

#### **APACHE CORPORATION**

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

# D State #49 Battery (2RP-856) Closure Report

API 30-015-38470

Release Date: August 4th, 2011

Unit Letter P, Section 26, Township 17S, Range 28E

#### Rice Environmental Consulting & Safety

P.O. Box 2948, Hobbs, NM 88241 Phone 575,393,2967

June 27th, 2013

#### Mike Bratcher

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

> RE: Termination Request Apache Corporation – D State #49 Battery (2RP-856) UL/P sec. 26 T-17-S R-28-E API No. 30-015-38470

Mr. Bratcher:

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

#### **Background and Previous Work**

The site is located approximately 9.5 miles west of Loco Hills, New Mexico at UL/P sec. 26 T17S R28E. NM OSE and BLM records indicate that there is no groundwater at the site.

On August 4<sup>th</sup>, 2011, a buried fiberglass line broke inside a junction box. A total of 45 barrels were released and a total of 30 barrels was recovered from the site. Approximately 17,000 sq ft of land was affected by the release along the pipeline right-of-way. The line was repaired and Apache informed NMOCD by an initial C-141 of the release on August 5<sup>th</sup>, 2011 (Appendix A).

RECS personnel were on site beginning on August 4<sup>th</sup>, 2011 to work the D State #49 Battery. Initial surface samples were taken along the release area and field tested for chlorides and hydrocarbons (Figure 1). The samples were then taken to a commercial laboratory for analysis (Appendix B).

Two verticals were installed at the site to determine the depth of contamination at the site. Vertical field data of Vertical #1 showed chloride values less than 250 mg/kg at 5 ft bgs and Vertical #2 showed chloride values less than 250 mg/kg at 4 ft bgs. Based on the vertical data, two excavations were dug at the vertical sites. The northwest excavation was excavated to 4 ft bgs and the west excavation was excavated to 5 ft bgs (Figure 2). Final samples of the walls and bottoms of each excavation were taken to a commercial laboratory for analysis of chlorides and hydrocarbons (Appendix C).

Two scrapes were completed at the site. Both the northwest and south scrapes were scraped to a depth of six inches. After the scrapes were completed, six points were taken

along the length of the south scrape and taken to a commercial laboratory for analysis. The walls and bottom samples of the northwest scrape were also taken to a commercial laboratory for analysis (Appendix C).

The excavated soil was taken to a NMOCD approved facility for disposal. Clean soil was imported to the site to use as backfill. The lease road was backfilled with caliche and the excavations and scrapes in the pasture were backfilled with top soil.

Photo Documentation of these activities can be found in Appendix D.

Since the contaminated soil was removed from the release area and replaced with clean, imported soil, Apache submits the final C-141 (Appendix E) and respectfully requests the closure of the regulatory file for this site.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 631-6432 below if you have any questions or wish to discuss the site.

Sincerely,

Lara Weinheimer

**Project Scientist** 

**RECS** 

(575) 441-0431

#### Attachments:

Figure 1 – Initial Lab Data

Figure 2 – Excavation Map

Appendix A – Initial C-141

Appendix B – Initial Sampling Laboratory Analyses

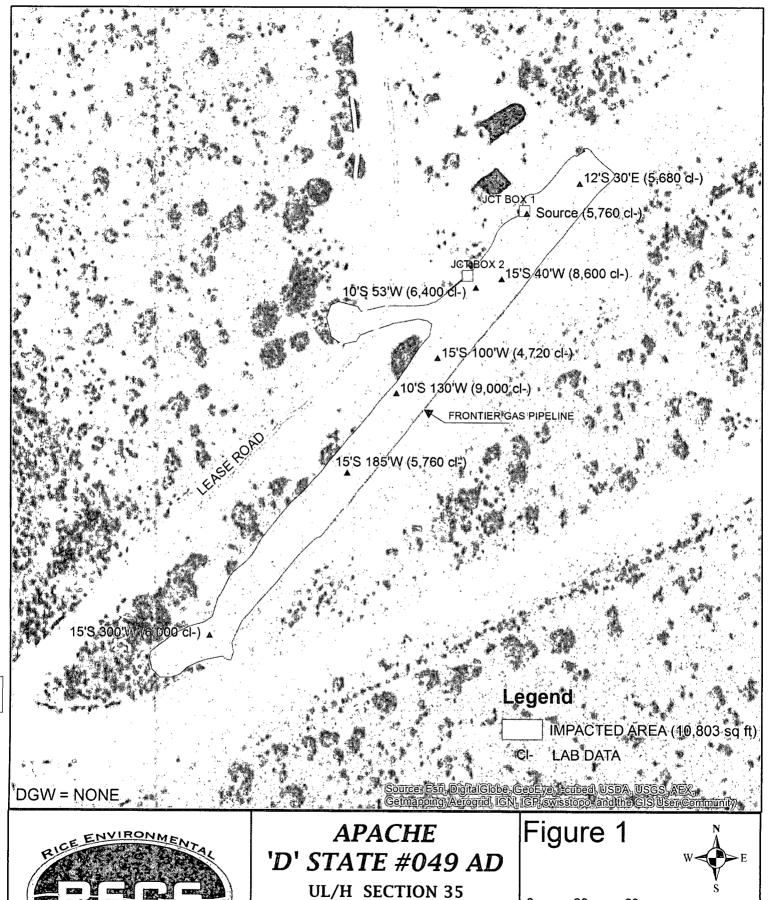
Appendix C – Final Laboratory Analyses

Appendix D – Photo Documentation

Appendix E – Final C-141



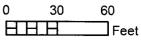
#### Initial Lab Data





T-17-S R-28-E **EDDY COUNTY, NM** 

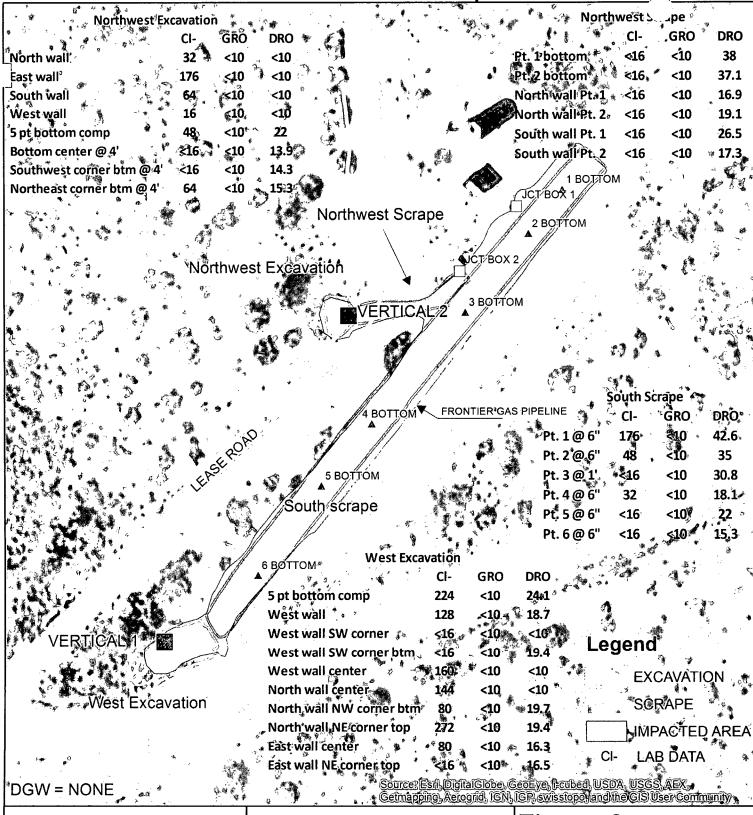
NMOCD Case #: 2RP-856



GPS date: 8/9-11/11 DH Drawing date: 8/12/11

Drafted by: T. Grieco and L. Weinheimer

**Excavation Map** 



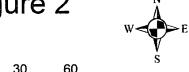


### APACHE 'D' STATE #049 AD

UL/H SECTION 35 T-17-S R-28-E EDDY COUNTY, NM

NMOCD Case #: 2RP-856

#### Figure 2



0 30 60 HHH Feet

GPS date: 8/9-11/11 DH Drawing date: 8/12/11,

Drafted by: T. Grieco and L. Weinheimer

## Appendix A Initial C-141

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

☐ Yes ☒ No ☐ Not Required

A buried fiberglass line busted inside the junction box. Line has been repaired and remediation has begun.

☐ Yes ☐ No

been disturbed along a pipeline right-of way. NMOCD guidelines will be followed to close,

Was Immediate Notice Given?

Was a Watercourse Reached?

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.

Describe Area Affected and Cleanup Action Taken.\*

By Whom?

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

AUG 5 2011

RECEIVED

Form C-141 Revised August 1, 2011

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

Submit 2 Copies to appropriate
NMOCD ARTES is rict Office in accordance
with Rule 116 on back side of form

			Rele	ase Notific	catio	n and Co	rrective A	ction	<u> </u>				
MLB11	22937	050				OPERA'	ror		<b>⊠</b> Initia	al Report		Final Report	
Name of Co			oration	873	3	Contact Na	talie Gladden						
Address PC	Box 184	9, Eunice N	M			Telephone l	No. 575-390-41	86					
Facility Nat	ne D Stat	e #49 Bty (n	ear #59 w	rell)		Facility Typ	e Production	Battery	<u> </u>				
		0) = 4				61 61 7			1	T 00 016	2047		
Surface Ow	Surface Owner State of NM   Mineral Owner State of NM   Lease No. 30-015-38470												
				LOCA	ATIO	N OF RE	LEASE						
Unit Letter	Section	Township	Range	Feet from the	Nort	NSouth Line	Feet from the	East/\	Vest Line	County		·	
Р	26	17S	28E	290	FSL		175	Eddy					
			La	titude		Longitud	le						
				NAT	URI	E OF REL	EASE				_		
Type of Rele	ase Produc	ed Water				Volume of	Release 45		Volume I	Recovered 3	0		
Source of Re	lease Fiber	glass line					Tour of Occurren	ce	Date and Hour of Discovery				
		·		·		08/04/11 8	30am		same				
Was Immedi	ate Notice (	Given?				I If YES, To	Whom?						

If YES, Volume Impacting the Watercourse.

Date and Hour

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. Signature: Signed By Approved by District Supervisor: Printed Name: Natalie Gladden aug Title: EHS Environmental Tech Approval Date: **Expiration Date:** E-mail Address: natalie.gladden@apachecorp.com Conditions of Approval: Attached 🔲 Date: 08/05/11 Phone: 575-390-4186 Remediation per OCD Rules & \* Attach Additional Sheets If Necessary **Guidelines. SUBMIT REMEDIATION** 2RP-856

PROPOSAL NOT LATER THAN:

Recently we drilled near this facility at the C49 SWD and found no ground water. Therefore it is safe to say that it does not exist. 17000 sq ft of land has





June 25, 2013

NATALIE GLADDEN

APACHE - EUNICE

P. O. BOX 1849

**EUNICE, NM 88231** 

RE: D STATE #49 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/05/11 8:02.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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.

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

Received:

08/05/2011

08/04/2011 Sampling Date:

Reported:

06/25/2013

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Project Name: Project Number:

NONE GIVEN

D STATE #49 BATTERY

Sample Received By:

Jodi Henson

Project Location:

NOT GIVEN

Sample ID: 15' SOUTH 40' WEST (H101627-01)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8600	16.0	08/08/2011	ND	448	112	400	6.45	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	35.6	10.0	08/10/2011	ND	187	93.7	200	2.82	
DRO >C10-C28	572	10.0	08/10/2011	ND	179	89.5	200	3.74	

Surrogate: 1-Chlorooctane

93.8 %

70-130

Surrogate: 1-Chlorooctadecane

111 %

70-130

#### Sample ID: SOURCE (H101627-02)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: CK					
' Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5760	16.0	08/08/2011	ND	448	112	400	6.45	
TPH 8015M	mg/kg		Analyzed By: ab						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	70.1	10.0	08/10/2011	ND	187	93.7	200	2.82	
DRO >C10-C28	1060	10.0	08/10/2011	ND	179	89.5	200	3.74	
Surrogate: 1-Chlorooctane	92.1	% 70-130	)						

Surrogate: 1-Chlorooctadecane

99.4%

70-130

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keine



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

Received:

08/05/2011

Sampling Date:

08/04/2011

Reported:

06/25/2013

Sampling Type:

Soil

D STATE #49 BATTERY

Sampling Condition:

Cool & Intact

Project Name: Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

NOT GIVEN

#### Sample ID: 10' SOUTH / 130' WEST (H101627-03)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	9000	16.0	08/08/2011	ND .	448	112	400	6.45	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	13.3	10.0	08/10/2011	ND	187	93.7	200	2.82	
DRO >C10-C28	25.5	10.0	08/10/2011	ND	179	89.5	200	3.74	
Surrogate: 1-Chlorooctane	90.6	% 70-130	)						

Surrogate: 1-Chlorooctadecane 111 % 70-130

#### Sample ID: 10' SOUTH / 53' WEST (H101627-04)

Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: CK					
\ Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6400	16.0	08/08/2011	ND	448	112	400	6.45	
TPH 8015M	mg,	/kg	Analyze	d By: ab					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/10/2011	ND	187	93.7	200	2.82	
DRO >C10-C28	<10.0	10.0	08/10/2011	ND	179	89.5	200	3.74	
Surrogate: 1-Chlorooctane	64.1	% 70-130							
Surrogate: 1-Chlorooctadecane	94.9	% 70-130	•						

Cardinal Laboratories \*=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:

08/05/2011

Sampling Date:

08/04/2011

Reported:

06/25/2013

Sampling Type:

Soil

Project Name:

D STATE #49 BATTERY

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

Project Number: Project Location:

NONE GIVEN

Sample ID: 12' SOUTH / 30' EAST (H101627-05)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5680	16.0	08/08/2011	ND	448	112	400	6.45	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	52.2	10.0	08/10/2011	ND	187	93.7	200	2.82	
DRO >C10-C28	581	10.0	08/10/2011	ND	179	89.5	200	3.74	

Surrogate: 1-Chlorooctane

85.5 %

70-130

Surrogate: 1-Chlorooctadecane

106 %

112%

70-130

70-130

#### Sample ID: 15' SOUTH / 100 ' WEST (H101627-06)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4720	16.0	08/08/2011	ND	448	112	400	6.45	
TPH 8015M	mg	/kg	Analyze	d By: ab		<b>-</b>			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	120	10.0	08/10/2011	ND	187	93.7	200	2.82	
DRO >C10-C28	2440	10.0	08/10/2011	ND	179	89.5	200	3.74	
Surrogate: 1-Chlorooctane	<b>2440</b>		· · ·	ND 	179	89.5	200	3.74	

#### 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:

08/05/2011

Sampling Date:

08/04/2011

Reported:

06/25/2013

Sampling Type:

Soil

Project Name:

D STATE #49 BATTERY

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

NOT GIVEN

#### Sample ID: 15' SOUTH / 185' WEST (H101627-07)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: CK		_			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPŅ	Qualifier
Chloride	5760	16.0	08/08/2011	ND	448	112	400	6.45	
TPH 8015M	mg	/kg	Analyze	d By: ab	-				S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	14.7	10.0	08/10/2011	ND	187	93.7	200	2.82	
DRO >C10-C28	60.6	10.0	08/10/2011	ND	179	89.5	200	3.74	
Surrogate: 1-Chlorooctane	69.1	% 70-130	)						

Surrogate: 1-Chlorooctadecane

92.6 %

70-130

#### Sample ID: 15' SOUTH / 300' WEST (H101627-08)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	6000	16.0	08/08/2011	ND	448	112	400	6.45	
TPH 8015M	mg/kg		Analyzed By: ab						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	15.6	10.0	08/10/2011	ND	187	93.7	200	2.82	
DRO >C10-C28	199	10.0	08/10/2011	ND	179	89.5	200	3,74	

Surrogate: 1-Chlorooctane 77.5 % 70-130 Surrogate: 1-Chloroociadecane 97.5% 70-130

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\*=Accredited Analyte

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Celey & Keine

Celey D. Keene, Lab Director/Quality Manager



#### **Notes and Definitions**

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

Cardinal Laboratories \*=Accredited Analyte

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Celuy D. Keene



#### 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	: Apache								B	IL.	L TO		ĺ.					ANAL	YSIS	RE	QUE	ST			
Project Manage	<sup>:</sup> Natalie Gladden						P.0	D. #:					$\mathbf{I}^{-}$												
Address:							Со	mpa	ıny:									SL							
City:	State: NM	Zip:				• • • • • • • • • • • • • • • • • • •	Att	n:					_	Ì				ior							
Phone #:	Fax #:						Ad	dres	s:									۸n			i				
Project #:	Project Owner						Cit	<u>y:</u>				<u></u>	ر ا۔	١	Σ		エ	//S							
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PLEASE NOTE: Linbility or	d Damages. Cordinal's liubility and client's exclusive remedy for ong those for negligence and any other cause whatsoever shall be	ny daim	atlain waive	g whether	based in	contrac	t or tor	t, shall	be ami	led to	the amount p	aid by the client	or the	ilcable			<b></b>	<u> </u>	L	<del></del>		<u> </u>			<u> </u>
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† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#26

Appendix C
Final Laboratory Analyses



June 25, 2013

NATALIE GLADDEN

APACHE - EUNICE

P. O. BOX 1849

**EUNICE, NM 88231** 

RE: D STATE #49 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/12/11 8:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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.

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

Received:

06/25/2013

Reported: Project Name:

D STATE #49 BATTERY

Project Number:

Project Location:

NONE GIVEN **NOT GIVEN** 

08/12/2011

Sampling Date:

Sampling Type:

08/10/2011 Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

#### Sample ID: NW EXC N WALL-CENTER (H101689-01)

Chloride, SM4500Cl-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	08/12/2011	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/13/2011	ND	191	95.6	200	0.904	
DRO >C10-C28	<10.0	10.0	08/13/2011	ND	165	82.7	200	0.0604	
Surrogate: 1-Chlorooctane	108	% 70-130							
Surrogate: 1-Chlorooctadecane	111	% 70-130							

#### Sample ID: NW EXC E WALL CENTER (H101689-02)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP			<u> </u>		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	08/12/2011	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/13/2011	ND	191	95.6	200	0.904	
DRO >C10-C28	<10.0	10.0	08/13/2011	ND	165	82.7	200	0.0604	
Surrogate: 1-Chlorooctane	107	% 70-130							
Surrogate: 1-Chlorooctadecane	113	% 70-130	1						

Cardinal Laboratories \*=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:

08/12/2011

Reported:

06/25/2013

Project Name: Project Number: D STATE #49 BATTERY

Project Location:

NONE GIVEN

NOT GIVEN

Sampling Date:

08/10/2011

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

#### Sample ID: NW EXC S WALL CENTER (H101689-03)

Chloride, SM4500Cl-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	08/12/2011	ND	416	104	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/13/2011	ND	191	95.6	200	0.904	
DRO >C10-C28	<10.0	10.0	08/13/2011	ND	165	82.7	200	0.0604	
Surrogate: 1-Chlorooctane	107 9	% 70-130							
Surrogate: 1-Chlorooctadecane	112 %	% 70-130							

#### Sample ID: NW EXC W WALL CENTER (H101689-04)

Chloride, SM4500Cl-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	08/12/2011	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/13/2011	ND	191	95.6	200	0.904	
DRO >C10-C28	<10.0	10.0	08/13/2011	ND	165	82.7	200	0.0604	
Surrogate: 1-Chlorooctane	109	% 70-130	1		***				
Surrogate: 1-Chlorooctadecane	115	% 70-130	)						

#### Cardinal Laboratories

\*=Accredited Analyte

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Celeg 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 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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Celeg D. Keine



#### 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

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#26

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



June 25, 2013

NATALIE GLADDEN

APACHE - EUNICE

P. O. BOX 1849

**EUNICE, NM 88231** 

RE: D STATE #49 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/10/11 8:12.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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
NATALIE GLADDEN
P. O. BOX 1849
EUNICE NM, 88231
Fax To: 394-2425

Received:

08/10/2011

Sampling Date:

08/08/2011

Reported:

06/25/2013

Sampling Type:

Soil

Project Name:

D STATE #49 BATTERY

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

89.3 %

70-130

Sample Received By:

Jodi Henson

Project Location:

NOT GIVEN

Sample ID: PT. 1 @ 6' (H101674-01)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte ·	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	08/11/2011	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2011	ND	155	77.3	200	1.34	
DRO >C10-C28	42.6	10.0	08/12/2011	ND	144	72.0	200	0.956	
Surrogate: 1-Chlorooctane	82.5	% 70-130	)						

Surrogate: 1-Chlorooctadecane

Sample ID: PT. 2 @ 6" (H10: Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP			<u></u>		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/11/2011	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2011	ND	155	77.3	200	1.34	
DRO >C10-C28	35.0	10.0	08/12/2011	ND	144	72.0	200	0.956	
Surrogate: 1-Chlorooctane	83.0	% 70-130	)						
Surrogate: 1-Chlorooctadecane	91.2	% 70-130	)						

#### Cardinal Laboratories

\*=Accredited Analyte

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Celeg D. Keene



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

Received:

08/10/2011

Sampling Date:

08/08/2011

Reported:

06/25/2013

Sampling Type:

Soil

Project Name:

D STATE #49 BATTERY

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

NOT GIVEN

#### Sample ID: PT. 3 @ 1' (H101674-03)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/11/2011	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	ed By: ab	•				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2011	ND	155	77.3	200	1.34	
DRO >C10-C28	30.8	10.0	08/12/2011	ND	144	72.0	200	0.956	
Surrogate: 1-Chlorooctane	81.9	% 70-130	)						
Surrogate: 1-Chlorooctadecane	92.8	% 70-130	)						

#### Sample ID: PT. 4 @ 6" (H101674-04)

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	08/11/2011	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2011	ND	155	77.3	200	1.34	
DRO >C10-C28	18.1	10.0	08/12/2011	ND	144	72.0	200	0.956	
Surrogate: 1-Chlorooctane	85.2	% 70-130							
Surrogate: 1-Chlorooctadecane	93.7	% 70-130							

#### Cardinal Laboratories

\*=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:

08/10/2011

Sampling Date:

08/08/2011

Reported:

06/25/2013

Sampling Type:

Soil

Project Name:

D STATE #49 BATTERY

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sample ID: PT. 5 @ 6" (H101674-05)

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	08/11/2011	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2011	ND	155	77.3	200	1.34	
DRO >C10-C28	22.0	10.0	08/12/2011	ND	144	72.0	200	0.956	

Surrogate: 1-Chlorooctane

83.3 %

70-130

Surrogate: 1-Chlorooctadecane

91.2 %

95.3 %

70-130

70-130

#### Sample ID: PT. 6 @ 6" (H101674-06)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/11/2011	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2011	ND	155	77.3	200	1.34	
DRO >C10-C28	15.3	10.0	08/12/2011	ND	144	72.0	200	0.956	
Surrogate: 1-Chlorooctane	86.0	% 70-130	)						

#### Cardinal Laboratories

Surrogate: I-Chlorooctadecane

\*=Accredited Analyte

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

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Celey D. Kune



#### 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	ripaciic.								攜輪	B	ILL	TO					/	ANAL	YSIS	RE	QUE	ST			
Project Manage						<u>~.</u>		P.C	), # <i>:</i>																
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City:		State: NM	Zip	:				Att	n:									Cations/Anions							
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<sup>†</sup> Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476



June 25, 2013

NATALIE GLADDEN

APACHE - EUNICE

P. O. BOX 1849

**EUNICE, NM 88231** 

RE: D STATE #49 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/12/11 8:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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.

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

Received: Reported: 08/12/2011

06/25/2013

Project Name:

D STATE #49 BATTERY

Project Number: Project Location: NONE GIVEN NOT GIVEN

Sampling Date:

Sample Received By:

Sampling Type:

08/11/2011 Soil

Sampling Condition:

Cool & Intact

Jodi Henson

#### Sample ID: W EXC 5 PT BTM COMP (H101690-01)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	08/12/2011	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/15/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	24.1	10.0	08/15/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	77.2	% 70-130	)						
Surrogate: 1-Chlorooctadecane	82.7	% 70-130	)						

#### Sample ID: NW EXC 5 PT BTM COMP (H101690-02)

Chloride, SM4500Cl-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	08/12/2011	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/15/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	22.0	10.0	08/15/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	98.3	% 70-130	l						
Surrogate: 1-Chlorooctadecane	102	% 70-130							

#### Cardinal Laboratories \*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Celey D. Keine



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

Received:

08/12/2011

Reported:

06/25/2013

Project Name: Project Number: D STATE #49 BATTERY

Project Location:

NONE GIVEN

Sampling Date:

08/11/2011

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

#### Sample ID: W EXC W WALL CENTER (H101690-03)

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	08/12/2011	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/15/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	O >C10-C28 18.7		08/15/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	103	% 70-130							
ırrogate: 1-Chlorooctadecane 102 % 70-13									

#### Sample ID: W EXC W WALL SW CORNER (H101690-04)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/12/2011	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/15/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	<10.0	10.0	08/15/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	121	% 70-130					,		
Surrogate: 1-Chlorooctadecane	132	132 % 70-130							

#### Cardinal Laboratories

\*=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:

08/12/2011

06/25/2013

Reported: Project Name:

D STATE #49 BATTERY

Project Number: Project Location: NONE GIVEN

Sampling Date:

08/11/2011

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

#### Sample ID: W EXC W WALL SW CORNER BTM (H101690-05)

Chloride, SM4500CI-B	mg.	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	nloride <16.0		08/12/2011	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/15/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	19.4	10.0	08/15/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	92.7	% 70-130	)						
Surrogate: 1-Chlorooctadecane 98.2 %		% 70-130	)						

#### Sample ID: W EXC W WALL CENTER (H101690-06)

Chloride, SM4500Cl-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	08/12/2011	ND	416	104	400 ery True Value QC	3.92	
TPH 8015M	mg/kg		Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/15/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	<10.0	10.0	08/15/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane		% 70-130							
Surrogate: 1-Chlorooctadecane	132 9	% 70-130							

Cardinal Laboratories \*=Accredited Analyte

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Celeg & Keene



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

Received: Reported: 08/12/2011

06/25/2013

Project Name:

D STATE #49 BATTERY

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

08/11/2011

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

#### Sample ID: W EXC N WALL CENTER (H101690-07)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/12/2011	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result Reporting Lim		Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/15/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	<10.0	10.0	08/15/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	110 % 70-130								
Surrogate: 1-Chlorooctadecane	119	119 % 70-130							

#### Sample ID: W EXC N WALL NW CORNER BTM (H101690-08)

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.		16.0	08/12/2011	ND	432	108	400	3.77	
TPH 8015M	mg/kg		Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/15/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	) >C10-C28 19.7 1		08/15/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	85.1	% 70-130	ı.		-				
Surrogate: 1-Chlorooctadecane	90.8	90.8 % 70-130							

Cardinal Laboratories \*=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:

08/12/2011

Reported:

06/25/2013

NONE GIVEN

Project Name:

D STATE #49 BATTERY

Project Number:

Project Location: NOT GIVEN

Sampling Date:

08/11/2011

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

#### Sample ID: W EXC N WALL NE CORNER TOP (H101690-09)

Chloride, SM4500CI-B	mg,	/kg	Analyze	ed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	08/12/2011	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	ed By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS ·	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/15/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	19.4	10.0	08/15/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	100	% 70-130	)						
Surrogate: 1-Chlorooctadecane			)						

#### Sample ID: W EXC E WALL CENTER (H101690-10)

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	08/12/2011	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/15/2011	ND	196	97.9	200 2.46	2.46	
DRO >C10-C28	<b>0-C28 16.3</b> 10.0		08/15/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	rogate: 1-Chlorooctane 102 %								
Surrogate: I-Chlorooctadecane	119 % 70-130								

#### Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keine



#### **Notes and Definitions**

Z-01 One or more surrogates above historical limits.

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  $6^{\circ}\text{C}$ 

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

Cardinal Laboratories \*=Accredited Analyte

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Celuy 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 Name	Mpacho							BILL TO ANALYSIS REQUEST							<u> </u>									
Project Manage	r: Natalie Gladden				***************************************		F	·.O.	#:															
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Phone #:	Fax #:						/	۱dd	ress:								5					.		
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Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER SOIL	Oil	SLUDGE	OTHER:	ACID/BASE:	OTHER:	DATE	TIME		ļ resa			Complete							
	W. EXCOVATION 5-ps blt corp	C	1	<b> </b>	V				V	1_	8-11-11	9:55	V	1	,									***************************************
2	W. EXCAVATION 5-07 blt Corp N.W. EXCAVATION 5-07 blt Mary W. EXC West WAI's. N. Comm W. EXC West WAI's. N. Comm		1,		V				V		8-11-11	11:32	V	1		ļ								
3	W. Excavation West Wall Conter	6	1./.	ļ	V	/			V		8-11-11	11:47	1	1										
<u> </u>	W. EXC WEST WAITS. N. Come	6	17		V	1_			1		8-11-11,	11:55	V	V					-					
5	W.EXC W. Wall 5 W. Corner BHY	6	L',-		V	-			~	-	8-11-11	1:00	V	V	;	-		ļ						
6	W. EXC W. Wall center	16	1	ļ	V				V		8-11-1/	1:05	1	1										
7	W. ECN. Wall Center	15	1/_	ļ	V				V		8-11-11	1:10	V	$ \nu\rangle$					ļ					
5	W. EXC N. Wall N.W. Corner BHY	5	1/-		V	4				,	8-11-11	1115	1	1			ļ							
9	W. EXC N. WALL N.E. COMM TOP W.EXC E. WALL CONTER	6	-		V	,			V		8-11-11	1:25	V	V	/									
service. In no event shall C	And Dimagos. Cardinal's Igalility and client's exclusive remedy for ting those for negligance and any other cause whotsoever shall be Cardinal be liable for inclamatal or consequented dumages, including sing out of or related to the porturnance of services hereunder by the	eny cla deeme	id walv ut limb	red un allon,	ilass made i ni esoñiaud	n writtr itorrupt	ig and r lons; lo:	occive on of u	kl by Ca so, or lo	rdinal y as of p	irofits incurred b	y client, its nubeld	or the the applic laries,	ablo			<u> </u>	<u> </u>	1					
Relinguished/B	Date: Date:	Re	ecei	ved	By:							Phone Resi		U Y		No No	Add'l Add'l	Phone Fax #:	#:					
Time: 20 To						<u> </u>	neerseart.	A. Walley Sales			REMARK					Trans.			<b>/</b>		***************************************			
Relinquished By:  Date: 7/1/ Received By:  Time: 70							j.	 ن <i>د آ آ</i> ا	) (		email Nata Zcon	lie.C	Slade								om.			
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I Sampler - UPS	- Bus - Other:		1	t	∐ŀÝe	s Iゴ	~Yes	1.	/	والمتاء	4	1	`	-						_				

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



June 25, 2013

NATALIE GLADDEN

APACHE - EUNICE

P. O. BOX 1849

**EUNICE, NM 88231** 

RE: D STATE #49 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/12/11 8:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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.

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

Received:

08/12/2011

Sampling Date:

08/10/2011

Reported:

06/25/2013

Sampling Type:

Soil

Project Name:

D STATE #49 BATTERY

Sampling Condition:

Cool & Intact

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

NOT GIVEN

#### Sample ID: W EXC E WALL NE COR TOP (H101691-01)

chloride, SM4500Cl-B	mg	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/12/2011	ND	432	108	400	3.77	•
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/15/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	16.5	10.0	08/15/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	95.8	% 70-130							
Surrogate: 1-Chlorooctadecane	107	% 70-130							

#### Sample ID: NW SCRAPE @ 6" PT.1 BTM (H101691-02)

110%

70-130

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/12/2011	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/16/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	38.0	10.0	08/16/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	105	% 70-130	)						

#### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

\*=Accredited Analyte

PLEASE NOTE: Uability 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 incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiances, 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.



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

Received: Reported: 08/12/2011

06/25/2013

Project Name:

D STATE #49 BATTERY

70-130

Project Number: Project Location:

Surrogate: 1-Chlorooctadecane

NONE GIVEN NOT GIVEN

121%

Sampling Date:

08/10/2011

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By: Jodi Henson

#### Sample ID: NW SCRAPE @ 6' PT. 2 BTM (H101691-03)

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AP			·		- <del></del>	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/12/2011	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/16/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	37.1	10.0	08/16/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	113	% 70-130	)						

#### Sample ID: NW SCRAPE N WALL PT. 1 (H101691-04)

Chloride, SM4500CI-B	mg	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/12/2011	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/16/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	16.9	10.0	08/16/2011	ND .	203	101	200	6.17	
Surrogate: 1-Chlorooctane	101	% 70-130	)						
Surrogate: 1-Chlorooctadecane	108	% 70-130	)						

Cardinal Laboratories \*=Accredited Analyte

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.

Celeg D. Keens



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

Received:

08/12/2011

Reported:

06/25/2013

Project Name:

D STATE #49 BATTERY

Project Number:

NONE GIVEN

112 %

70-130

Project Location:

Surrogate: 1-Chlorooctadecane

NOT GIVEN

Sampling Date:

08/10/2011 Soil

Sampling Type: Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

#### Sample ID: NW SCRAPE N WALL PT. 2 (H101691-05)

Chloride, SM4500CI-B	mg	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/12/2011	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/16/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	19.1	10.0	08/16/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	109	% 70-130	)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				

#### Sample ID: NW SCRAPE S WALL PT 1 (H101691-06)

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AP					_	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/12/2011	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	ed By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/16/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	26.5	10.0	08/16/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	94.5	% 70-130	)						
Surrogate: 1-Chlorooctadecane	103	% 70-130	)						

#### Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Kune



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

Received:

08/12/2011

Sampling Date:

08/10/2011

Reported:

06/25/2013

Sampling Type:

Soil

Project Name:

D STATE #49 BATTERY

Sampling Condition:

Cool & Intact Jodi Henson

Project Number:

NONE GIVEN

119%

70-130

Sample Received By:

Project Location:

NOT GIVEN

#### Sample ID: NW SCRAPE S WALL PT. 2 (H101691-07)

Chloride, SM4500CI-B	mg	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/12/2011	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/16/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	17.3	10.0	08/16/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	88.1	% 70-130	1						
Surrogate: 1-Chlorooctadecane	112	% 70-130	)						

#### Sample ID: NW EXC BTTM CENTER @ 4' (H101691-08)

Chloride, SM4500Cl-B	mg,	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/12/2011	ND	432	108	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/16/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	13.9	10.0	08/16/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	85.6	% 70-130	)						

#### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

\*=Accredited Analyte

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Celey & Keens



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

Received:

08/12/2011

Reported:

06/25/2013

Project Name:

D STATE #49 BATTERY

Project Number:

NONE GIVEN

Sampling Date:

08/10/2011

Sampling Type:

Soil

Sampling Condition:

Cool & Intact Jodi Henson

Sample Received By:

Project Location:

NOT GIVEN

#### Sample ID: NW EXC SW CORNER BTM @4' (H101691-09)

Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/12/2011	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	ed By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/16/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	14.3	10.0	08/16/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	84.0	% 70-130	)						

Surrogate: 1-Chlorooctadecane

108 %

70-130

#### Sample ID: NE CORNER BTM @ 4' (H101691-10)

hloride, SM4500CI-B	mg	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	08/12/2011	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/16/2011	ND	196	97.9	200	2.46	
DRO >C10-C28	14.8	10.0	08/16/2011	ND	203	101	200	6.17	

Surrogate: 1-Chlorooctadecane

105 %

70-130

#### Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories,



ND

#### **Notes and Definitions**

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

Analyte NOT DETECTED at or above the reporting limit

Cardinal Laboratories \*=Accredited Analyte

PLEASE NOTE: Uability 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 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.



ANALYSIS REQUEST

#### ARDINAL LABORATORIES

Company Name: Apache

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

Project Manager: Natalie Gladden		P.O. #:									
Address:	ggyang kalga kapan dalamba manganan kapan mangangganggan yangga Mangan pangah dapat Mangan panah mandalamba ka	Company:			.		2				1
City:, State: NM	Zip:	Attn:					Cations/Anions				
Phone #: Fax #:		Address:					2				
Project #: Project Owner	•	City:	(1	` ∑		-ji	S				
Project Name: D Stark -40 Emulsion 11	ne A.D.	State: Zip:	<u>a</u>	5 15	×		G			ŀ	
Project Location:		Phone #:			BTEX		at:	DS			
Sampler Name: Dak Harnis		Fax #:	<u> </u>	-	m	X		}		1	
Lab I.D. Sample I.D.  HIOIDGI  W.EXC E. Wall N.E. Cur Top  Z. N.W. Scrape & DTD. bHM  J.N.W. Scrape N. Wall DT I  N.W. Scrape N. Wall DT J.  N.W. Scrape N. Wall DTD.	つるののののでは、	V 8-10-1) 1. V 8-12-1) 1 V 8-12-1) 1	TIME 30 V 35 V 1/0 V 1/50 V		Radinal I	exas	Complete				
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8 AW DR btm certeray	GII	8.1D.11	ب ب								
4 NIVEYE SWEDTHER DIME	GI V	8/10.11		1							
10 NE corner bHMad 4"	61	V (6.10-1)		سعد المرا							
PLEASE NOTE: Linbility und Damages. Cerdinal's lability and clients exclusive remote to analyses. All claims including those for regispence and any other cause whatscever shall be sortice. In a geent shall Cardinal be linbip for includent at consequental damages, includi affiliates of puccess of a prising out of or related to the performance of scruless herounder by	deemed waived unless mado in willing a gwithput limitation, business interuption Cardinal, repardions of whother such clai	and received by Cordinal within 30 days after a spicasopf use, of less of profits insurred by citor mile baced upon any of the above stated reaso	mpletion of the app I, its subsidiaries s or otherwise;			,					
Relinquished By:  Date:  Relinquished By:  Date:  Date:  Prime:  Time:  Time:	Received By:  Received By:	leudov	email res Natalie.	ା Ye ∕ ୭୧- ଶ sults Glado	is 2 Soun Per len@	No Note Dusa	S ( ) ) apą	checor	5/12/ CL 10 (HA ).com; rice-ecs	C-0-1	5
Delivered By/ (Circle One)	Sample Cond	/ (Inifials)		_					ner@ric		
Sampler - UPS - Bus - Other:	-9 Pyes Fix	es / 444		<u></u>			., *\				 Prince de la Constantina

BILL TO

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



June 25, 2013

NATALIE GLADDEN

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: D STATE #49 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 08/10/11 8:12.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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. 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 NATALIE GLADDEN P. O. BOX 1849 **EUNICE NM, 88231** Fax To: 394-2425

Received:

08/10/2011

Sampling Date:

08/09/2011

Reported:

06/25/2013

Sampling Type:

Soil

Project Name:

D STATE #49 BATTERY

Sampling Condition: Sample Received By: Cool & Intact Jodi Henson

Project Number: Project Location: NONE GIVEN NOT GIVEN

Sample ID: NORTH WALL PT. 1 (H101675-01)

Chloride, SM4500Cl-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	08/11/2011	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2011	ND	196	98.2	200	3.54	
DRO >C10-C28	<10.0	10.0	08/12/2011	ND	179	89.5	200	2.25	
Surrogate: 1-Chlorooctane	111	% 70-130	)						

111%

Surrogate: 1-Chlorooctadecane

128 %

70-130

#### Sample ID: NORTH WALL PT. 2 (H101675-02)

Chloride, SM4500Cl-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	08/11/2011	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2011	ND	196	98.2	200	3.54	
DRO >C10-C28	<10.0	10.0	08/12/2011	ND	179	89.5	200	2.25	
Surrogate: 1-Chlorooctane	hlorooctane 105 %								
Surrogate: 1-Chlorooctadecane	121	% 70-130							

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\*=Accredited Analyte

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

Received:

08/10/2011

Reported:

06/25/2013

Project Name:

D STATE #49 BATTERY

Project Number: Project Location: NONE GIVEN

NOT GIVEN

Sampling Date:

Sampling Type:

Soil Sampling Condition:

Sample Received By:

08/09/2011

Cool & Intact Jodi Henson

#### Sample ID: NORTH WALL PT. 3 (H101675-03)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/11/2011	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	ed By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2011	ND	196	98.2	200	3.54	
DRO >C10-C28	<10.0	10.0	08/12/2011	ND	<b>1</b> 79	89.5	200	2.25	
Surrogate: 1-Chlorooctane	111	% 70-130	)						
C	110	0/ 70 12/	n						

Surrogate: 1-Chlorooctadecane

119%

116%

70-130

70-130

#### Sample ID: NORTH WALL PT. 4 (H101675-04)

mg	/kg	Analyze	d By: AP				_	
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<16.0	16.0	08/11/2011	ND	416	104	400	3.92	
mg	/kg	Analyze	d By: ab					
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<10.0	10.0	08/12/2011	ND	196	98.2	200	3.54	
<10.0	10.0	08/12/2011	ND	179	89.5	200	2.25	
108	% 70-130	)		***************************************				
	Result <16.0 mg  Result <10.0 <10.0	<16.0 16.0 mg/kg  Result Reporting Limit <10.0 10.0 <10.0 10.0	Result         Reporting Limit         Analyzed           <16.0	Result         Reporting Limit         Analyzed         Method Blank           <16.0	Result         Reporting Limit         Analyzed         Method Blank         BS           <16.0	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery           <16.0	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC           <16.0	Result         Reporting Limit         Analyzed         Method Blank         BS         % Recovery         True Value QC         RPD           <16.0

#### Cardinal Laboratories

Surrogate: 1-Chlorooctadecane

\*=Accredited Analyte

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:

08/10/2011

Reported: Project Name: 06/25/2013 D STATE #49 BATTERY

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

08/09/2011

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

#### Sample ID: NORTH WALL PT. 5 (H101675-05)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	08/11/2011	ND	416	104	400	3.92	
TPH 8015M	mg,	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2011	ND	196	98.2	200	3.54	
DRO >C10-C28	35.1	10.0	08/12/2011	ND	179	89.5	200	2.25	
Surrogate: 1-Chlorooctane 11		% 70-130							
Surrogate: 1-Chlorooctadecane	123	% 70-130	)						

#### Sample ID: NORTH WALL PT. 6 (H101675-06)

Chloride, SM4500Cl-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	08/11/2011	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/12/2011	ND	196	98.2	200	3.54	
DRO >C10-C28	<10.0	10.0	08/12/2011	ND	179	89.5	200	2.25	
Surrogate: 1-Chlorooctane 1115		% 70-130	)						
Surrogate: 1-Chlorooctadecane	129	% 70-130	)						

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\*=Accredited Analyte

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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Received:

08/10/2011

Sampling Date:

08/09/2011

Reported:

06/25/2013

Sampling Type:

Soil

Project Name:

D STATE #49 BATTERY

Cool & Intact

Project Number:

NONE GIVEN

Sampling Condition: Sample Received By:

Jodi Henson

Project Location:

NOT GIVEN

Sample ID: EAST WALL PT. 1 (H101675-07)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP				<u></u>	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	08/11/2011	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: ab					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/13/2011	ND	196	98.2	200	3.54	
DRO >C10-C28	91.8	10.0	08/13/2011	ND	179	89.5	200	2.25	
Surrogate: 1-Chlorooctane	110	% 70-130	)						

Surrogate: 1-Chlorooctane 110 % Surrogate: 1-Chlorooctadecane 119% 70-130

Cardinal Laboratories

\*=Accredited Analyte

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#### **Notes and Definitions**

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

\*\* Samples not received at proper temperature of 6°C or below.

\*\*\* Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

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

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Celeg D. Keene

### ARDINAL LABORATORIES

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

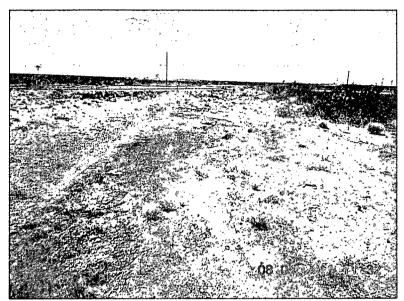
101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603 (505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

							BI	LL TO						ANAL	YSIS	RE	QUE	ST				
Project Manage	r: Natalie Gladden					P.C	), #:															
Address:					تشتنيني	Company:								S							1	
City:	State: NM	Zip:				Attn:							<u>ö</u> .					ŀ	1	l		
Phone #:	Fax #:					Address:			1			ļ	4						l			
Project #:	oject #: Project Owner:					Cit	y:				(n)	Σ		エ	l/s							
Project Name: /	1-40 EMUISION line AIL	),				Sta	te:		Zip:		ě	15	$\times$		O.	(0					}	ł
Project Location					· · · · · · · · · · · · · · · · · · ·	Ph	one#:	<u> </u>			ΙΞ	8	BTEX	S	ati	TDS					1	ı
Sampler Name:	Davi Harris						(#:	i-			Chlorides	I	<u>-   m</u>	Texas TPH	Ü	<b>—</b>				ļ	l	İ
Lab I.D. HIO1675	Sample I.D.  North Wall PT   North Wall PT 3, North Wall PT 4, North Wall PT 4, North Wall PT 5, North Wall PT 6, East Wall PT 1	PPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	GROUNDWATER	MASTEWATER AND A SOIL	RIX JOIN NO.		ACID/BASE: BA	OTHER:	DATE 8-9-11 8-9-1) 8-9-1) 8-9-1) 8-9-1)	TÍME 10:30 10:35 10:40 10:45 10:50 10:55 11:00	0	7 A C A C A C TPH 8015		<u>a</u>	Complete Cations/Anions							
																		,				
analyses. All claims including service. In no eventienal C	nd Dernagos, Cerdine's Hability and client's exclusive remedy for a ng those for nepligence and any other cause whatsoever shall be ardigal be liable for incidental or consequental damagos, including nagbit of or related to the performance of services hereunder by C	deemed w	aved unler ritation, bu	ss made in usiness inte	willing at	d recel loss a	ved by Co luse, or lo	ardinal v ess of p	vithin 30 days at rafits incurred by	er completion of t client, its subsidi	he applica arles	ible	1	·			<b>.</b>					
Relinquished B		_	ived		,	والمعارض والمعارض			٦	Phone Re Fax Resu	sult:	□ Ye	s (Z)	No No	Add'l Add'l	Phone	#:					
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Delivered By	(Gircle One)	0		ample Cool I	ntact		CI	IECK	(ED BY:	Zcono											óm	
Sampler - UPS	- Bus - Other:	1.5	0	Ýes No	∐-Ye	S O		17	ials)	nçond	1610	ynice	-608	.con	1, ∟∨	/CIIII	ieiiii	eiw	HCG-0	-US.C	OH	

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

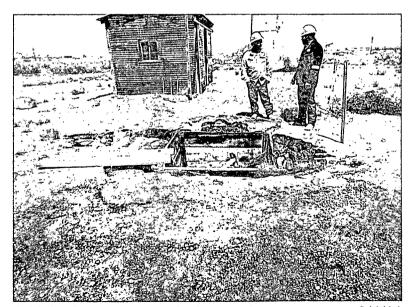
## Appendix D Photo Documentation

## Apache D State #049 Battery AD Unit Letter P, Section 26, T17S, R28E



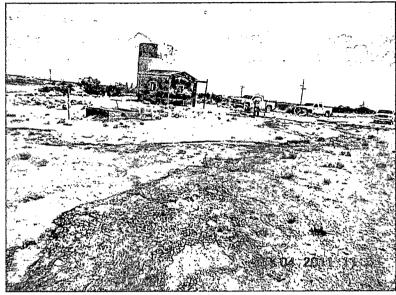
Initial release area, facing west

8/4/11



Initial release source, facing north

8/4/11



Initial release area, facing north

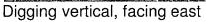
8/4/11



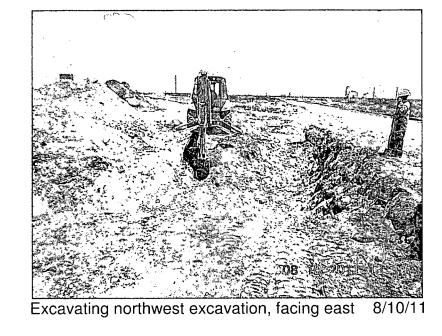
Scraping release area, facing west

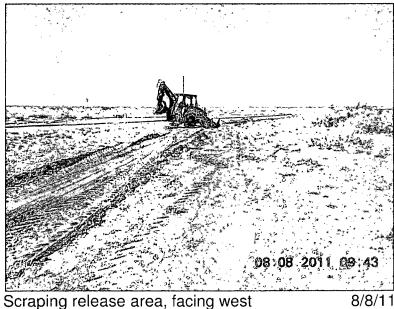
8/4/11



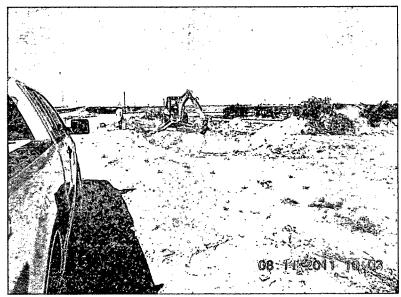


8/10/11



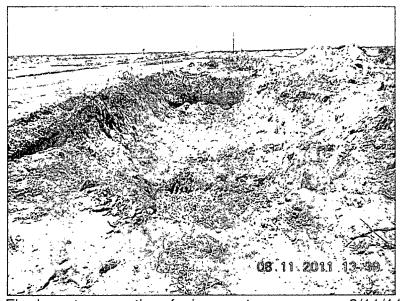


Scraping release area, facing west



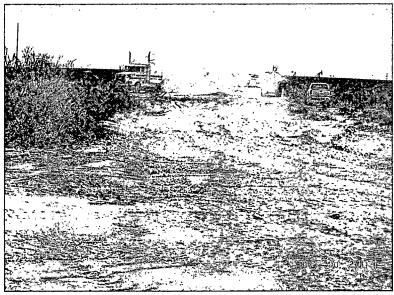
Excavating west excavation, facing west

8/10/11

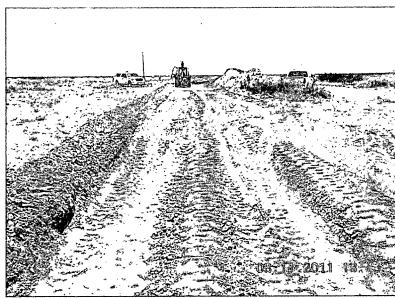


Final west excavation, facing west

8/11/1

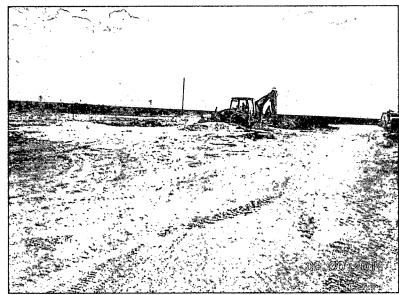


Importing soil, facing west 8/30/11

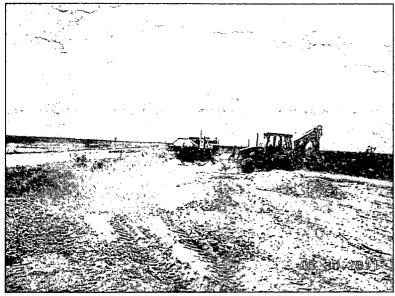


Final scrape, facing west

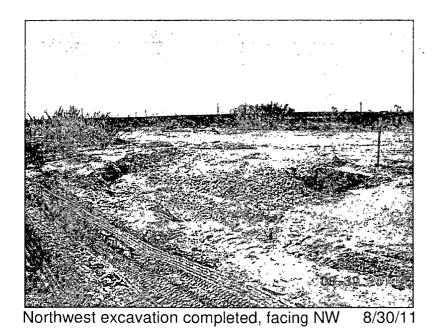
8/11/1



Backfilling northwest excavation, facing SW 8/30/13



Backfilling west excavation, facing southwest 8/30/11



West excavation completed, facing north 8/30/11



Site completed, facing southeast

8/30/11

# Appendix E Final C-141

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

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

Revised August 8, 2011

Form C-141

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.

Release Notification and Corrective Action																
						OPERATOR Initial Report Final Report										
Name of Co		Apache Cor				Contact Bruce Baker Talambana No. (432) 631 6082										
Facility Na		, Eunice, NM tate #49 Bty		) well)		Telephone No. (432) 631-6982 Facility Type Production Battery										
Surface Ow			(Hour Wos	Mineral (												
Surface Ow	1101 312	110														
Unit Letter	Section	Township	Range	Feet from the		N OF RE	Feet from the	Fact/\	West Line	County						
		-														
Р	26	17S	28E	290	<u> </u>	FSL	175	<u> </u>	FEL	Eddy						
			Lat	titude		Longitud	le									
Type of Release Produced Water Volume of Release 45 bbls Volume Recovered 30 bbls																
Type of Rele Source of Re							Release 45 bbls lour of Occurrence			Recovered Hour of Dis	30 b					
Source of Re	icase i ioci	igiass inic				8/4/11 8:3		E	same	Hour or Dis	scovery	у				
Was Immedi	ate Notice C		L v 57	N D N (D	. ,	If YES, To										
D 11/1 0			Yes 🔀	No 🗌 Not R	equired	D										
By Whom? Was a Water	course Reac	rhed?				Date and F	lour olume Impacting t	he Wate	ercourse							
			Yes 🗌	No			rume impueting t	no man	- COUITO -	DEA	- 11		7			
If a Watercon	ırse was Im	pacted, Descr	ibe Fully.*			<u> </u>				RECEIVED						
										OCT	<b>03</b> 2	013	1			
		em and Reme								10.000	A D'	TEGIA				
A buried fibe	rglass line t	burst inside th	e junction	box. The line ha	is been re	epaired and re	emediation has be	gun.		MOCD	AR	IESIA	7			
Describe Are	a Affected	and Cleanup A	Action Tak	en.* 17,000 sq	ft of land	d has been dis	sturbed along the	pipeline	right-of-w	ay. RECS p	ersonr	nel were o	 on			
							ples were taken a is. Two verticals									
contaminatio	n at the site	. Based on th	e vertical o	lata, two excavat	ions wer	e dug at the v	ertical sites. The	northw	est excavat	ion was exc	avated	to 4 ft bg	gs			
							oms of each excave the northwest and						or			
inches. After	the scrapes	s were comple	eted, six po	ints were taken a	long the	length of the	south scrape and	taken to	o a comme	rcial laborat	ory for	analysis.	. The			
walls and bo	tom sample	s of the north	west scrap	e were also taken	to a cor	nmercial labo	oratory for analysi	s. The	excavated s	soil was tak	en to a	NMOCD	)			
scrapes in the	pasture we	re backfilled	with top so	oil.			he lease road was						d			
I hereby certi	fy that the i	nformation gi	ven above	is true and comp	lete to th	ne best of my	knowledge and u	nderstar	nd that purs	suant to NM	OCD 1	rules and				
public health	or the envir	are required to ronment. The	o report an acceptanc	d/or file certain r	ort by the	otifications ai e NMOCD m	nd perform correc arked as "Final Re	tive acti eport" d	ions for reli loes not reli	eases which ieve the one	may e rator o	ndanger f liability	,			
should their	perations h	ave failed to a	adequately	investigate and r	emediate	e contaminati	on that pose a thre	eat to gr	ound water	r, surface wa	iter, hu	ıman heal				
federal, state.	nment. In a or local lav	ddition, NMC ws and/or regu	CD acceptulations.	tance of a C-141	report d	oes not reliev	e the operator of i	responsi	ibility for c	ompliance v	vith an	y other				
				<del></del>		OIL CONSERVATION DIVISION										
Signature:	Bruce	Baher														
Printed Name						Approved by	Environmental S <sub>1</sub>	pecialist	t:							
Title: Enviro	onmental Te	ech				Approval Dat	e:		Expiration :	Date:						
		aker@apache	corp.com			Conditions of Approval:										
	3-30-					Conditions of	pprovar.			Attached						
Date: 7				(432) 631-698	2			_								