District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 Revised October 10, 2003 ubmit 2 Copies to appropriate

Form C-141

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

			Rele	ease Notifi	catio	n and Co	orrective A	ction	1					
						OPERA'	TOR		☐ Initi	al Report	\boxtimes	Final Repor		
Name of C	ompany	Apache Co	rp.		1	Contact	Natalie Gladde	en						
		349, Eunice,		231	ju e s	Telephone 1	No. (575) 390	-4186		72		7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Facility Na	me South	Lusk 34 Fed	leral #006	5	-7-	Facility Typ	e Production	Facility			-			
Surface Ov	vner BLN	Л		Mineral (Owner	er State Lease No. 30-025-37680								
				LOC	ATIO	N OF RE	LEASE							
Unit Letter	Section	Township	Range	Feet from the	North	h/South Line	Feet from the	East/	West Line	County				
A	34	19S	32E	990	FNL		990	FEL		Lea				
		170		itude		Longitu		122		200		A 1214		
			Lat		CUDE		100							
Type of Rele	ease Drill	ling fluids/Bri	ne Water	NA	UKI	Volume of	Release >100 b	bls	Volume I	Recovered	0 bbls			
Source of Re		legal Dumpin				Date and Hour of Occurrence 4/11/12 Date and Hour of Discovery 4/11/12								
Was Immed	iate Notice (Yes 🗵	No Not R	equired	If YES, To Whom?								
By Whom?						Date and I	Hour							
Was a Water	rcourse Read		Yes [] No		If YES, Vo	olume Impacting	the Wat	ercourse.		-			
If a Waterco	urse was Im	pacted, Descr	ribe Fully.	*			in the same					1		
		em and Reme bed drilling flu		n Taken.* water). They ba	cked up	to the edge o	f this location pa	d and en	nptied their	trucks in thi	ee diff	erent areas.		
The leak afformation and the leak afformation	ected 3 areas a NMOCD a ride impact well installed	approved disposer removed	nd totaling osal facilit l and a pla	sen.* g 16,006 sq. ft. T y. In two of the o stic liner was inst at no groundwate	excavat	ed areas, chlor a barrier to de	ide was removed ownward migrati	on of res	In the last sidual chlor	excavation, ide. A form	the so	ils with the porary		
regulations a public health should their or the enviro	all operators or the environment. In a	are required to ronment. The nave failed to	o report and acceptance acceptanc	e is true and comp nd/or file certain ce of a C-141 rep investigate and otance of a C-141	release ort by the remedia	notifications a he NMOCD mate contamination	nd perform corre larked as "Final I ion that pose a the re the operator of	Report" or reat to g	tions for rel does not rel round water ibility for c	eases which ieve the ope r, surface wa ompliance v	may en rator of ater, hu	ndanger f liability ıman health		
Signature:	a	telie	G	laddu		Ammondi	OIL CON	12154		DIVISIO	<u>DN</u>			
Printed Nam	e: Natalie (Gladden				Approved by	District Supervi	SOF	Heef	Bally	Mes	A .		
Title: EH&S	S Environme	ental Tech			113	Approval Da	te: 6/11/12		Expiration	Date:	0			

Conditions of Approval:

* Attach Additional Sheets If Necessary

Date:

E-mail Address: Natalie.gladden@apachecorp.com

Phone: (575) 390-4186

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 **HOBBS OCD**

State of New Mexico

Form C-141 Revised August 8, 2011

District II
811 S. First St., Artesia, NM 88210
District III

Energy Minerals and Natural Resources

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

1000 Rio Brazos Road, Aztec, NM 87410 APR 3 0 2012 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

Santa Fe, NM 87505 DECEIVED

			Rele	ease Notific	catio	n and Co	orrective A	ction	l					
						OPERATOR								
Name of Co							talie Gladden							
		9 Eunice, NI		11.6	_	Telephone No. 575-390-4186 Facility Type Production Facility								
Facility Nan	ne South	East Lusk 34	Federal	#6		Facility Typ	e Production Fa	acility						
Surface Own	ner BLM			Mineral C)wner	State			API No	30-025-3	37680	37681		
						N OF REI	LEASE							
Unit Letter	Section	Township	Range	Feet from the	North	/South Line	Feet from the	East/V	Vest Line	st Line County				
A	34	19S	32E	990'	FNL		990'	FEL		Lea				
			La	titude		Longitud	le.							
	NATURE OF RELEASE													
Type of Relea	ase Drilling	g fluids/Brine	water	11281	CICL		Release >100		Volume I	Recovered 0)			
Source of Rel						Date and H 4/13/2012	lour of Occurrence	e	Date and 4/13/12	Hour of Dis	covery			
Was Immedia	ate Notice C		Yes 🗵	No Not Re	equired	If YES, To	Whom?							
By Whom?						Date and H	lour							
Was a Watero	course Reac		Yes 🛭	¶ No		If YES, Vo	olume Impacting the	he Wate	ercourse.					
If a Watercou	rse was Im	nacted. Descr	ibe Fully.	*										
Describe Cau An unknown					ced up t	o the edge of	this location pad a	nd emp	tied their ti	rucks in thre	e differ	rent areas.		
Describe Area There is no gr				ken.* be delineated and	remedia	ition will begi	n.							
regulations al public health should their o	I operators or the envir operations h nment. In a	are required to ronment. The ave failed to a ddition, NMC	o report ar acceptance adequately OCD accep	nd/or file certain rece of a C-141 report investigate and re	elease nort by the emediate	otifications are e NMOCD m e contaminati	knowledge and und perform correct arked as "Final Re on that pose a three the operator of r	tive acti eport" d eat to gr	ons for release oes not release ound water	eases which ieve the ope r, surface wa	may en rator of ater, hu	ndanger f liability man health		
Signature:	a	belie	GO	odden		Approved by	OIL CONS	炒	ATION	DIVISION SPACIAL	W W	ď		
Printed Name	: Natalie G	Bladden				- pp.o.ou oy		- MEVEL	- AMILEUR	m pheciai	TOF			
Title: EHS E	nvironment	al Tech				Approval Dat	e: 04/30/12	I	Expiration	Date: 07 0	2/12			
E-mail Addre	ess: natalie.	gladden@apa	checorp.c	om			Approval: Sug M	n Fin	ML	Attached				
	8/12	Phone: 5	75-390-4	186		C- 141 B	4 02/02/12			1RP-06		2820		

^{*} Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
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* Attach Additional Sheets If Necessary

State of New Mexico Energy Minerals and Natural Resources

Form C-141
Revised August 8, 2011

ubmit 1 Copy to appropriate District Office in

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.

			Dol	ease Notific		n and C		otion			All States			
			Rei	ease Nounc	catio			CHOI	_					
N. CC						OPERA'				al Report		Final Report		
		pache Corpo				Contact Natalie Gladden Telephone No. 575-390-4186								
		9 Eunice, NI East Lusk 34		#6		Facility Type Production Facility								
		East Lusk 34	+ rederai				e Production r	actiffy	y					
Surface Ow	ner BLM			Mineral C)wner	State			API No. 30-025-37680					
				LOCA	ATIO	N OF RE	LEASE							
Unit Letter	Section	Township	Range	Feet from the		/South Line								
A	24	198	32E	990'	FNL	NL 990' FEL Lea								
A	34	195			FNL			FEL		Lea				
			La	titude		Longitud	le							
				NAT	URF	OF REL	EASE							
Type of Rele	ase Drilling	g fluids/Brine	water				Release >100		Volume F	Recovered 0				
Source of Re	lease Illega	al Dumping					Hour of Occurrence	ce		Hour of Dis	covery			
Was Immedi	1. 31.11. 6	3' 0				4/13/2012	W		4/13/12					
was Immedi	ate Notice (Yes 🗵	No Not R	equired	If YES, To	wnom?							
By Whom?					1	Date and I	lour							
Was a Water	course Read	ched?					olume Impacting t	the Wat	ercourse.					
			Yes [No										
If a Waterco	irse was Im	pacted, Descr	ibe Fully.	*										
		em and Reme ned drilling flu		on Taken.*	ked up	to the edge of	this location pad	and emp	otied their tr	rucks in thre	ee diffe	rent areas.		
There is no g	round water		Site will	be delineated and										
regulations a public health should their or the enviro	Il operators or the envir operations h nment. In a	are required to ronment. The nave failed to	to report at acceptant adequately OCD accep	e is true and comp nd/or file certain a ce of a C-141 repo y investigate and a ptance of a C-141	release ort by the remedia	notifications a he NMOCD mate contaminat	nd perform correct parked as "Final Rich that pose a thr	ctive act deport" of reat to g	tions for relations for relations not relations not relations.	eases which ieve the ope r, surface wa	may en rator of ater, hu	ndanger f liability man health		
/		- /	1				OIL CON	SERV	ATION	DIVISIO	ON			
Signature:	a	alu (بال	gdden	/	A man 1 1	Environment C	!-1'						
Printed Nam	e: Natalie (Gladden				Approved by	Environmental S	pecialis	i.					
Title: EHS I	Environmen	tal Tech				Approval Da	te:		Expiration	Date:				
E-mail Addr	ess: natalie.	.gladden@apa	achecorp.c	com		Conditions o	f Approval:			Attached				
Date: 4/	18/12	Phone:	575-390-4	186										



APACHE CORPORATION

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

Southeast Lusk 34 Federal #006

Closure Report

API 30-025-37680

Release Date: April 11, 2012

Unit Letter A, Section 34, Township 19S, Range 32E

Rice Environmental Consulting & Safety

P.O. Box 5630 Hobbs, NM 88241 Phone 575.393.4411 Fax 575.393.0293

May 14, 2012

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 – Southeast Lusk 34 Federal #6 AD UL/A sec. 34 T19S R32E API No. 30-025-37680

Mr. Leking:

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

Background and Previous Work

The site is an illegal discharge of drilling fluids by an unknown party at the Apache Southeast Lusk 34 Federal #6. Fluids were located in three (3) areas off the south end of the well pad. An initial form C-141 was submitted by Apache Corporation on April 18, 2012 (Appendix A). The site is located north of U.S. Highway 62/180 west of Hobbs, near the Laguna Plata area in unit letter 'A', section 34, T19S, R32E in Lea County, New Mexico.

On April 11, 2012, RECS personnel initiated work on the Southeast Lusk 34 Federal #6 (Figure 1). Surface soil samples were collected and field tested for chloride. Headspace measurements were also taken in the field using a Photo Ionization Detector (PID). The samples were submitted to a commercial laboratory for chloride analysis, and ranged from 8,400 ppm (parts per million or mg/kg) to 83,200 ppm (Appendix B). The samples from Pt.1, Pt.2, and Pt.3 were also analyzed for TPH (GRO/DRO) and ranged from <10.0 ppm to 845 ppm.

On April 17-18, 2012, RECS personnel collected and field tested samples from six (6) vertical sampling points throughout the leak areas. Representative grab samples were collected from the two (2) bottom most samples in each vertical. The samples were submitted to a laboratory for chloride and TPH analyses (Appendix B). Vertical 1 in the southwest leak area contained 80.0 ppm chloride at 3 ft. below ground surface (bgs), and Vertical 2 in the center leak area contained 64.0 ppm chloride at 2 ft. bgs (Figure 2). The remaining verticals were located in the southeast leak area (Figure 3). Vertical 3 contained 80 ppm chloride at 11 ft. bgs. Vertical 4 contained 160 ppm at 7 ft. bgs. Vertical 5 contained 96 ppm at 6 ft. bgs. Vertical 6 contained 208 ppm at 13 ft. bgs.

Remediation of the leak proceeded according to discussion between RECS and NMOCD personnel on April 19, 2012 (Figure 5). Subsequently, the southwest area was excavated to 3 ft. bgs and the center area was excavated to 1 ft. bgs. The southeast area was excavated to 2 ft bgs. An area encompassing Verticals 3 and 6 was excavated to 4.5 ft. bgs, and a 20 mil reinforced plastic liner was installed in the bottom of the 4.5 ft. excavation (Figure 4).

Impacted soils, totaling 2,768 cubic yards, were removed to a NMOCD approved disposal facility. The excavations were backfilled with 3,000 cubic yards of clean soil (Appendix B) and contoured to the surrounding area. See Appendix C for photographs of field activities.

Conclusion

According to data obtained from the installation of a temporary groundwater monitoring well at the site in July 2011, no groundwater exists beneath the site (Appendix D). Due to the removal of impacted soils in the southwest and center excavations, and the removal of the most highly impacted soils in the southeast excavation and the installation of the migration barrier, Apache submits the final C-141 (Appendix E) and respectfully requests the closure of the regulatory file for this site.

Apache Corporation appreciates the opportunity to work with you on this project. Please call Natalie Gladden (575) 390-4186 if you have any questions or comments.

Sincerely,

Bruce Baker

Head Foreman

Bruce Baden

RECS

(575) 631-5157

Attachments:

Figure 1: Site Plat with Initial Lab Data

Figure 2: Site Plat with Southwest and Center Vertical Data

Figure 3: Site Plat with Southeast Vertical Data
Figure 4: Site Plat with Southeast Liner Installation
Figure 5: Site Plat with Final Excavation Areas

Appendix A: Initial Form C-141 Appendix B: Laboratory Results

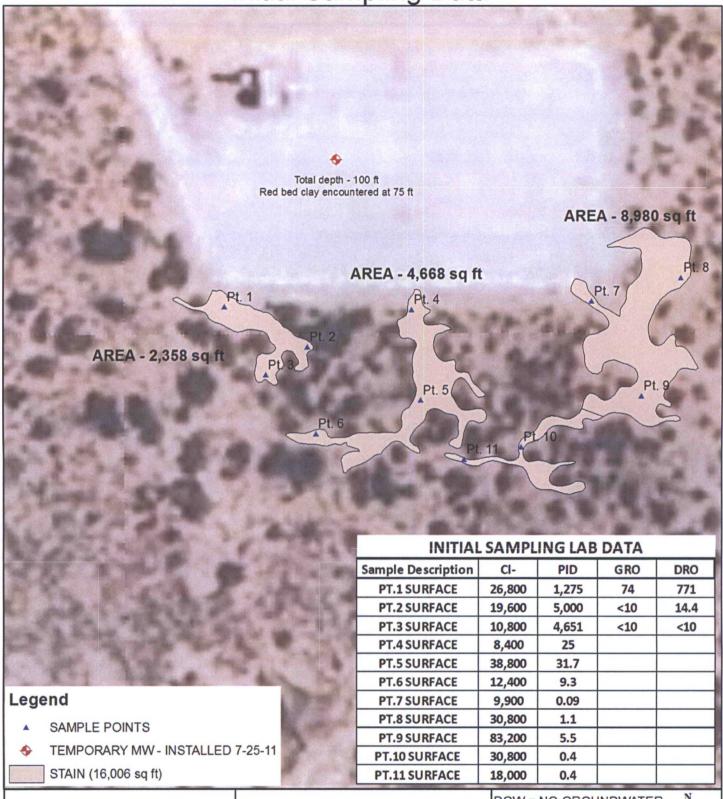
Appendix C: Site Photographs

Appendix D: Temporary Monitoring Well Log, Letter of Groundwater Verification, and

Plugging Report

Appendix E: Final Form C-141

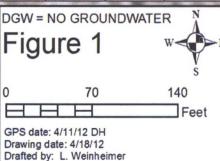
Initial Sampling Data



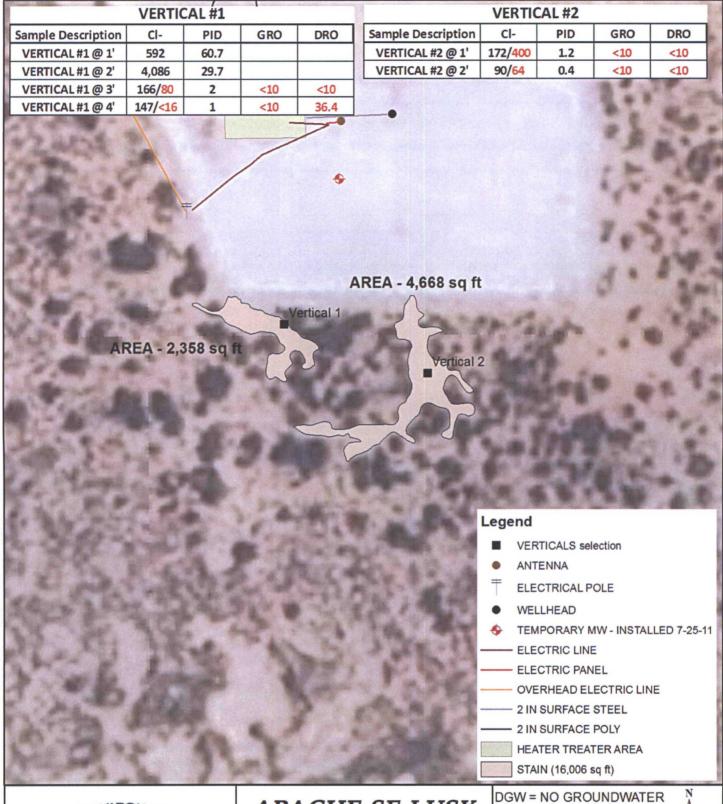


APACHE SE LUSK 34 FEDERAL #6 AD

LEGALS: UL/A sec. 34 T-19-S R-32-E LEA COUNTY, NM



Southwest and Center Vertical Data

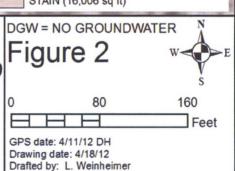




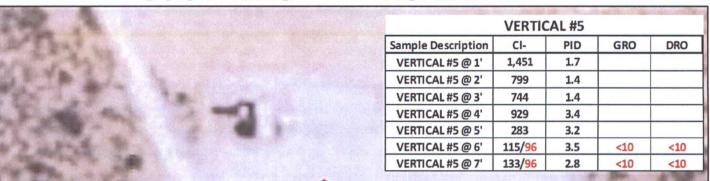
APACHE SE LUSK 34 FEDERAL #6 AD

4/17/12

LEGALS: UL/A sec. 34 T-19-S R-32-E LEA COUNTY, NM



SOUTHEAST VERTICAL DATA



Vertical 5 Vertical

Total depth - 100 ft Red bed clay encountered at 75 ft

AREA - 8,980 sq ft

Vertical 6

ertical 3

VERTICAL #3									
Sample Description	CI-	PID	GRO	DRO					
VERTICAL #3 @ 1'	5,541	3.4							
VERTICAL #3 @ 2'	3,737	2.3							
VERTICAL#3@3'	3,848	1.3							
VERTICAL #3 @ 4'	4,857	1.9							
VERTICAL #3 @ 5'	2,723	2.3							
VERTICAL #3 @ 6'	1,317	4.6							
VERTICAL #3 @ 7'	3,028	4.2							
VERTICAL #3 @ 8'	3,472	4.4							
VERTICAL #3 @ 9'	1,743	0.5							
VERTICAL #3 @ 10'	281	0.6							
VERTICAL #3 @ 11'	83/80	3.9	<10	<10					
VERTICAL #3 @ 12'	149/128	5.1	<10	<10					
	EL LOS LA PROPERTIE DE LA PROP	LE SECTION	STATE OF THE PARTY	100					

VERTICAL #4										
Sample Description	Cl-	PID	GRO	DRO						
VERTICAL #4 @ 1'	1,106	0.7								
VERTICAL #4@ 2	1,020	0.5								
VERTICAL #4@3	813	0.4								
VERTICAL #4 @ 4	785	0.9								
VERTICAL #4 @ 5'	654	0.9								
VERTICAL #4 @ 6	424	0.6								
VERTICAL #4@7	166/160	0.3	<10	<10						
VERTICAL #4 @ 8'	138/32	0.4	<10	<10						

	VERTIC	CAL #6		
Sample Description	CI-	PID	GRO	DRO
VERTICAL #6 @ 1'	1,106	719		
VERTICAL #6 @ 2'	1,324	329.1		
VERTICAL #6 @ 3'	2,992	26		
VERTICAL #6 @ 4'	1,315	12.5		
VERTICAL #6 @ 5'	1,229	2.3		
VERTICAL #6 @ 6'	460	2.4		
VERTICAL #6@7'	380	1.7		
VERTICAL #6 @ 8'	680	7.5		
VERTICAL #6 @ 9'	376	8.4		
VERTICAL #6 @ 10'	298	4		
VERTICAL #6 @ 11'	275	5.6		
VERTICAL #6 @ 12'	175/400	2.1	<10	<10
VERTICAL #6 @ 13'	107/208	5.1	<10	<10

Legend

■ VERTICALS selection

♦ TEMPORARY MW - INSTALLED 7-25-11

STAIN SOUTHEAST AREA



APACHE SE LUSK 34 FEDERAL #6 AD

4/17/12 - 4/18/12

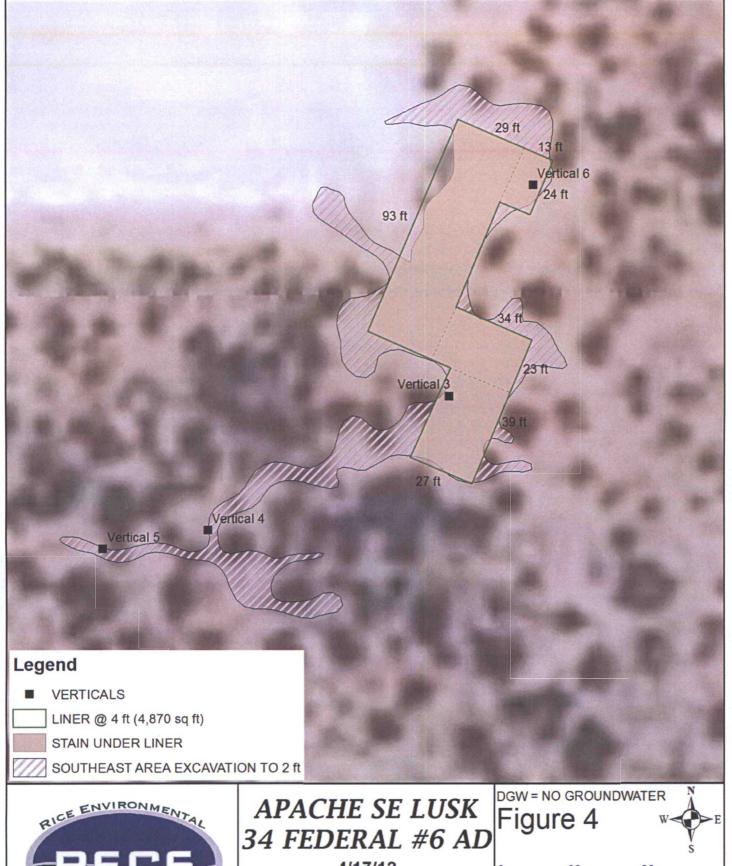
LEGALS: UL/A sec. 34 T-19-S R-32-E LEA COUNTY, NM DGW = NO GROUNDWATER

Figure 3

0 80 160

GPS date: 4/11/12 DH
Drawing date: 4/24/12
Drafted by: L. Weinheimer

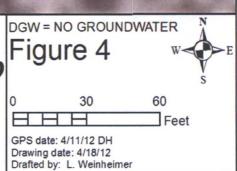
SOUTHEAST AREA - LINER INSTALLATION



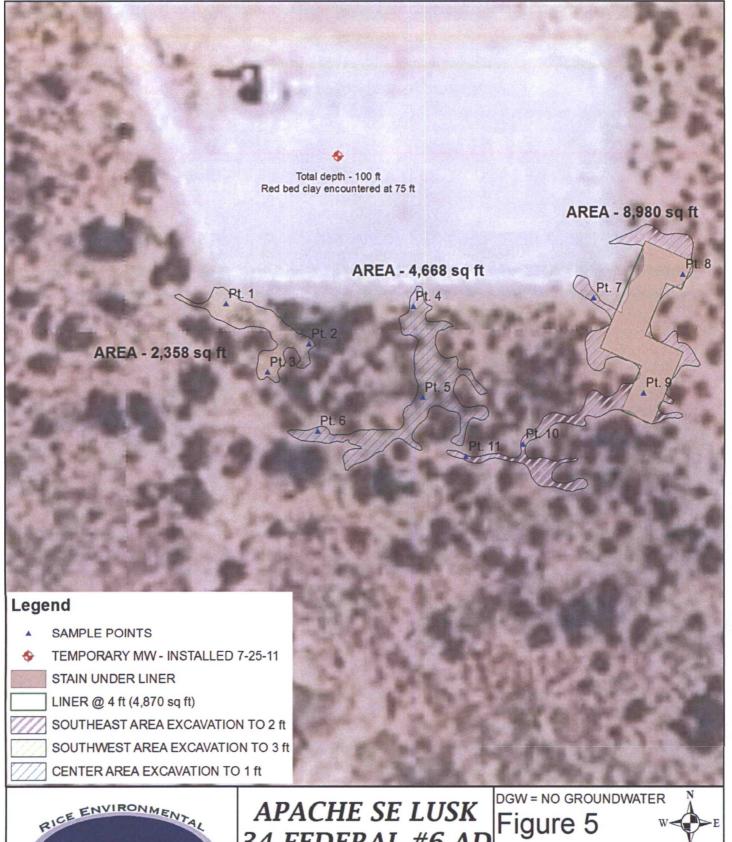


4/17/12

LEGALS: UL/A sec. 34 T-19-S R-32-E LEA COUNTY, NM



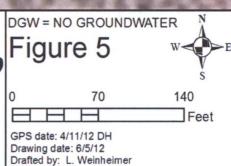
Final Excavation Areas





34 FEDERAL #6 AD

LEGALS: UL/A sec. 34 T-19-S R-32-E LEA COUNTY, NM





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

Received:

04/13/2012

Reported:

04/18/2012

Project Name: Project Number: S. E. LUSK 34 #6 NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

04/11/2012

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: PT. 1 SURFACE (H200856-01)

mg/kg

Analyzed By: AP

chioriae, Silvisocci B	mg/	Kg .	Andryze	u by. Ai					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	26800	16.0	04/17/2012	ND	432	108	400	7.69	
PH 8015M mg/kg		Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	74.0	50.0	04/17/2012	ND	183	91.5	200	0.212	
DRO >C10-C28	771	50.0	04/17/2012	ND	194	97.0	200	0.820	

Surrogate: 1-Chlorooctane

99.7%

55.5-154

Surrogate: 1-Chlorooctadecane

105 %

93.8 %

57.6-158

57.6-158

Sample ID: PT. 2 SURFACE (H200856-02)

Chloride, SM4500CI-B	mg/	mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	19600	16.0	04/17/2012	ND	432	108	400	7.69	
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	04/17/2012	ND	183	91.5	200	0.212	
DRO >C10-C28	14.4	10.0	04/17/2012	ND	194	97.0	200	0.820	
Surrogate: 1-Chlorooctane	91.9	% 55.5-15	4						

Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

*=Accredited Analyte

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Celeg D. Keine



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

Received:

04/13/2012

Reported:

04/18/2012 S. E. LUSK 34 #6

Project Name: Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

04/11/2012

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: PT. 3 SURFACE (H200856-03)

Ch	lor	ide,	SM4	15000	I-B

mg/kg

Analyzed By: HM

cinoriae, criticocci B	9/	9	7						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	10800	16.0	04/17/2012	ND	432	108	400	7.69	
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	04/17/2012	ND	183	91.5	200	0.212	
DRO >C10-C28	<10.0	10.0	04/17/2012	ND	194	97.0	200	0.820	

Surrogate: 1-Chlorooctane

90.9 %

55.5-154

Surrogate: 1-Chlorooctadecane

88.0 %

57.6-158

Sample ID: PT. 4 SURFACE (H200856-04)

Chloride, SM4500CI-B		kg	Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8400	16.0	04/17/2012	ND	432	108	400	7.69	

Sample ID: PT. 5 SURFACE (H200856-05)

Chloride, SM4500CI-B	mg/	кд	Anaiyze	а ву: нм					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	38800	16.0	04/17/2012	ND	432	108	400	7.69	

Analysis of Box 1114

Cardinal Laboratories

CLI--II- CMAFOOCI D

*=Accredited Analyte

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Celey D. Keine



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

Received: Reported: 04/13/2012

04/18/2012

Project Name: Project Number: S. E. LUSK 34 #6 NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

04/11/2012

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: PT. 6 SURFACE (H200856-06)

Chloride, SM4500CI-B

Analyzed By: HM

Analyte

Analyte

Result

Reporting Limit

Analyzed

Method Blank

BS 432 % Recovery

True Value QC

RPD

Qualifier

Chloride

12400

16.0

Reporting Limit

04/17/2012

ND

108

400

7.69

Sample ID: PT. 7 SURFACE (H200856-07)

Chloride, SM4500CI-B

Analyzed By: HM

Analyzed

Method Blank

BS

% Recovery

Qualifier

Chloride

Result 9900

16.0 04/17/2012 ND

432

108

True Value QC 400

RPD 7.69

Sample ID: PT. 8 SURFACE (H200856-08)

Chloride, SM4500Cl-B

Result

Analyzed By: HM Analyzed

Method Blank

BS

% Recovery

True Value QC

Qualifier

Chloride

Chloride

Chloride

30800

Reporting Limit 16.0

16.0

Reporting Limit

16.0

04/17/2012

ND

432

108

RPD

Analyte

Analyte

Analyte

Analyzed By: HM

400

7.69

Sample ID: PT. 9 SURFACE (H200856-09)

Chloride, SM4500CI-B

mg/kg

Result

83200

Result

30800

Reporting Limit

Analyzed

04/17/2012

Analyzed

04/17/2012

Method Blank

ND

Method Blank

ND

BS

432

BS

432

% Recovery

True Value QC

RPD

Oualifier

108

400

True Value QC

400

7.69

Sample ID: PT. 10 SURFACE (H200856-10)

Chloride, SM4500CI-B

Analyzed By: HM

% Recovery

108

RPD

7.69

Qualifier

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Page 4 of 8



APACHE - EUNICE NATALIE GLADDEN P. O. BOX 1849 **EUNICE NM, 88231**

Fax To:

394-2425

Received:

04/13/2012

Reported:

04/18/2012

Project Name: Project Number: S. E. LUSK 34 #6 NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

04/11/2012

Soil

Sampling Type:

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: PT. 11 SURFACE (H200856-11)

Chloride, SM4500CI-B	mg/	кg	Anaiyze	а ву: нм					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	18000	16.0	04/17/2012	ND	432	108	400	7.69	

Cardinal Laboratories

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Celey D. Keene

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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: Apache	Apache			1		1	-	18 H. S.		311	BILL TO	0					A	ANALYSIS REQUEST	SIS	REGI	JES.	_			
Project Manager:	Project Manager: Natalie Gladden						4	P.O. #:	#					_	_	_	_	_	-	_	_	_		_	
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City:	State: NM	Zip:					4	Attn:										101				_		_	
Phone #:	Fax#:						4	Address	ess:			The second second					_	u\							
Project #:	Project Owner:			1			J	City:										//S		_					
Project Name:	Project Name: 5.4. LUSK 34#6			1			0)	State:		2	Zip:		10.	3 l	-	_	d1								
Project Location:							1	Phone #:	e #:				\int	_	Ξ.		_	DS							
Sampler Name:	Detstar Harris							Fax #:	41				ماد				-		11	_					
FOR LAB USE ONLY			-		MA	MATRIX		Ь	PRESERV	RV.	SAN	SAMPLING		-			-	Ð.	_						
Lab I.D. 片2008号6	Sample I.D.	.9RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	MASTEWATER SOIL	OIL	SLUDGE	OTHER:	ICE / COOF	: A3HTO	DATE	TE TIME						Complet							
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60	07.3 Surface	5	_	-	>					7	11-1	N.5 2110	7	3	-										
J	prid Surface	B	_		,					7	411	on: 15 61-10	7												
N	DT. 5 Surface	S	_	_	*		-			7	111	14 4:00	7				_								
9	07.6 Surface	S	-		2					7	1-11-1	01:16 B	7												
T	DI.7 Surface	S	_		30					1	111	11/2 4:15	7												
29	DT. 8 SUNFAIR	B	_		7		-			7	11-1	18 4:36	7	,											
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PLEASE NOTE: Liability and Duranges, Cardinal's Bability and client's outbacker remedy for any claim mining whether based in contract or but, shall be limited to the amount paid by the client for the amount paid by the client for the amount paid by the client by the client by contracted by Cardinal Post-began proper to the cross-began and the completion of the service. In or evert shall Cardinal bee label for incident die consequented demayes, incidently although unitation, business (plengtions, loss of Dag, or loss of posts, business dy client, it authorities are completed by the contract by client, it authorities the contract by the consequented or consequented demayes, incidently although unitation, business of the cut is seed from the contract of the c

hconder@rice-ecs.com; Lweinheimer@rice-ecs.com Zconder@rice-ecs.com; Bbaker@rice-ecs.com; Natalie. Gladden@usa.apachecorp.com; cons or otherwise.

Phone Result:

Yes
No | Add'l Phone #:

REMARKS: email results CHECKED BY: Cool Intact 0715 Date: 13.17 Date: 4 · 13 · 12 Time: Sampler - UPB - Bus - Other: Delivered By: (Circle One)

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



imer@rice-ecs.com

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: Apache	ie.						m to			316	BILL TO							ANA	ANALYSIS	S RE	REQUEST	ST			
Project Manager: Natalie Gladden	e Gladden						_	P.O. #:	4														_	_	
Address:	er e							mo	Company:									SI							
City:	State: NM	Zip:					4	Attn:										uo							
Phone #:	Fax #:						4	Address:	SS:									u\							
Project #:	Project Owner:	ï.						City:						5	M		Н	//S							
Project Name: 5. E. LUSK 34 #6	145 34 #6						3,	State:		Z	Zip:			səp	91	X	Ч	uo				_			
Project Location:	, , , , , , ,						Sale.	Phone #:	e #:					oiric	.08	3.	S	ite	SC				_		
Sampler Name: //o/	Ster) 146,1715						tal.	Fax #:	,,					Oll	3 F	18	ex	C							
FOR LAB USE ONLY		L		L	Š	MATRIX	-	PR	PRESERV.	<u>~</u>	SAMPLING	LING	Γ	10	10	1	Э	ə				_	_		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	ВЭТАМОИИОЯЭ	MASTEWATER	OIL SOIL	SLUDGE	OTHER:	ICE / COOL	: A3HTO	DATE	TIME			Ι		L	Complet							
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Fax Result:	Semail results	hconder@rice-ecs.com; Lweinheimer@rice-ecs.com;	
4.13.12 Necented By:	Time: Ja / Collection of the work	Sample Condition CHECKED BY: Cool Intact Cool Intact No INO INO	
Company of the state of the sta	The state of the s	Delivered By: (Circle One) Sampler VPS - Bus - Other:	

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



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

Received: Reported: 04/19/2012

04/23/2012

Project Name: Project Number: S. E. LUSK 34 FEDERAL #6 AD

Project Location:

NONE GIVEN NOT GIVEN

Sampling Date:

04/17/2012

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: VERTICAL #1 @ 3' (H200899-01)

Chloride, SM4500CI-B

Analyzed By: AP

Chioride, SM4500CI-B	ilig	/ Kg	Allalyze	u by. Ar					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	04/20/2012	ND	432	108	400	3.77	
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	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	

Surrogate: 1-Chlorooctane

79.2 %

55.5-154

Surrogate: 1-Chlorooctadecane

75.0 %

57.6-158

Sample ID: VERTICAL #2 @ 1' (H200899-02)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	04/20/2012	ND	432	108	400	3.77	
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	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane	102	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	102	% 57.6-15	8						

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

Received: Reported: 04/19/2012

04/23/2012

Project Name:

S. E. LUSK 34 FEDERAL #6 AD

Project Number: Project Location: NONE GIVEN

NOT GIVEN

Sampling Date:

04/17/2012

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: VERTICAL #3 @ 11' (H200899-03)

Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	04/20/2012	ND	432	108	400	3.77	
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	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane	96.0	% 55.5-15	4						

Surrogate: 1-Chlorooctane 96.0 % 55.5-154
Surrogate: 1-Chlorooctadecane 95.3 % 57.6-158

Sample ID: VERTICAL #4 @ 7' (H200899-04)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	04/20/2012	ND	432	108	400	3.77	
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	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane	101	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	101	% 57.6-15	8						

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Celey D. Keene



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

Received: Reported: 04/19/2012

04/19/2012

Project Name:

S. E. LUSK 34 FEDERAL #6 AD

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

04/17/2012

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: VERTICAL #5 @ 6' (H200899-05)

Chloride, SM4500Cl-B	mg	/kg	Analyze	ed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/20/2012	ND	400	100	400	0.00	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane	90.0	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	89.5	% 57.6-15	8						

Sample ID: VERTICAL #6 @ 12' (H200899-06)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	04/20/2012	ND	400	100	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	04/19/2012	ND	160	79.9	200	2.07	
DRO >C10-C28	<10.0	10.0	04/19/2012	ND	165	82.5	200	0.115	
Surrogate: 1-Chlorooctane	97.8	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	97.4	% 57.6-15	8						

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Page 6 of 6

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

- ARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603

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Project Manager: Natalie Gladden	THE REPORT OF THE PARTY OF THE	P.O. #:				_							
Address:		Company:					SI						
City:	State: NM Zip:	Attn:					loi						
Phone #:	Fax #:	Address:					u√						
Project#:	Project Owner:	City:		5	M	Н							
Project Name: 5.2. Lusk 34 Fichre L #6 19.	doru to An	State:	Zip:	səp	91		_						
Project Location:	AND THE RESIDENCE OF THE PARTY	Phone #:	The state of the s	oino		_ s (3.		DS					
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FOR LAB USE ONLY	MATRIX	PRESERV	SAMPLING	CI	_								
Lab I.D. Sample I.D.	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL	SLUDGE OTHER: ICE / COOL THER:	DATE TIME		T	L	Comple						
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13 Vertical #38,11	1 - 1 - 9	7	4-17-13 3:05	1	7								
4 Vertal 44 67	61	1	4-17-12 3:45	7	7								
5 Virtie 4586	7	'	4-17-13 3:55	1	1								
b Vortice # 6 e19	3, 6.1	*	13:61 61.86h	2	2								
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ult:	Fax Result: L Yes L No Add'I Fax #: REMARKS:	email results	Natalie. Gladden@usa.apachecorp.com;	_	hconder@rice-ecs.com; Lweinheimer@rice-ecs.com
Relinquished By:	1 Change Her Times 1 00 1 00 1 00	Relinquished By: Date: Received By:	Time:	Delivered By: (Circle One) Sample Condition CHEGKED BY:	Sampler - UPS - Bus - Other: 50 Cool Infact Minist

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

#26



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

Received:

04/20/2012

Reported:

04/25/2012

Project Name: Project Number: S. E. LUSK 34 FEDERAL #6 AD

Project Location:

NONE GIVEN

NOT GIVEN

Sampling Date:

04/17/2012

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: VERTICAL #1 @ 4' (H200909-01)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	04/23/2012	ND	416	104	400	3.77	
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	04/20/2012	ND	184	91.8	200	0.670	
DRO >C10-C28	36.4	10.0	04/20/2012	ND	196	98.1	200	1.38	
Surrogate: 1-Chlorooctane	93.5	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	93.5	% 57.6-15	8						

Sample ID: VERTICAL #2 @ 2' (H200909-02)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	04/23/2012	ND	416	104	400	3.77	
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	04/20/2012	ND	184	91.8	200	0.670	
DRO >C10-C28	<10.0	10.0	04/20/2012	ND	196	98.1	200	1.38	
Surrogate: 1-Chlorooctane	73.9	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	70.5	% 57.6-15	8						

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*=Accredited Analyte

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Celey D. Keine



APACHE - EUNICE NATALIE GLADDEN P. O. BOX 1849 **EUNICE NM, 88231**

Fax To:

394-2425

Received: Reported: 04/20/2012

04/25/2012

Project Name: Project Number: S. E. LUSK 34 FEDERAL #6 AD

Project Location:

NONE GIVEN **NOT GIVEN**

Sampling Date:

04/17/2012

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: VERTICAL #3 @ 12' (H200909-03)

Chloride, SM4500CI-B	mg,	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	04/23/2012	ND	416	104	400	3.77	
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	04/20/2012	ND	184	91.8	200	0.670	
DRO >C10-C28	<10.0	10.0	04/20/2012	ND	196	98.1	200	1.38	
Surrogate: 1-Chlorooctane	78.0	% 55.5-15	4						

Surrogate: 1-Chlorooctadecane

76.7%

57.6-158

Sample ID: VERTICAL #4 @ 8' (H200909-04)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	04/23/2012	ND	416	104	400	3.77	
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	04/23/2012	ND	152	76.2	200	7.36	
DRO >C10-C28	<10.0	10.0	04/23/2012	ND	146	72.9	200	4.39	
Surrogate: 1-Chlorooctane	78.0	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	74.5	% 57.6-15	8						

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

Received: Reported: 04/20/2012

04/25/2012

Reported:
Project Name:

S. E. LUSK 34 FEDERAL #6 AD

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

sampling Date:

04/17/2012

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: VERTICAL #5 @ 7' (H200909-05)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	04/23/2012	ND	416	104	400	3.77	
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	04/23/2012	ND	152	76.2	200	7.36	
DRO >C10-C28	<10.0	10.0	04/23/2012	ND	146	72.9	200	4.39	
Surrogate: 1-Chlorooctane	83.7	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	80.3	% 57.6-15	8						

Sample ID: VERTICAL #6 @ 13' (H200909-06)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	04/23/2012	ND	416	104	400	3.77	
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	04/23/2012	ND	152	76.2	200	7.36	
DRO >C10-C28	<10.0	10.0	04/23/2012	ND	146	72.9	200	4.39	
Surrogate: 1-Chlorooctane	84.9	% 55.5-15	4						
Surrogate: 1-Chlorooctadecane	81.6	% 57.6-15	8						

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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:	e: Apache								18	BILL TO						A	MAL	SIS	ANALYSIS REQUEST	SOLES	_		
Project Manage	Project Manager: Natalie Gladden						P.	P.O. #:					_	_	-			_					L
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FOR LAB USE ONLY		L			MA	MATRIX		PRE	PRESERV.	L	SAMPLING			_		_	Э		_	_			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER SOIL	OIL	SLUDGE	ACID/BASE:	ICE / COOL	DATE	TIME			11			Complet						
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PLEASE NOTE: Usability and Damages. Cardinut's liability and client's enclusive remody for any claim artising whether based in contract of tag, shall be limited in the amount paid by the client for the analyses. At dainre including those for negligence and envy other cause whatevever shall be determed wakeed unless made jn virting and received by Cardinal within 30 days after completion of the applicable services, prove counts and a soft of profits incurred by discriptions, the applicable and a services in the performance of services hereunder by Cardinal, regardleys of whether goods claim is based upod any of the above exist.

easons of otherwise.	Phone Result: Yes No Add'l Phone #: Fax Result: Yes No Add'l Fax #:	REMARKS:	email results	Natalie.Gladden@usa.apachecorp.com;	Acuinei (Milice-ecs. Colli), bbakei (Milice-ecs. Colli),	hconder@rice-ecs.com; Lweinheimer@rice-ecs.com	
nce of services hereunder by Cardinal, regardiegs of whether good claim is based upgal any pilling above stated reasons or otherwise	Date: V. 20.12 Received By:	Time: 5 / June 1	Date: Received By:	Time: of all devider	lition CHE	Cool Intact (Infitials) - [] D Fyes Ves Ves Ves Ves Ves Ves Ves Ves Ves V	047 COL 202 7
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† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

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

Received: Reported: 04/27/2012 05/01/2012

NOT GIVEN

Project Name: S. E. LUSK 34 FEDERAL #6 AD Project Number: NONE GIVEN

Project Location:

Analyte

Sampling Date:

Sampling Type:

04/27/2012

Soil Sampling Condition:

Sample Received By:

Cool & Intact Jodi Henson

Sample ID: IMPORTED SOIL (H200974-01)

Chloride, SM4500CI-B

mg/kg

Analyzed By: HM

% Recovery

RPD

Qualifier

Chloride

Result 48.0 Reporting Limit 16.0

Analyzed 04/30/2012 Method Blank ND

416

104

True Value QC 400

0.00

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Page 4 of 4

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Company Name: Apache	Project Manager: Natalie Gladden	Address:	City:	Phone #:	Project #:	Project Name:	Project Location:	Sampler Name: Orkston 1-16 rris	FOR LAB USE ONLY	Lab I.D. H200474	

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	Time:	Natalie. Gladden@usa.apachecorp.com;
Delivered By: (Circle One)	tion CHE	Zconder@rice-ecs.com; Bbaker@rice-ecs.com;
Sampler - UPS - Bus - Other:	73 © Cool Intact (Infitiple)	hconder@rice-ecs.com; Lweinheimer@rice-ecs.com
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APACHE - EUNICE NATALIE GLADDEN P. O. BOX 1849 **EUNICE NM, 88231**

Fax To:

394-2425

Received:

05/02/2012

Reported:

05/03/2012 S. E. LUSK 34 FEDERAL #6 AD

Project Name: Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

05/01/2012

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: IMPORTED SOIL (H201002-01)

Chloride, SM4500CI-B	mg/	kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	05/03/2012	ND	400	100	400	0.00	

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Page 4 of 4

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: Apache	e: Apache				BIL	BILL TO					A	MALY	ANALYSIS REQUEST	EQUI	ST		
Project Manage	Project Manager: Natalie Gladden			P.O. #:					_		-	-	-	_		L	_
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City:	State: NM	Zip:		Attn:							_	10					
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Sampler Name: /	: Halsten Harris			Fax #:				OJL	_		_		11				
FOR LAB USE ONLY			MATRIX		PRESERV.	SAMPLING	IG	CI	_			9:	_				
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER	MASTEWATER SOIL OIL	SLUDGE STUDGE:	ICE / COOL	DATE	TIME		T			Complet					
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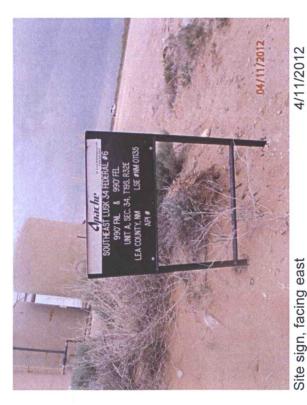
PEASE NOTE: Libitity and Demages, Cardinal's labelity and dient's exclusive remety for any claim arising whether based in contact or fort shall be limited to the amount paid by the cleant for the analyses. At claims including those for negligence and any other cause whatesever shall be decemed varieed unless made in writing and received by Cardinal within 30 days after compeleion of the applicable service. They werent shall candinable labelity in incleantal or consequential damages, including unless the interpretors, loss of trae, or loss of protis meanered by Earth its anished services arising out of or righed to the performance of services hereunded by Cardinal regardees of whether such claim is based upon any of the above stated reasons or otherwise.

| Received By:

Frome Result:	email results Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com
Received by:	Sample Condition CHECKET BY: Cool Intact Cool Intact No No No
Time:	Tung: 55
Control of the state of the sta	Relinquished By: Delivered By: (Circle One) Sampler - UPS - Bus - Other:

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

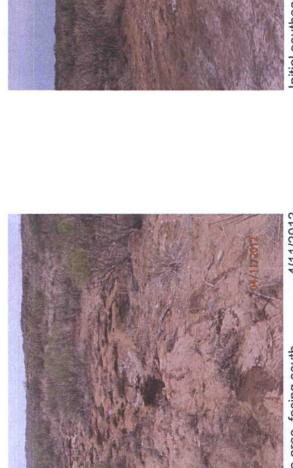
Apache Southeast Lusk 34 Federal #6 Unit A, Section 34, T19S, R32E



Site sign, facing east







Initial center release area, facing south

4/11/2012

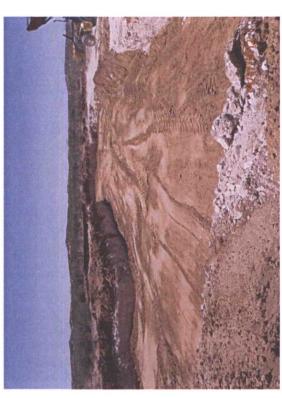
4/11/2012 Initial southeast release area, facing northwest



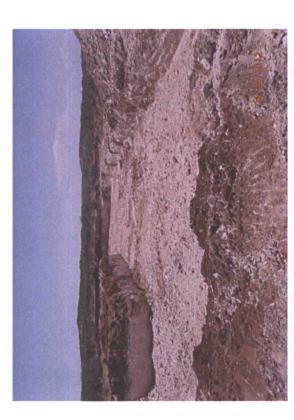
Digging vertical, facing northwest



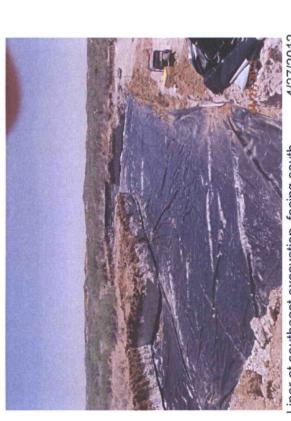
Exporting soil, facing south



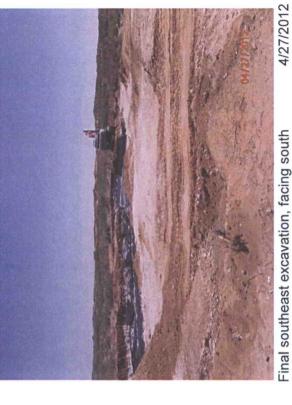
Southeast excavation padded for liner, facing south 4/27/2012



Southeast excavation ready for liner, facing south 4/24/2012



Liner at southeast excavation, facing south



Final southeast excavation, facing south

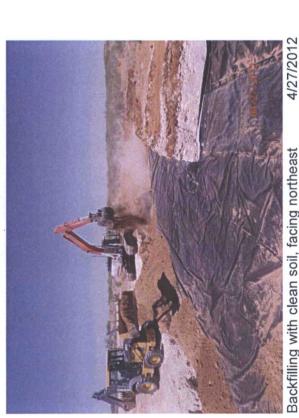


Final center excavation, facing north

4/27/2012

Final southwest excavation, facing northwest

4/27/2012



Backfilling with clean soil, facing northeast



Southwest excavation backfilled, facing northwest 5/9/2012



Center excavation backfilled, facing northeast

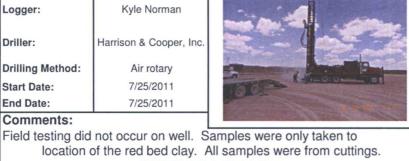


Southeast excavation backfilled, facing northwest 5/9/2012

Logger: Kyle Norman Driller: Harrison & Cooper, Inc. **Drilling Method:** Air rotary

Start Date: 7/25/2011 End Date: 7/25/2011

Comments:



DRAFTED BY: L. Weinheimer



Company: Apache Corporation Project Name:

SE Lusk 34 Federal #6 AD

Temp MW-1

Project Consultant: RECS

Location: UL/A sec. 34 T19S R32E

Lat: 32 °37′16.505″N

County: Lea

	TD = 100	ft		GW = none	Lo	ng: 103°44'	55.7	733"W		State: NM
Depth (feet)	Chloride field tests	LAB	PID	Description		Lithology		We	II Co	onstruction
)
SS										
5 ft										
10 ft										
				NO SAMPLES TAKEN						
15 ft								PVC		
								2 in PVC		
20 ft										
25 ft										
30 ft			-							
30 11										
35 ft										
40 ft										

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
(1004)						
45 ft						annular
						space
						left open
50 ft						PLUGGED
						7/28/2011
55 ft						
60 ft						
65 ft						
70 ft						
75 ft						
00.64						
80 ft						
				RED BED CLAY		
85 ft						
90 ft						
9011						
95 ft						
100 ft						

Rice Environmental Consulting & Safety

P.O. Box 5630 Hobbs, NM 88241 Phone 575.393.4411 Fax 575.393.0293

August 2nd, 2011

Natalie Gladden Apache Corp. P.O. Box 1849 Eunice, New Mexico 88231

Re: Apache SE Lusk 34 Federal #6

Ms. Gladden,

On July 25th, 2011, RECS personnel drilled a temporary monitoring well at the Apache SE Lusk 34 Federal #6. On July 28th, 2011, I supervised RECS personnel checking for water accumulation within the borehole using a Heron depth to water meter. The meter indicated no water had accumulated within the borehole at the total depth of 100 ft.

Sincerely,

Bruce Baker

Head Foreman

Bruce Baden

Rice Environmental Consulting & Safety

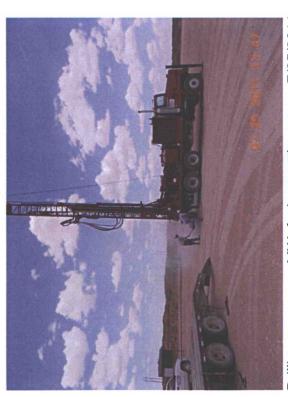


Monitor Well Plugging Report

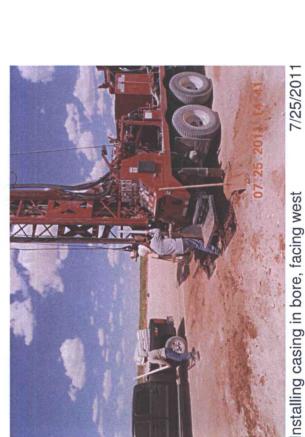
P.O. Box 5630 Hobbs, NM 88241 Phone: 575-393-4411

Client	Apache Corp.
Contractor	RECS
Date Completed	7/28/2011
Site	SE Lusk 34 Federal #6
County	Lea
Legal Description	UL/A sec. 34 T19S R32E
Well ID	Temp. MW-1
Casing Diameter	2"
Well Depth	100'
Casing Material	PVC
Plugging Material	Bentonite

Apache SE Lusk 34 Federal #6 Unit A, Section 34, T19S, R32E



7/25/2011 Drilling temporary MW, facing southwest



Installing casing in bore, facing west



Temporary MW complete, facing southeast 7/25/2011



Plugging MW in total with bentonite

7/28/2011