrey@rice-ecs.com sedwards@rice-ecs.com,lflores@rice-ecs.com

<sup>†</sup> Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2636





February 12, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

**EUNICE, NM 88231** 

RE: CK STATE BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 02/06/14 15:47.

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.qov/field/ga/lab">www.tceq.texas.qov/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)

Accreditation applies to public drinking water matrices.

Celeg D. Keene

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

Received: Reported:

02/06/2014

02/12/2014

Project Name:

CK STATE BATTERY

Project Number: Project Location:

NONE GIVEN

NOT GIVEN

Sampling Date:

02/05/2014

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By: Amanda Ponce

#### Sample ID: IMPORTED CALICHE (H400382-01)

Chloride, SM4500CI-B	mg,	/kg	Analyzed By: HM						
Analyte	Result	Result Reporting Limit		Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	02/11/2014	ND	400	100	400	3.92	

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 Cleardinal 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 approved of Cardinal Laboratories.

Celey D. Kune



#### **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 SM4500CI-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Llability 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 Laboratomes.

Celey D. Keine

### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

#### ARDINAL 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

Company Namo: AP & Che	BILL TO	ANALYSIS REQUEST								
Project Manager: Bruce Paker	P.O. #.									
Address: Larry, Baker @ Apache Corp. Com	Company:	l   s								
City: Hobbs :State: NM Zip: 88240	Áttn:	H 8015 M STEX Cations/Anions TDS								
Phone#: :Fax#:	Address::									
Project #: Project Owner:	City:									
Project Name: A Peche CK State Pattery	State: ZIp:	Chlorides PH 8015 I BTEX exas TPF e Cations TDS								
Project Location: T-21-5 R-07-E	Phone #:	H 8015 BTEX Xas TF TDS TDS								
Sampler Name: Kyle Humphrey	Fax#:									
Tablid. Sample I.D. (G) (G) (G) (G) (G) (G) (G) (G) (G) (G)	PRESERV SAMPLING.  1000 CE PROPERTY PRO	Complete Cations//								
PLEASE NOTE: Limity and Damages. Cardingle stability and oriental protection records for any stability areas weather protecting crystal analysis. (All claims broaders are programs and any other cause which other chair to descript waited universimated in writing as secrebal, in one event supplication for the protection of consequents carriages, probably whose statistics, protecting which carried an additional or consequents carried to the protection of the consequents of Cardinal projections of which are supplicated in the protection of the carried and carried and the	nd received by Condens within 30 days wher completion of a , loss of use, of loss of profits incomed by effect, its substitu	he documents.								
Relinquished By:    Date: 2.6 - 14   Received By   Time: 97	Phone Re Fax Resu REMARK	sult: 🖸 Yes 🖾 No  Add'l Phone #; lt: 🗘 Yes 🖾 No  Add'l Fax #: 9:								
Delivered By: (Circle One) Sampler - UPS - Bus - Other: Z C HSU Received By:    Date:   Received By:   Received	Kjónés( Lweinhi Khumpi	in@rice-ecs.com @riceswd.com; jkamplain@rice-ecs.com hconder@rice-ecs.com; eimer@rice-ecs.com hrey@rice-ecs.com ds@rice-ecs.com,lflores@rice-ecs.com								

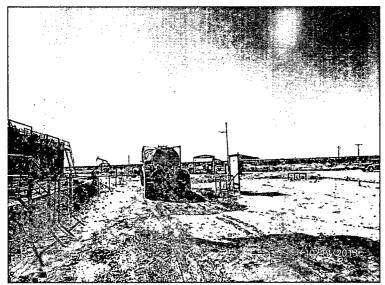
<sup>†</sup> Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476"

Appendix D
Photo Documentation

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

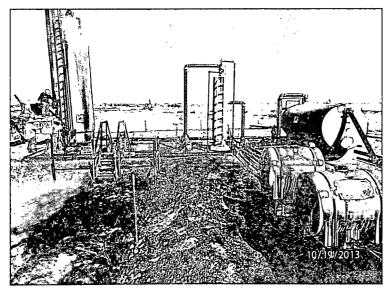
### **Apache CK State Battery**

Unit Letter N, Section 19, T21S, R37E



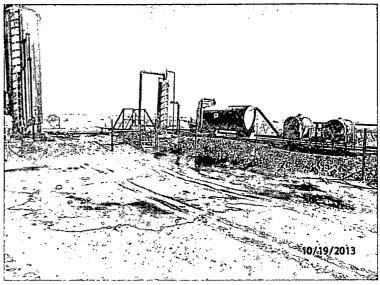
Initial release area, facing south

10/19/13



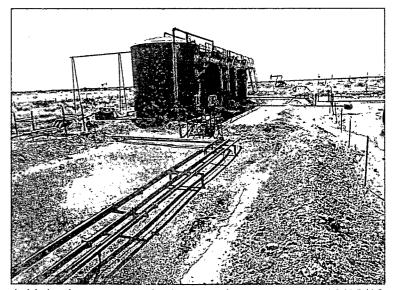
Initial release area, facing north

10/19/13



Initial release area, facing northeast

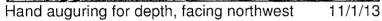
10/19/13

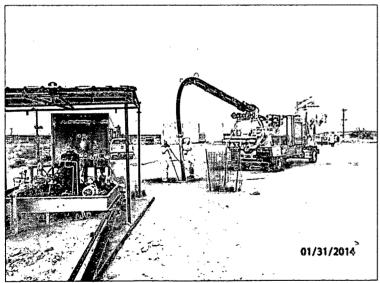


Initial release area, facing southeast

10/19/13.





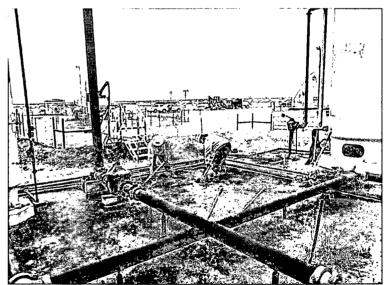


Line spot using hydrovac, facing west 1/31/14

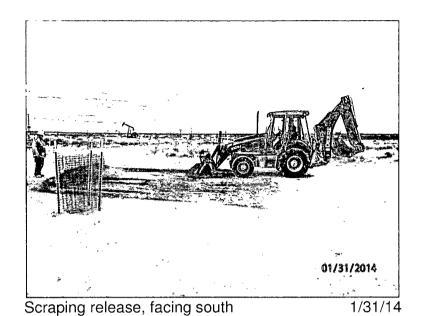


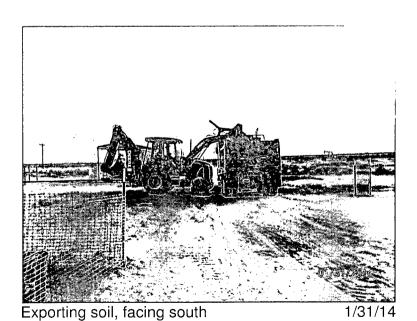
Plugging augur point with bentonite

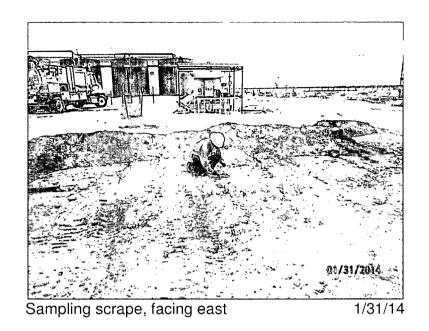
11/1/13

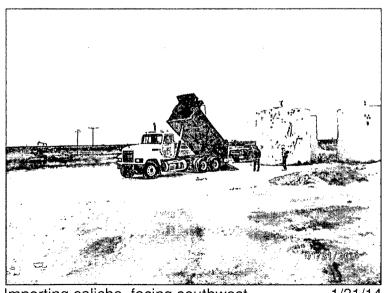


Hand shoveling release inside battery, facing southwest 1/31/14

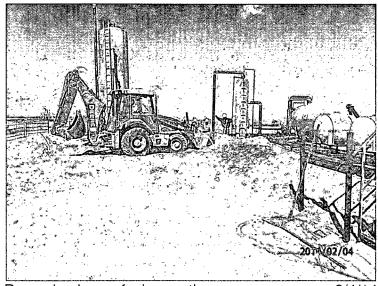






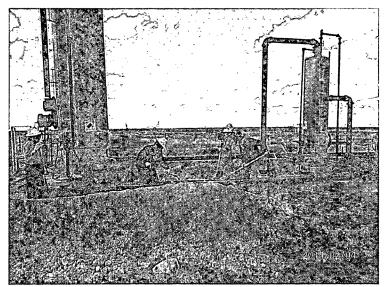


Importing caliche, facing southwest 1/31/14



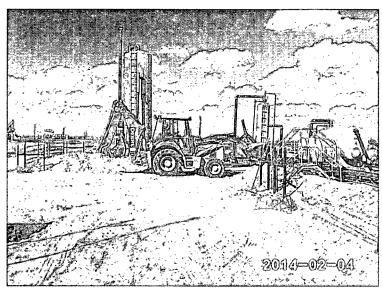
Removing berm, facing north



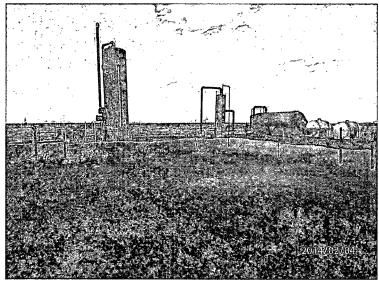


Backfilling battery, facing northeast

2/4/14

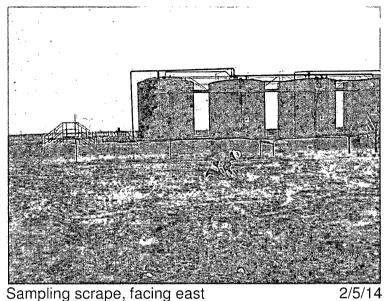


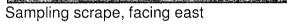
Replacing berm with clean caliche, facing north 2/4/14

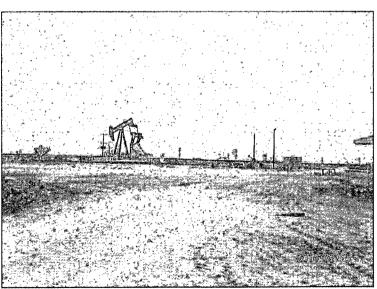


Battery completed, facing northeast

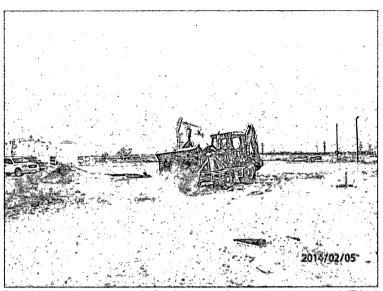
2/4/14





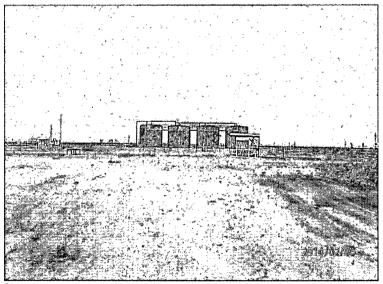


Site completed, facing northwest 2/5/14



Backfilling lease pad, facing northwest





Site completed, facing east

2/5/14

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

\* Attach Additional Sheets If Necessary

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

Form C-141
Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

			Rela	ease Notific	atio	n and Co	orrective A	ction							
						OPERA			☐ Initial Report 🏻 Final Repor						
Name of Co						Contact Br		102							
Address 8 Facility Nat			NM 8823	1		Telephone No. 432-631-6982  Facility Type Battery									
Surface Ow	ner State	e		Mineral C	wner		<del>-</del>		APING	30-025-	06672	<u>;</u>			
	_			LOCA	OIT	N OF REI	LEASE								
Unit Letter	Section	Township	Range	Feet from the	North	/South Line	Feet from the	East/V	Vest Line	County					
N	19	218	37E	300'		FSL	2209'	<u> </u>	WL	Lea					
			La	titude		Longitud	le								
				NAT	URE	OF RELI	EASE								
Type of Relea			ater				Release 15 Barr			Recovered					
Source of Rel	lease Heate	er-Treater				Date and H 10/19/13	lour of Occurrenc	e	Date and 2:45 a.m.	Hour of Disc	covery	10/19/13 at			
Was Immedia	ate Notice C		Yes 🔯	No 🔲 Not Re	-anired	If YES, To	Whom?								
By Whom?		L_J	103 67			Date and H	four								
Was a Water	course Reac						lume Impacting t	he Wate	rcourse.	<del></del>					
1			Yes 🛚	No											
If a Watercou	rse was Imp	nacted, Descri	be Fully.*	:											
Treater was iso	lated and a va	acuum truck wa	s dispatche	i Taken.*□The ga d to pick up standin	g fluid.	The gasket was	replaced.								
beginning on O commercial lab chloride levels. 192 mg/kg at 1. Range Organic: RECS met with around Point 2 1.5 ft bgs and to Point 1 was har 608 mg/kg, a G down 6 inches I value of non-de serve a backfill. new berms wer	ectober 21 <sup>st</sup> , 2 coratory for audropped from .5 ft bgs and s (DRO) drop n NMOCD— be scraped do to leave the re and excavated RO value of bgs. A sample ce installed are fry that the in	013 to assess the alysis. At Point 4,640 mg/kg at 2 form of the to a depth of 1 mon-detect and fe from the both of 60 yards of 6 fthe imported out the heater aformation gives	ne site. Thr nt I, the lab at the surfac ft bgs. Gas becember 6 <sup>th</sup> dd the area a contaminat ft bgs. A sa a DRO valu om of the s contaminate caliche was streater.	en.* The release asee points within the oratory chloride leve to 1,260 mg/kg at tooline Range Organi from readings above, 2013 to determine around Point 3 need ion until site abandoumple from the bottue of 2,800 mg/kg, crape was taken to a taken to a commercial true and complete is true and complete is true and complete is true and complete is true and complete is true and complete.	release rels drop 6 inche cs (GRG e regula a path fed to be onment. The are a comme a NMO cial laborate to t	area were sampliped from 1,040 is bgs. At Point 100 dropped at all tory standards a forward for the si excavated until On January 31 if the scrape was take a ground Point 2 creial laboratory CD approved faratory for analysthe best of my	led at the surface an mg/kg at the surface 3, the laboratory ch is ampling points to the surface to beloite. Based on the lactean. At Point 1, the surface to a commercial was scraped down for analysis and reteility for disposal. As sis and returned a changle of the surface of	d with de e to 352 i loride lev non-dete we regula boratory the area n tivities be I laborato 6 inches urned a c A total of hibride ve	epth. Represeng/kg at 1.5 els dropped ct at the bas cory standar analysis, NA eeded to be egan at the s ry for analys bgs. The ar hloride value of 48 m d that purs	sentative sample feet bgs. At from 512 mg, e of each auge do at the base MOCD reques excavated by the case around Poile of 48 mg/kg the caliche was ing/kg. The site uant to NMO	ples we. Point 2 /kg at the point of each ted that hand to ted by dachl and G mporte was b	re taken to a , the laboratory he surface to t. Diesel a ungur point. t the area o a depth of 1 - NMOCD, oride value of is also scraped RO and DRO d to the site to ackfilled and ules and			
public health should their o	or the environs harmont. In ad	onment. The we failed to a idition, NMO	acceptanc dequately CD accept	d/or file certain re e of a C-141 repo investigate and re ance of a C-141 r	rt by th mediat	e NMOCD ma le contamination	arked as "Final Re on that pose a thre	eport" de eat to gre	oes not reli ound water	eve the oper , surface wa	ator of ter, hu	f liability man health			
Signature;	Bruce	Baher				Approved by	OIL CONS Environmental S <sub>I</sub>	XUX	Kux	Ar and	A()	Q <sub>M</sub>			
Printed Name:	Bruce Ba	ker							4 TT OT 1111	erren nin					
Title: Enviro	nmental Te	chnician				Approval Date	: 4/03/14	"\_E	xpiration l	Date:					
E-mail Addres	ss: larry.bal			432-631-6982		Conditions of	Approval:			Attached	□ 2~\?	3-2998			