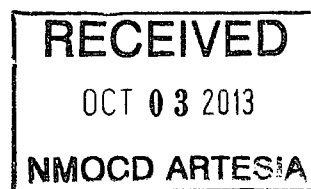




EXPLORING WHAT'S POSSIBLE



# 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 4<sup>th</sup>, 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 27<sup>th</sup>, 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).

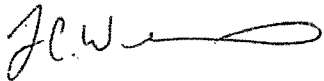
The excavated soil was taken to a NMOCD approved facility for disposal. Clean soil was imported to the site to use as backfill. The lease road was backfilled with caliche and the excavations and scrapes in the pasture were backfilled with top soil.

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,

A handwritten signature in black ink, appearing to read 'L. Weinheimer', with a long, sweeping horizontal line extending to the right.

Lara Weinheimer  
Project Scientist  
RECS  
(575) 441-0431

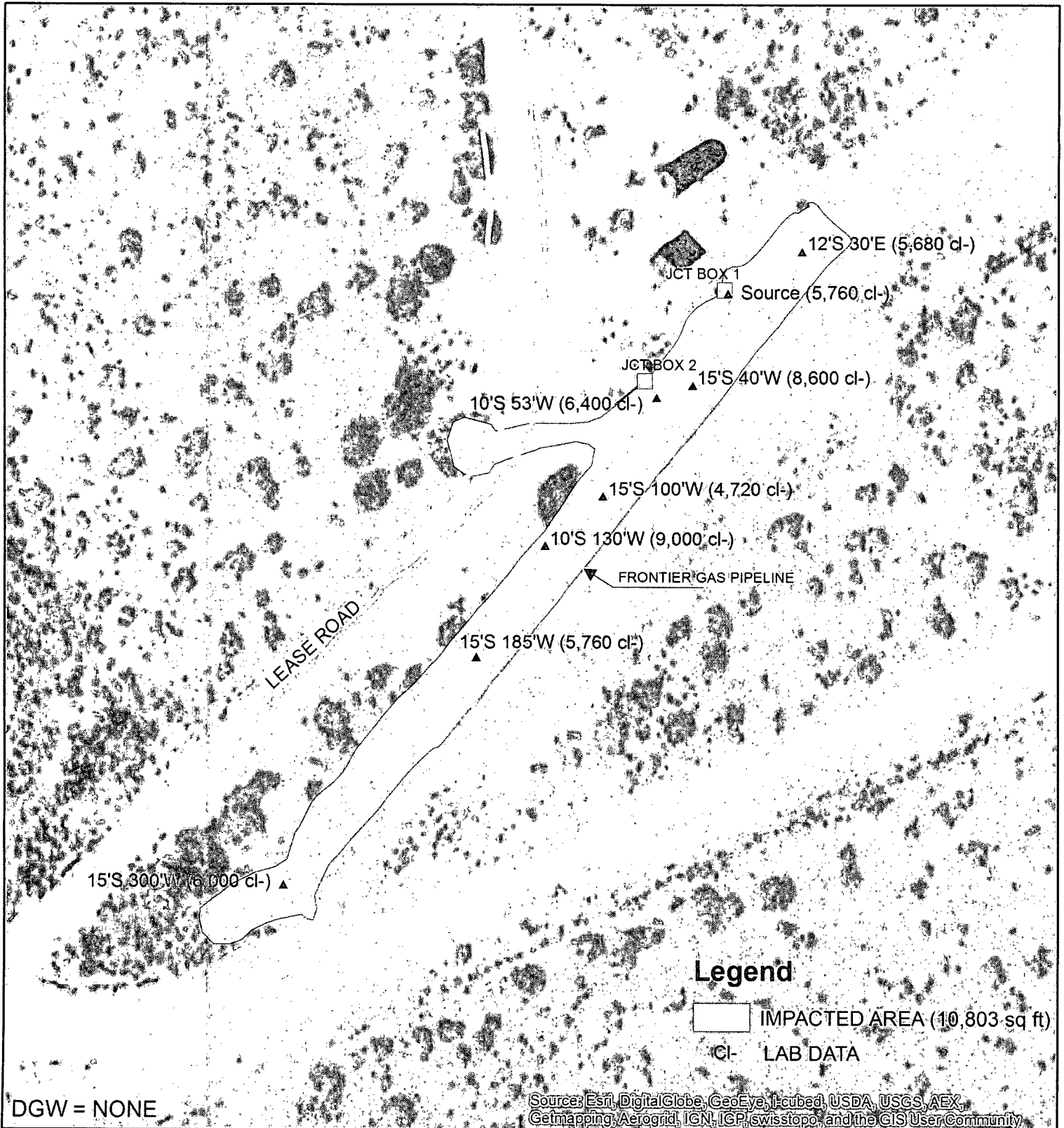
Attachments:

- 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

# Figures

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

# Initial Lab Data



## APACHE 'D' STATE #049 AD

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

NMOCD Case #: 2RP-856

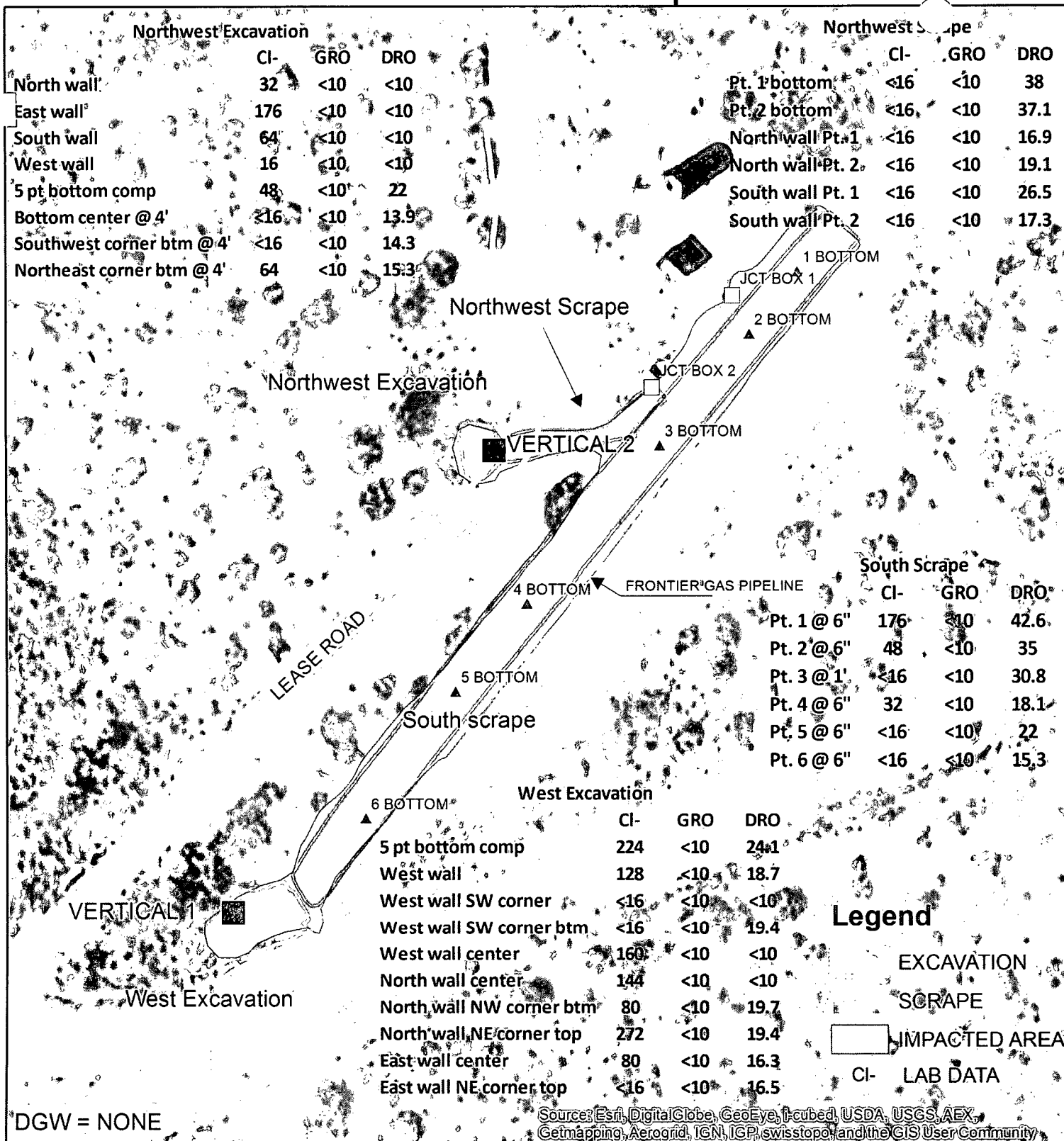
### Figure 1



0 30 60  
Feet

GPS date: 8/9-11/11 DH  
Drawing date: 8/12/11  
Drafted by: T. Grieco and L. Weinheimer

# Excavation Map



DGW = NONE



## 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  
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

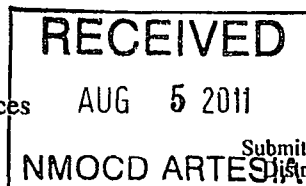
**RICE Environmental Consulting and Safety (RECS)**

P.O. Box 2948 Hobbs, NM 88241

Phone 575.393.2967

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

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



Form C-141  
Revised August 1, 2011  
Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

NMLB1122937050

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Apache Corporation	873	Contact	Natalie Gladden
Address	PO Box 1849, Eunice NM		Telephone No.	575-390-4186
Facility Name	D State #49 Bty (near #59 well)		Facility Type	Production Battery

Surface Owner	State of NM	Mineral Owner	State of NM	Lease No.	30-015-38470
---------------	-------------	---------------	-------------	-----------	--------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	26	17S	28E	290	FSL	175	FEL	Eddy

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	45	Volume Recovered	30
Source of Release	Fiberglass line	Date and Hour of Occurrence	08/04/11 830am	Date and Hour of Discovery	same
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?		Date and Hour			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

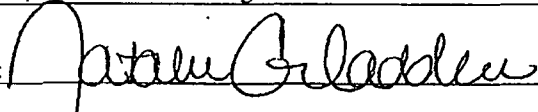
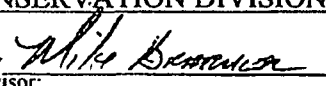
Describe Cause of Problem and Remedial Action Taken.\*

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

Describe Area Affected and Cleanup Action Taken.\*

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

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Natalie Gladden	Signed By 	
Title: EHS Environmental Tech	Approved by District Supervisor:	
E-mail Address: natalie.gladden@apachecorp.com	Approval Date: AUG 17 2011	Expiration Date:
Date: 08/05/11 Phone: 575-390-4186	Conditions of Approval:	Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary

Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:

9/17/2011

2RP-856



# Appendix B

## Initial Sampling Laboratory Analyses

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

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 [www.tceq.texas.gov/field/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

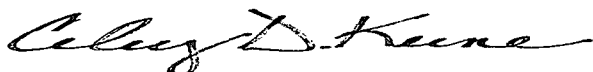
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 08/05/2011  
Reported: 06/25/2013  
Project Name: D STATE #49 BATTERY  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/04/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

Chloride, SM4500Cl-B		mg/kg	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>8600</b>	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
<b>GRO C6-C10</b>	<b>35.6</b>	10.0	08/10/2011	ND	187	93.7	200	2.82	
<b>DRO &gt;C10-C28</b>	<b>572</b>	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	Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>5760</b>	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
<b>GRO C6-C10</b>	<b>70.1</b>	10.0	08/10/2011	ND	187	93.7	200	2.82	
<b>DRO &gt;C10-C28</b>	<b>1060</b>	10.0	08/10/2011	ND	179	89.5	200	3.74	

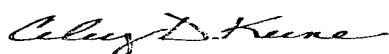
Surrogate: 1-Chlorooctane 92.1 % 70-130

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. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 08/05/2011  
Reported: 06/25/2013  
Project Name: D STATE #49 BATTERY  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/04/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

Chloride, SM4500Cl-B		mg/kg		Analyzed 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		Analyzed 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		Analyzed 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		Analyzed By: ab						
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		

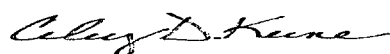
Surrogate: 1-Chlorooctane 64.1 % 70-130

Surrogate: 1-Chlorooctadecane 94.9 % 70-130

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 08/05/2011  
Reported: 06/25/2013  
Project Name: D STATE #49 BATTERY  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/04/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

Chloride, SM4500CI-B		mg/kg		Analyzed 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		Analyzed 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 %	70-130						

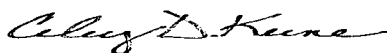
**Sample ID: 15' SOUTH / 100' WEST (H101627-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed 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		Analyzed By: ab					
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	106 %	70-130							
Surrogate: 1-Chlorooctadecane	112 %	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. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 08/05/2011  
Reported: 06/25/2013  
Project Name: D STATE #49 BATTERY  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/04/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

Chloride, SM4500Cl-B		mg/kg		Analyzed 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						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							

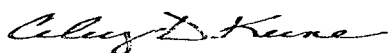
**Sample ID: 15' SOUTH / 300' WEST (H101627-08)**

Chloride, SM4500Cl-B	mg/kg		Analyzed 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-Chlorooctadecane	97.5 %	70-130							

Cardinal Laboratories

\*=Accredited Analyte

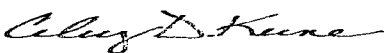
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived 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. 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



---

Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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



# Appendix C

## Final Laboratory Analyses

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

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 [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

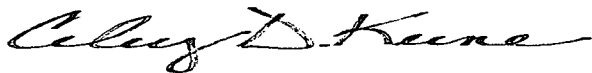
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

APACHE - EUNICE  
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  
Project Location: NOT GIVEN

Sampling Date: 08/10/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

Chloride, SM4500Cl-B		mg/kg		Analyzed 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		Analyzed 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						

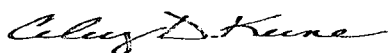
**Sample ID: NW EXC E WALL CENTER (H101689-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
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		Analyzed 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						

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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  
Project Location: NOT GIVEN

Sampling Date: 08/10/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

Chloride, 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	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed 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		112 %	70-130						

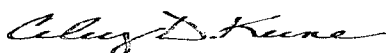
**Sample ID: NW EXC W WALL CENTER (H101689-04)**

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	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed 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						
Surrogate: 1-Chlorooctadecane		115 %	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. Keene, Lab Director/Quality Manager

**Notes and Definitions**

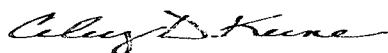
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

---

Cardinal Laboratories

\*=Accredited Analyte

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



---

Celey D. Keene, Lab Director/Quality Manager



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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

† 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 [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

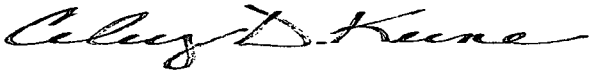
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

APACHE - EUNICE  
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: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/08/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

Chloride, SM4500Cl-B		mg/kg		Analyzed 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		Analyzed 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		89.3 %	70-130						

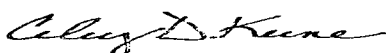
**Sample ID: PT. 2 @ 6" (H101674-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/11/2011	ND	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed 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

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



Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/08/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

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	08/11/2011	ND	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed 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	
<b>DRO &gt;C10-C28</b>	<b>30.8</b>	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						

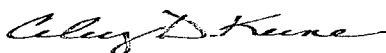
**Sample ID: PT. 4 @ 6" (H101674-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed 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		Analyzed 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

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



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 08/08/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

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	08/11/2011	ND	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed 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 %	70-130							

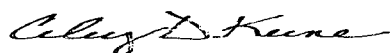
**Sample ID: PT. 6 @ 6" (H101674-06)**

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	08/11/2011	ND	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed 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	
<b>DRO &gt;C10-C28</b>	<b>15.3</b>	10.0	08/12/2011	ND	144	72.0	200	0.956	
Surrogate: 1-Chlorooctane	86.0 %	70-130							
Surrogate: 1-Chlorooctadecane	95.3 %	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. Keene, Lab Director/Quality Manager

**Notes and Definitions**

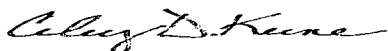
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

---

Cardinal Laboratories

\*=Accredited Analyte

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



---

Celey D. Keene, Lab Director/Quality Manager



# CARDINAL LABORATORIES

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																																	
Project Manager: Natalie Gladden				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div> </div>																																	
Address:				Company:																																					
City: State: NM Zip:				Attn:																																					
Phone #: Fax #:				Address:																																					
Project #: Project Owner:				City:																																					
Project Name:				State: Zip:																																					
Project Location: D STATE #40 AD				Phone #:																																					
Sampler Name: GERALD PEREZ				Fax #:																																					
FOR LAB USE ONLY		Lab I.D.		Sample I.D.		(GRAB OR COMPOUND)		CONTAINERS		MATRIX		PRESERV.		SAMPLING																											
						#		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER		ACID/BASE		ICE / COOL		OTHER		DATE		TIME													
H101674																																									
1		PT.1 @ 6'				1																				8/8/11		03:00													
2		PT.2 @ 6"				1																				8/8/11		03:05													
3		PT.3 @ 1'				1																				8/8/11		03:10													
4		PT.4 @ 6"				1																				8/8/11		03:15													
5		PT.5 @ 6"				1																				8/8/11		03:20													
6		PT.6 @ 6"				1																				8/8/11		03:25													

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 the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:		Date: 8/10/11		Received By:		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #:	
		Time: 7:30				Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Fax #:	
Relinquished By:		Date: 8/10/11		Received By:		REMARKS:  email results Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com			
		Time: 6:12							
Delivered By: (Circle One)									
Sampler - UPS - Bus - Other:		4.5°C		Sample Condition					
				Cool - Intact					
				<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
				<input type="checkbox"/> No <input type="checkbox"/> No					
				CHECKED BY:					
				(initials)					

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

#26

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 [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

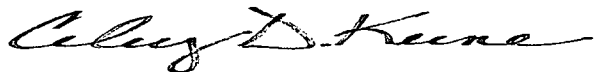
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

APACHE - EUNICE  
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  
Project Location: NOT GIVEN

Sampling Date: 08/11/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

Chloride, SM4500Cl-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>224</b>	16.0	08/12/2011	ND	416	104	400	3.92	
TPH 8015M		mg/kg	Analyzed 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	
<b>DRO &gt;C10-C28</b>	<b>24.1</b>	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	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>48.0</b>	16.0	08/12/2011	ND	416	104	400	3.92	
TPH 8015M		mg/kg	Analyzed 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	
<b>DRO &gt;C10-C28</b>	<b>22.0</b>	10.0	08/15/2011	ND	203	101	200	6.17	

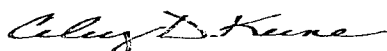
Surrogate: 1-Chlorooctane 98.3 % 70-130

Surrogate: 1-Chlorooctadecane 102 % 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. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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  
Project Location: NOT 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, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	08/12/2011	ND	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed 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	18.7	10.0	08/15/2011	ND	203	101	200	6.17	

Surrogate: 1-Chlorooctane 103 % 70-130

Surrogate: 1-Chlorooctadecane 102 % 70-130

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

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	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed 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	

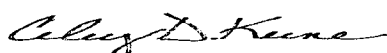
Surrogate: 1-Chlorooctane 121 % 70-130

Surrogate: 1-Chlorooctadecane 132 % 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. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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  
Project Location: NOT 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, 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	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed 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	
<b>DRO &gt;C10-C28</b>	<b>19.4</b>	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							

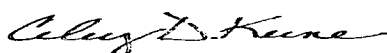
**Sample ID: W EXC W WALL CENTER (H101690-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed 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	3.92	
TPH 8015M		mg/kg		Analyzed 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	128 %	70-130							
Surrogate: 1-Chlorooctadecane	132 %	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. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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  
Project Location: NOT GIVEN

Sampling Date: 08/11/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

Chloride, SM4500Cl-B		mg/kg		Analyzed 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		Analyzed 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		110 %	70-130						
Surrogate: 1-Chlorooctadecane		119 %	70-130						

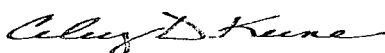
**Sample ID: W EXC N WALL NW CORNER BTM (H101690-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed 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		Analyzed 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	19.7	10.0	08/15/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane		85.1 %	70-130						
Surrogate: 1-Chlorooctadecane		90.8 %	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. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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  
Project Location: NOT GIVEN

Sampling Date: 08/11/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

Chloride, SM4500Cl-B		mg/kg		Analyzed 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		Analyzed 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 107 % 70-130

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

Chloride, SM4500Cl-B		mg/kg		Analyzed 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		Analyzed 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	16.3	10.0	08/15/2011	ND	203	101	200	6.17	

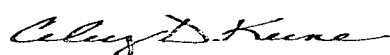
Surrogate: 1-Chlorooctane 102 % 70-130

Surrogate: 1-Chlorooctadecane 119 % 70-130

Cardinal Laboratories

\*=Accredited Analyte

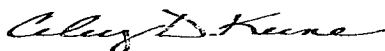
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived 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. Keene, Lab Director/Quality Manager

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



---

Celey D. Keene, Lab Director/Quality Manager



# CARDINAL LABORATORIES

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache		<b>BILL TO</b>		ANALYSIS REQUEST																				
Project Manager: Natalie Gladden		P.O. #:		<div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div>																				
Address:		Company:																						
City: State: NM Zip:		Attn:																						
Phone #: Fax #:		Address:																						
Project #: Project Owner:		City:																						
Project Name: <i>D State-40 Emulsion Line A.D.</i>		State: Zip:																						
Project Location: <i>Dick Harris</i>		Phone #:																						
Sampler Name: <i>Dick Harris</i>		Fax #:																						
FOR LAB USE ONLY																								
Lab I.D.	Sample I.D.	(GRAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.		SAMPLING													
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME										
<i>H101690</i>																								
<i>1</i>	<i>W. EXCAVATION 5-PT BHM CORP</i>	<i>C</i>	<i>1</i>			<i>✓</i>				<i>✓</i>			<i>8-11-11</i>	<i>9:55</i>	<i>✓</i>	<i>✓</i>								
<i>2</i>	<i>N.W. EXCAVATION 5-PT BHM CORP</i>	<i>C</i>	<i>1</i>			<i>✓</i>				<i>✓</i>			<i>8-11-11</i>	<i>11:32</i>	<i>✓</i>	<i>✓</i>								
<i>3</i>	<i>W. EXCAVATION West Wall Center</i>	<i>G</i>	<i>1</i>			<i>✓</i>				<i>✓</i>			<i>8-11-11</i>	<i>11:47</i>	<i>✓</i>	<i>✓</i>								
<i>4</i>	<i>W. EXC West Wall S.N. Corner</i>	<i>G</i>	<i>1</i>			<i>✓</i>				<i>✓</i>			<i>8-11-11</i>	<i>11:55</i>	<i>✓</i>	<i>✓</i>								
<i>5</i>	<i>W. EXC W. Wall S.W. Corner BHM</i>	<i>G</i>	<i>1</i>			<i>✓</i>				<i>✓</i>			<i>8-11-11</i>	<i>1:00</i>	<i>✓</i>	<i>✓</i>								
<i>6</i>	<i>W. EXC W. Wall Center</i>	<i>G</i>	<i>1</i>			<i>✓</i>				<i>✓</i>			<i>8-11-11</i>	<i>1:05</i>	<i>✓</i>	<i>✓</i>								
<i>7</i>	<i>W. EXC N. Wall Center</i>	<i>G</i>	<i>1</i>			<i>✓</i>				<i>✓</i>			<i>8-11-11</i>	<i>1:10</i>	<i>✓</i>	<i>✓</i>								
<i>8</i>	<i>W. EXC N. Wall N.W. Corner BHM</i>	<i>G</i>	<i>1</i>			<i>✓</i>				<i>✓</i>			<i>8-11-11</i>	<i>1:15</i>	<i>✓</i>	<i>✓</i>								
<i>9</i>	<i>W. EXC N. Wall N.E. Corner TOP</i>	<i>G</i>	<i>1</i>			<i>✓</i>				<i>✓</i>			<i>8-11-11</i>	<i>1:20</i>	<i>✓</i>	<i>✓</i>								
<i>10</i>	<i>W. EXC E. Wall Center</i>	<i>G</i>	<i>1</i>			<i>✓</i>				<i>✓</i>			<i>8-11-11</i>	<i>1:25</i>	<i>✓</i>	<i>✓</i>								
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 the client for the 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 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 profit incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.																								
Relinquished By: <i>Dick Harris</i>		Date: <i>8/14/11</i> Time: <i>7:20</i>		Received By: <i>Tony G</i>		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #:		REMARKS:  email results Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com														
Relinquished By: <i>Tony G</i>		Date: <i>8/12/11</i> Time: <i>8:10</i>		Received By: <i>April McNamee</i>		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Fax #:																
Delivered By: (Circle One)																								
Sampler - UPS - Bus - Other:				Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>		CHECKED BY: <i>LA</i>																		

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

#26

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 [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).


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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

APACHE - EUNICE  
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  
Project Location: NOT GIVEN

Sampling Date: 08/10/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

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		Analyzed 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	
<b>DRO &gt;C10-C28</b>	<b>16.5</b>	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)**

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		Analyzed 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	
<b>DRO &gt;C10-C28</b>	<b>38.0</b>	10.0	08/16/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	105 %	70-130							
Surrogate: 1-Chlorooctadecane	110 %	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. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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  
Project Location: NOT GIVEN

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					
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		Analyzed 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	
<b>DRO &gt;C10-C28</b>	<b>37.1</b>	10.0	08/16/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	113 %	70-130							
Surrogate: 1-Chlorooctadecane	121 %	70-130							

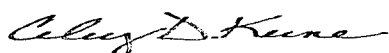
**Sample ID: NW SCRAPE N WALL PT. 1 (H101691-04)**

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		Analyzed 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	
<b>DRO &gt;C10-C28</b>	<b>16.9</b>	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

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



Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

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  
Project Location: NOT GIVEN

Sampling Date: 08/10/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

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		Analyzed 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								
Surrogate: 1-Chlorooctadecane	112 %	70-130								

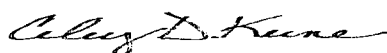
### Sample ID: NW SCRAPE S WALL PT 1 (H101691-06)

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		Analyzed 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

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



Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

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  
Project Location: NOT GIVEN

Sampling Date: 08/10/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

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

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		Analyzed 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							
Surrogate: 1-Chlorooctadecane	112 %	70-130							


**Sample ID: NW EXC BTM 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		Analyzed 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	
<b>DRO &gt;C10-C28</b>	<b>13.9</b>	10.0	08/16/2011	ND	203	101	200	6.17	
Surrogate: 1-Chlorooctane	85.6 %	70-130							
Surrogate: 1-Chlorooctadecane	119 %	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. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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  
Project Location: NOT GIVEN

Sampling Date: 08/10/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson

**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		Analyzed 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							

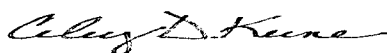
**Sample ID: NE CORNER BTM @ 4' (H101691-10)**

Chloride, SM4500Cl-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		Analyzed 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-Chlorooctane									
	101 %	70-130							
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.



Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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

---

Cardinal Laboratories

\*=Accredited Analyte

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



---

Celey D. Keene, Lab Director/Quality Manager



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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache						BILL TO								ANALYSIS REQUEST																						
Project Manager: Natalie Gladden						P.O. #:																														
Address:						Company:																														
City:		State: NM		Zip:		Attn:																														
Phone #:		Fax #:				Address:																														
Project #:		Project Owner:				City:																														
Project Name: D stake -40 Emulsion line A.D.						State:		Zip:																												
Project Location:						Phone #:																														
Sampler Name: Dal Harris						Fax #:																														
FOR LAB USE ONLY						MATRIX		PRESERV		SAMPLING																										
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER		ACID/BASE		ICE / COOL		OTHER		DATE		TIME								
H101691																																				
1 W.E.C. E. Wall N.E. Cor Top		G-1																								8-10-11		1:30								
2 N.W. Scrape @ 6" PT. 1 btm		G-1																								8-10-11		1:35								
3 N.W. Scrape @ 6" PT. 2 btm		G-1																								8-10-11		1:40								
4 N.W. Scrape N. Wall PT 1		G-1																								8-10-11		1:45								
5 N.W. Scrape N. Wall PT 2		G-1																								8-10-11		1:50								
6 N.W. Scrape S. Wall PT 1		G-1																								8-10-11		1:55								
7 N.W. Scrape S. Wall PT 2		G-1																								8-10-11		2:00								
8 NW Exc. btm center 4'		G-1																								8-10-11										
9 NW Exc SW corner btm 4'		G-1																								8-10-11										
10 NE corner btm 4'		G-1																								8-10-11										
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 the client for the 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 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.						Relinquished By: Dal Harris		Date: 8/12/11		Received By: TSC		Time: 7:30		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #: 8/12/11		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Fax #: 8/12/11		REMARKS: * Three samples added to C-D-C as email results per Dal. JHA Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com														
Relinquished By: TSC						Date: 8/12/11		Received By: Gadi Neuse		Time: 8:10		Sample Condition Cool Intact		CHECKED BY: (Initials)		Delivered By: (Circle One)		Sampler: UPS Bus Other:																		
												<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																						

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 [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

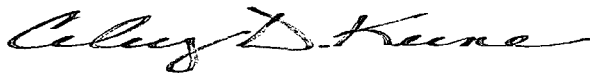
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

APACHE - EUNICE  
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: 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. 1 (H101675-01)**

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	08/11/2011	ND	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed 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						
Surrogate: 1-Chlorooctadecane		128 %	70-130						

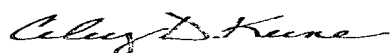
**Sample ID: NORTH WALL PT. 2 (H101675-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed 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		Analyzed 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		105 %	70-130						
Surrogate: 1-Chlorooctadecane		121 %	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. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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: 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. 3 (H101675-03)**

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	08/11/2011	ND	416	104	400	3.92	
TPH 8015M		mg/kg	Analyzed 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							
Surrogate: 1-Chlorooctadecane	119 %	70-130							

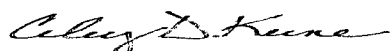
**Sample ID: NORTH WALL PT. 4 (H101675-04)**

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	08/11/2011	ND	416	104	400	3.92	
TPH 8015M		mg/kg	Analyzed 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	108 %	70-130							
Surrogate: 1-Chlorooctadecane	116 %	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. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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: 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	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>752</b>	16.0	08/11/2011	ND	416	104	400	3.92	
TPH 8015M		mg/kg	Analyzed 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	
<b>DRO &gt;C10-C28</b>	<b>35.1</b>	10.0	08/12/2011	ND	179	89.5	200	2.25	

Surrogate: 1-Chlorooctane 112 % 70-130

Surrogate: 1-Chlorooctadecane 123 % 70-130

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

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	08/11/2011	ND	416	104	400	3.92	
TPH 8015M		mg/kg	Analyzed 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	

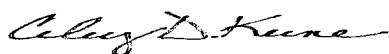
Surrogate: 1-Chlorooctane 111 % 70-130

Surrogate: 1-Chlorooctadecane 129 % 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. Keene, Lab Director/Quality Manager



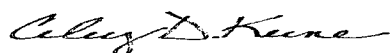
**Analytical Results For:**APACHE - EUNICE  
NATALIE GLADDEN  
P. O. BOX 1849  
EUNICE NM, 88231  
Fax To: 394-2425Received: 08/10/2011  
Reported: 06/25/2013  
Project Name: D STATE #49 BATTERY  
Project Number: NONE GIVEN  
Project Location: NOT GIVENSampling Date: 08/09/2011  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Jodi Henson**Sample ID: EAST WALL PT. 1 (H101675-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
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		Analyzed 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-Chlorooctadecane	119 %	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. Keene, Lab Director/Quality Manager

**Notes and Definitions**

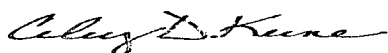
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

---

Cardinal Laboratories

\*=Accredited Analyte

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



---

Celey D. Keene, Lab Director/Quality Manager



# CARDINAL LABORATORIES

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

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Apache				<b>BILL TO</b>				ANALYSIS REQUEST																		
Project Manager: Natalie Gladden				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div> </div>																		
Address:				Company:																						
City: State: NM Zip:				Attn:																						
Phone #: Fax #:				Address:																						
Project #: Project Owner:				City:																						
Project Name: D-40 Emulsion line AID.				State: Zip:																						
Project Location:				Phone #:																						
Sampler Name: Dave Harris				Fax #:																						
FOR LAB USE ONLY																										
Lab I.D.	Sample I.D.	(G)IRABOR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.		SAMPLING															
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME												
A101675																										
1	North Wall PT 1	G	1			✓					✓		8-9-11	10:30	✓	✓										
2	North Wall PT 2	G	1			✓					✓		8-9-11	10:35	✓	✓										
3	North Wall PT 3	G	1			✓					✓		8-9-11	10:40	✓	✓										
4	North Wall PT 4	G	1			✓					✓		8-9-11	10:45	✓	✓										
5	North Wall PT 5	G	1			✓					✓		8-9-11	10:50	✓	✓										
6	North Wall PT 6	G	1			✓					✓		8-9-11	10:55	✓	✓										
7	EAST WALL PT 1	G	1			✓					✓		8-9-11	11:00	✓	✓										

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 the client for the 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 30 days after completion of the applicable services. 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: <i>Dave Harris</i>	Date: 8/9/11 Time: 7:50	Received By: <i>[Signature]</i>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
Relinquished By: <i>[Signature]</i>	Date: 8/10/11 Time: 6:12	Received By: <i>Jodi Henson</i>	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CHECKED BY: (Initials) <i>GH</i>	REMARKS: email results Natalie.Gladden@usa.apachecorp.com; Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com	

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

#26

# Appendix D

## Photo Documentation

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

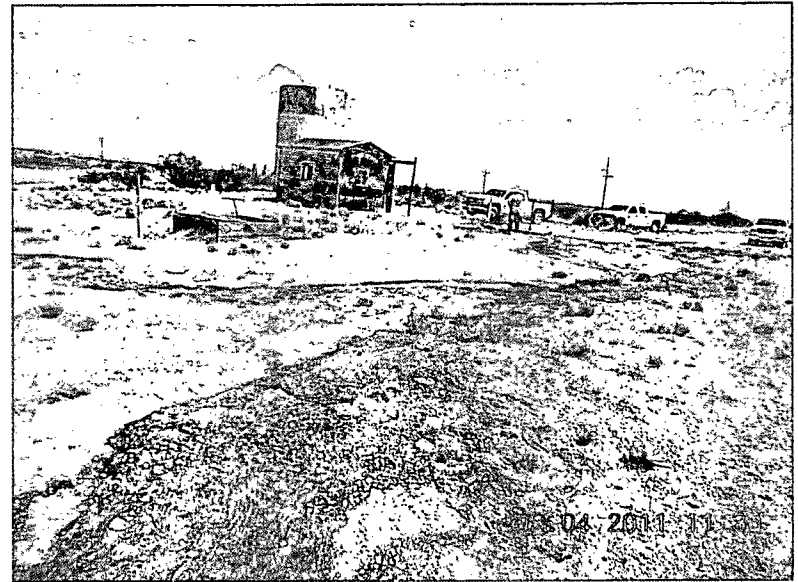
# Apache D State #049 Battery AD

Unit Letter P, Section 26, T17S, R28E



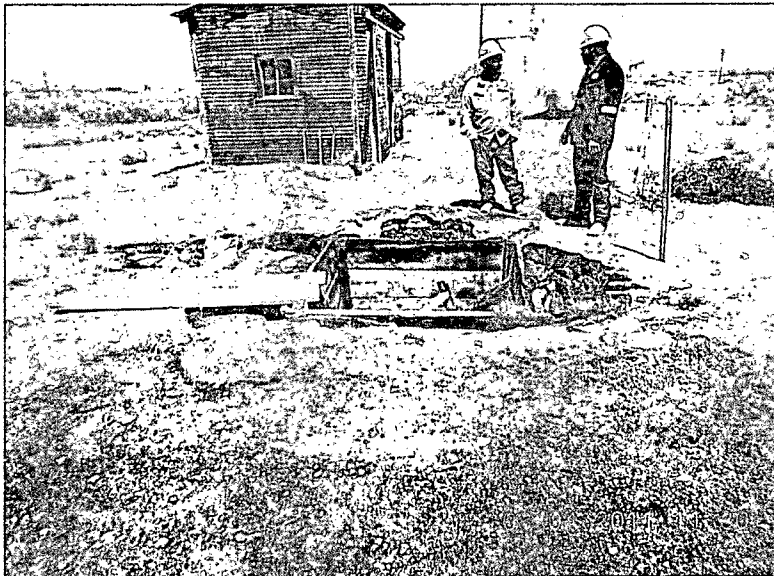
Initial release area, facing west

8/4/11



Initial release area, facing north

8/4/11



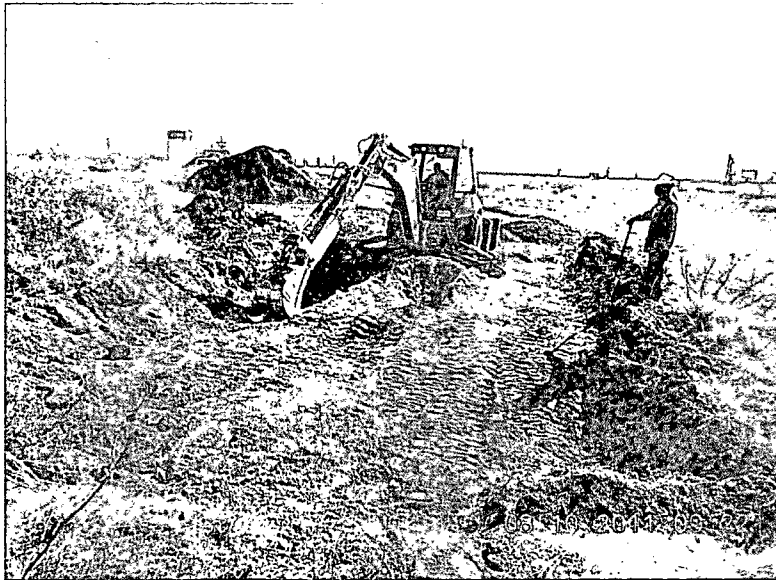
Initial release source, facing north

8/4/11



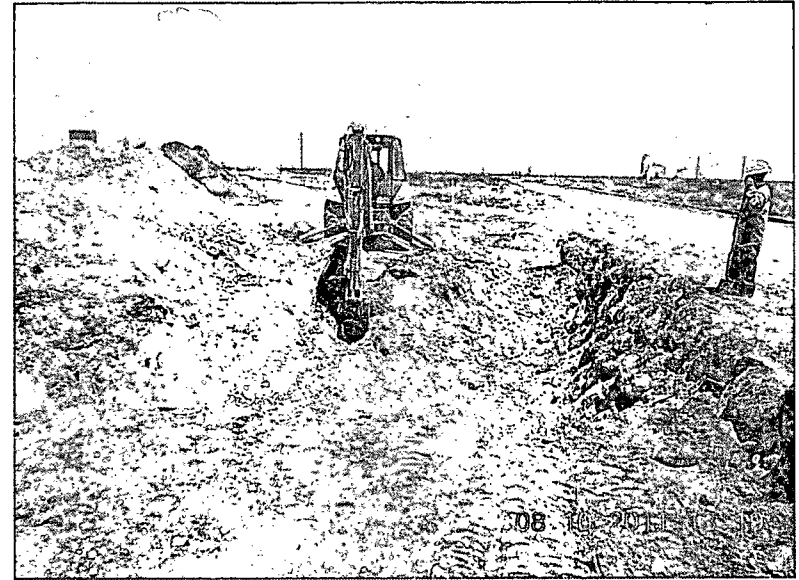
Scraping release area, facing west

8/4/11

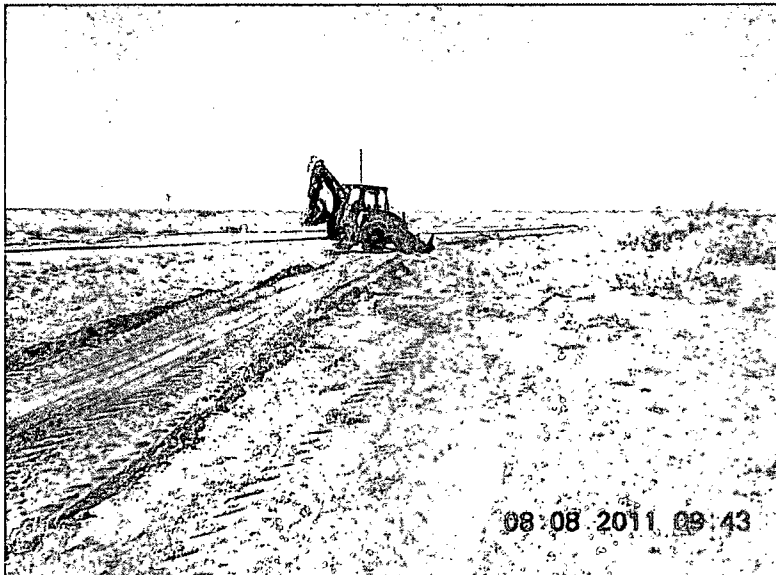


Digging vertical, facing east

8/10/11

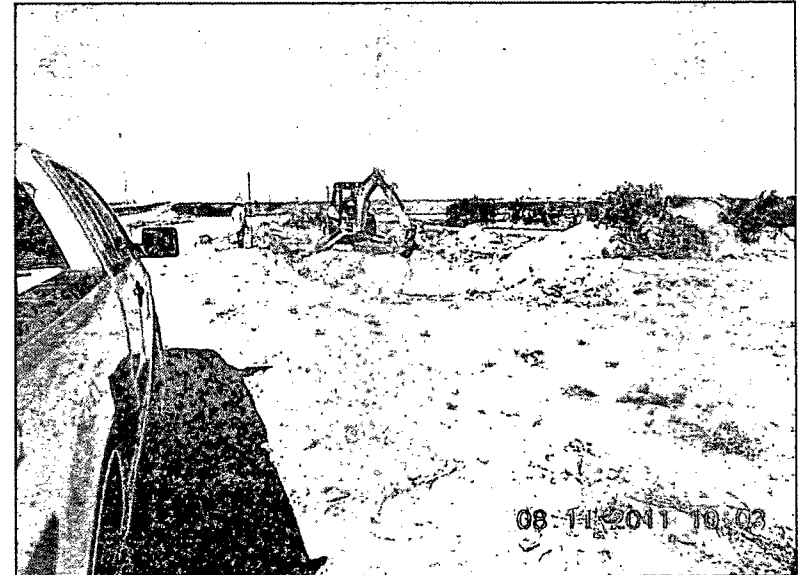


Excavating northwest excavation, facing east 8/10/11



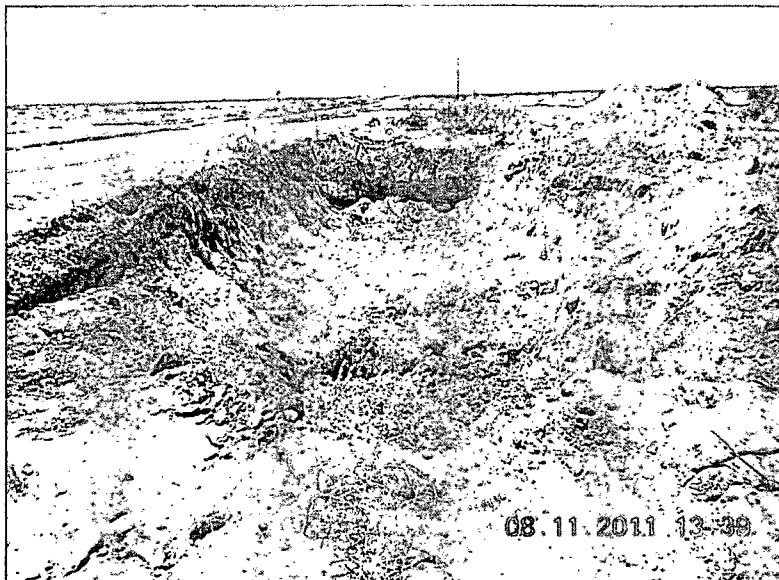
Scraping release area, facing west

8/8/11



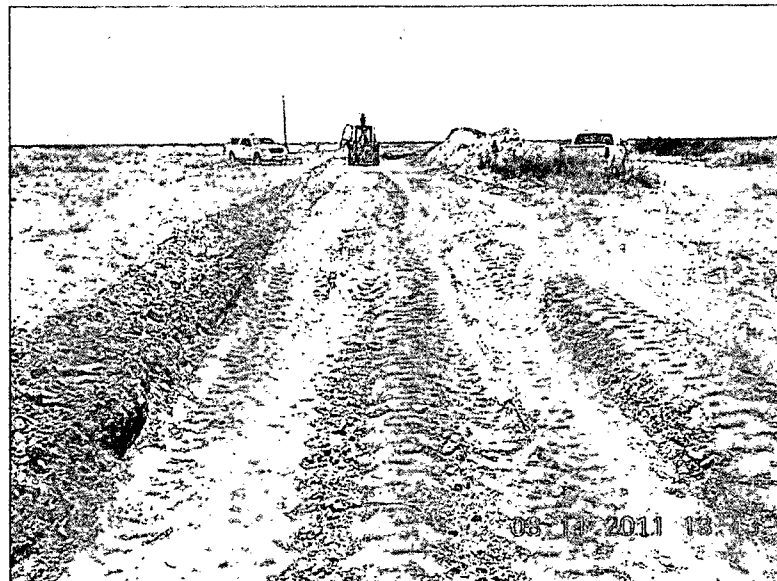
Excavating west excavation, facing west

8/10/11



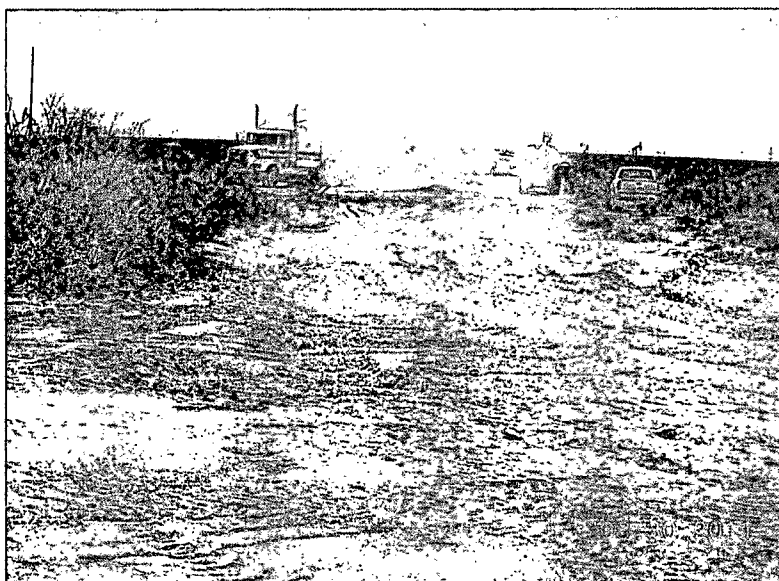
Final west excavation, facing west

8/11/11



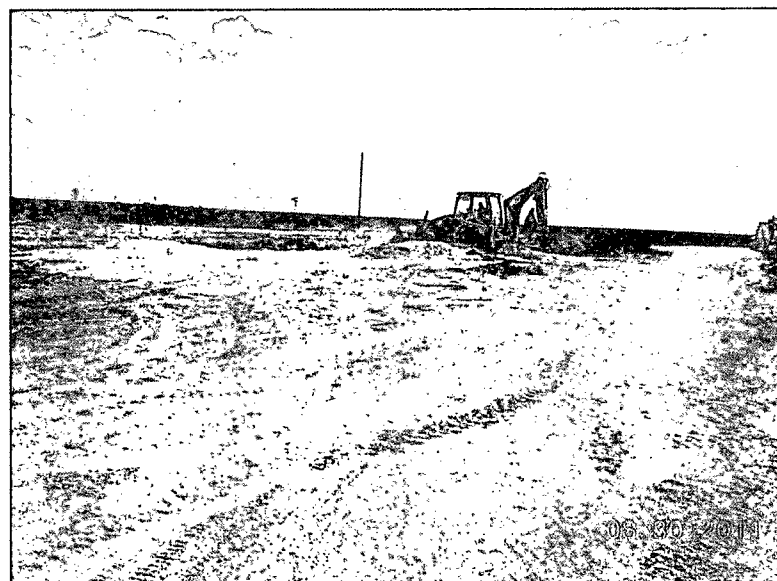
Final scrape, facing west

8/11/11



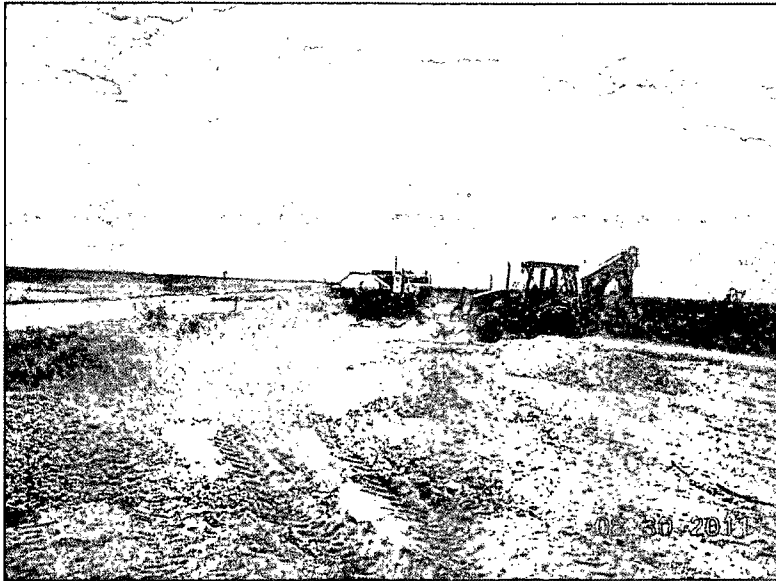
Importing soil, facing west

8/30/11

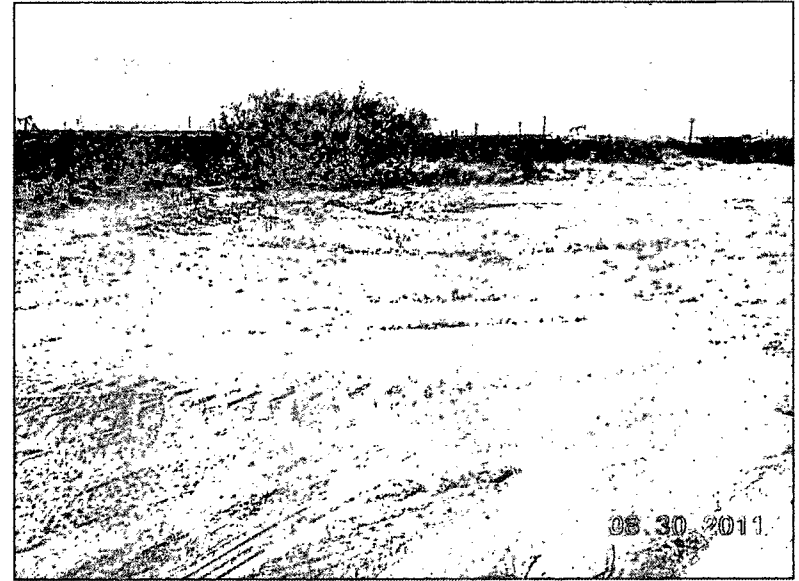


Backfilling northwest excavation, facing SW

8/30/11



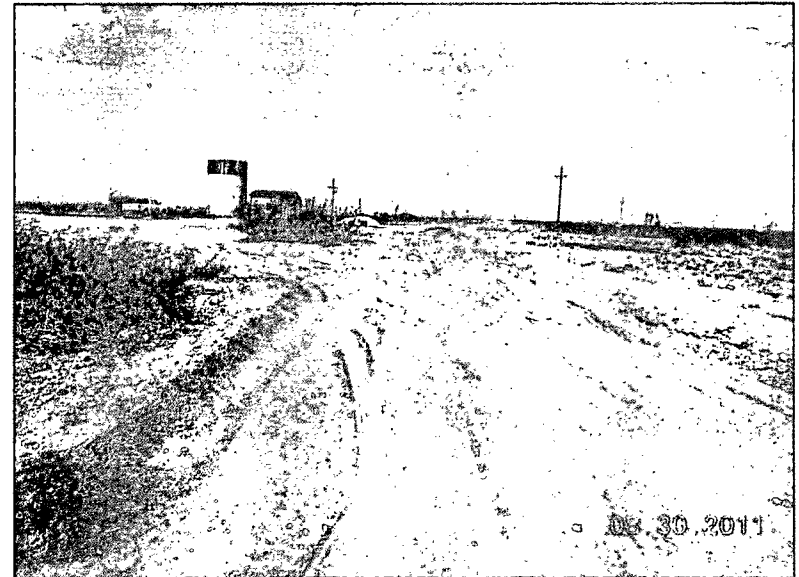
Backfilling west excavation, facing southwest 8/30/11



West excavation completed, facing north 8/30/11



Northwest excavation completed, facing NW 8/30/11



Site completed, facing southeast 8/30/11



# Appendix E

Final C-141

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

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

State of New Mexico  
Energy Minerals and Natural Resources

Form C-141  
Revised August 8, 2011

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

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

## Release Notification and Corrective Action

### OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Apache Corporation	Contact	Bruce Baker
Address	PO Box 1849, Eunice, NM 88231	Telephone No.	(432) 631-6982
Facility Name	D State #49 Bty (near #59 well)	Facility Type	Production Battery
Surface Owner	State	Mineral Owner	State
		API No.	30-015-38470

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	26	17S	28E	290	FSL	175	FEL	Eddy

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

### NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	45 bbls	Volume Recovered	30 bbls
Source of Release	Fiberglass line	Date and Hour of Occurrence	8/4/11 8:30 am	Date and Hour of Discovery	same
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?			
By Whom?	Date and Hour				
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			
If a Watercourse was Impacted, Describe Fully.*					
Describe Cause of Problem and Remedial Action Taken.* A buried fiberglass line burst inside the junction box. The line has been repaired and remediation has begun.					

RECEIVED

OCT 03 2013

NMOCD ARTESIA

Describe Area Affected and Cleanup Action Taken.\* 17,000 sq ft of land has been disturbed along the pipeline right-of-way. 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. The samples were then taken to a commercial laboratory for analysis. Two verticals were installed at the site to determine the depth of contamination at the site. 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. Final samples of the walls and bottoms of each excavation were taken to a commercial laboratory for analysis of chlorides and hydrocarbons. 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. 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.

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: <i>Bruce Baker</i>		OIL CONSERVATION DIVISION	
Printed Name: Bruce Baker		Approved by Environmental Specialist:	
Title: Environmental Tech	Approval Date:	Expiration Date:	
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 8-30-13	Phone: (432) 631-6982		

\* Attach Additional Sheets If Necessary