



EXPLORING WHAT'S POSSIBLE

# **APACHE CORPORATION**

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

## **Lee Federal #72**

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# **Termination Request**

API No. 30-015-41253

Release Date: December 17<sup>th</sup>, 2013

Unit Letter J, Section 20, Township 17S, Range 31E

**July 23<sup>rd</sup>, 2014**

**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 – Lee Federal #72  
UL/J sec. 20 T17S R31E  
API No. 30-015-41253**

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 5.3 miles east of Loco Hills, New Mexico at UL/J sec. 20 T17S R31E. This site is in an area of no known groundwater.

On December 17<sup>th</sup>, 2013, a release from the wellhead of 30 barrels of oil and brine water encumbered 12,987 square feet of lease pad and pasture area. The well was shut in and repaired. The release area on the lease pad was scraped to remove the wet material and the excavated material was disposed of at a NMOCD approved facility. The pad was backfilled with clean, imported soil. NMOCD and BLM were notified of the release on December 18<sup>th</sup>, 2013 and an initial C-141 was sent to NMOCD for their approval (Appendix A).

RECS personnel were on site beginning on January 8<sup>th</sup>, 2014 to assess the release. Eight samples were taken within the release area and field tested for chlorides and organic vapors (Figure 1). The field data for the lease pad showed elevated chloride readings at the surface. Point 3 was also sampled at 6 inches bgs and returned a field chloride reading of 480 mg/kg. The field data from the pasture area showed an elevated chloride reading at the surface of Point 6, chloride data that was below regulatory standards at 6 inches bgs at Point 7 and a surface sample below regulatory standards at Point 8.

Based on the field data, BLM recommended that the pasture area be scraped down 6 inches to remove the wet material. The release in the pasture and on the lease pad was initially scraped down 6 inches. On February 14<sup>th</sup>, 2014, two samples were taken from the bottom of the 6 inch scrape on the lease pad and a vertical was installed to determine the depth of contamination (Figure 2). Vertical samples were taken every 6 inches and field tested for chloride and organic

vapors. Representative samples from the vertical and the two bottom points were taken to a commercial laboratory for analysis (Appendix B). Laboratory analysis of the vertical returned chloride values of 1,020 mg/kg at 1.5 ft, 48 mg/kg at 2 ft and 496 mg/kg at 2.5 ft. Gasoline Range Organics (GRO), Diesel Range Organics (DRO) and BTEX readings at all depths returned values of non-detect. The two bottom points, Point 5 and Point 6, returned GRO, DRO and BTEX readings of non-detect, except at Point 6 where the DRO value was 326 mg/kg. Point 5 returned a laboratory chloride value of 320 mg/kg, and Point 6 returned a laboratory chloride value of 1,840 mg/kg, which was above regulatory standards.

Scraping on the lease pad continued with both depth and breadth until field chloride data indicated that all bottom and wall sample points would return laboratory chloride values below regulatory standards. However, two of the walls could not meet regulatory standards. The south wall was encroaching on the pump jack and the west wall was encroaching on the access road. Both became safety issues and a decision was made to halt scraping efforts at that time. These areas will be addressed during site abandonment. Six bottom samples and 8 wall samples were taken from the scrape and submitted to a commercial laboratory to verify the accuracy of the field data (Appendix C). All excavated soils were taken to a NMOCD approved facility for disposal. The lease pad was backfilled with clean, imported caliche and water packed to provide and stable driving surface.

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

Since the majority of the contaminated soil was removed from the site and replaced with clean, imported soil, Apache respectfully requests 'remediation termination' and site closure. A final C-141 can be found in Appendix E.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-2967 or me if you have any questions or wish to discuss the site.

Sincerely,



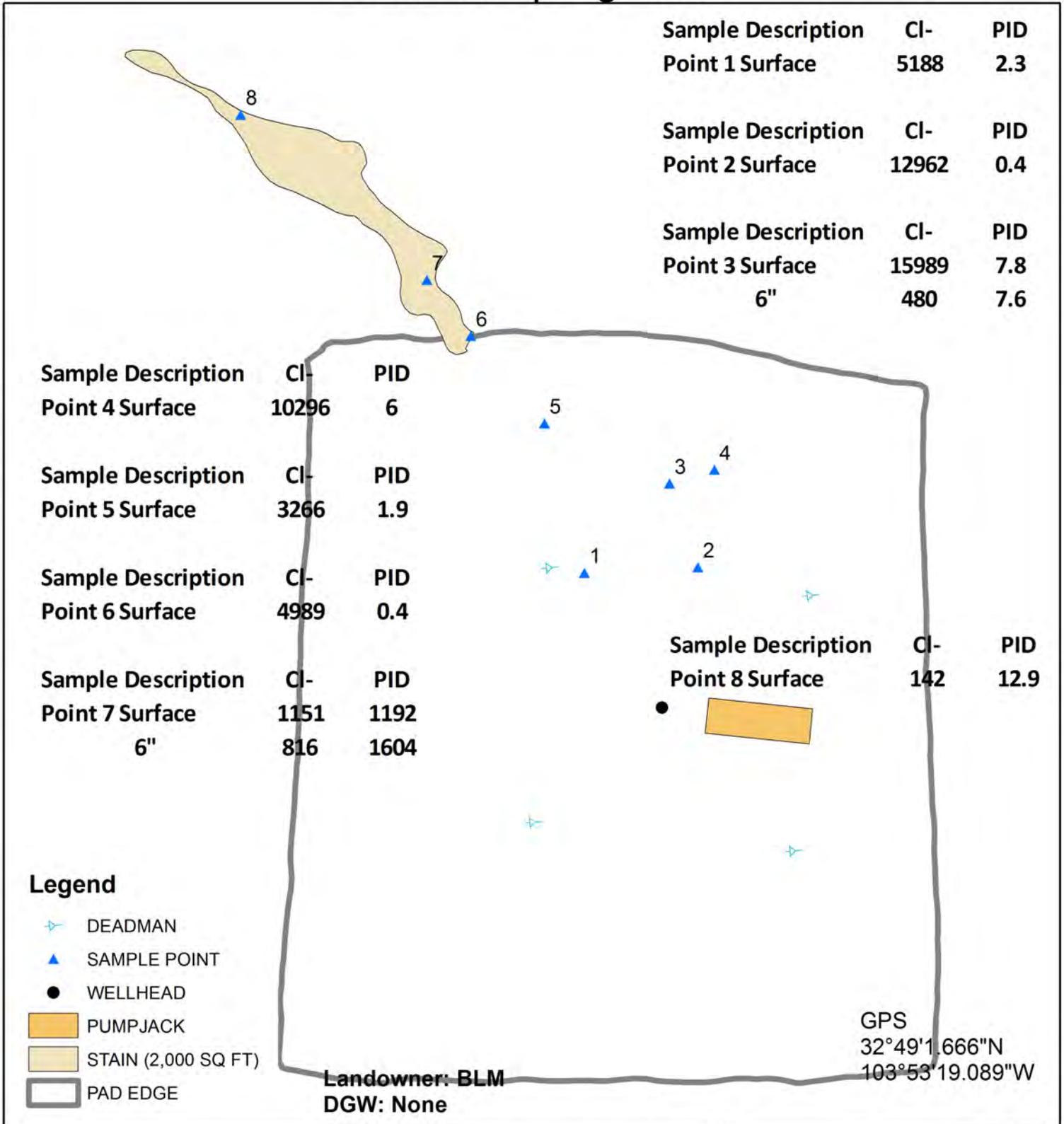
Lara Weinheimer  
Project Scientist  
RECS  
(575) 441-0431

Attachments:

- Figure 1 – Initial Sampling Data
- Figure 2 – Excavation Data
- Appendix A – Initial C-141
- Appendix B – Initial Sampling Lab
- Appendix C – Final Sampling Labs
- Appendix D – Photo Documentation
- Appendix E – Final C-141

# Figures

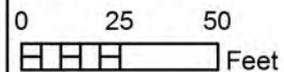
# Initial Sampling Data



## APACHE LEE FEDERAL #072

UL J SECTION 20  
T-17-S R-31-E  
EDDY COUNTY, NM

Figure 1



GPS date: 1/8/14, 2/12/14 AG  
Drawing date: 2/13/14  
Drafted by: T. Grieco

# Excavation Data

| Vertical 1 | CI-  | PID  | GRO | DRO | B     | T     | E     | X     | BTEX |
|------------|------|------|-----|-----|-------|-------|-------|-------|------|
| 6"         | 5370 | 32.1 |     |     |       |       |       |       |      |
| 1'         | 307  | 28.5 |     |     |       |       |       |       |      |
| 1.5'       | 1020 | 11.3 | <10 | <10 | <0.05 | <0.05 | <0.05 | <0.15 | <0.3 |
| 2'         | 48   | 7    | <10 | <10 | <0.05 | <0.05 | <0.05 | <0.15 | <0.3 |
| 2.5'       | 496  | 4.3  | <10 | <10 | <0.05 | <0.05 | <0.05 | <0.15 | <0.3 |

### Point 5

| CI- | PID | GRO | DRO | B   | T     | E     | X     | BTEX  |      |
|-----|-----|-----|-----|-----|-------|-------|-------|-------|------|
| 6"  | 320 | 2.4 | <10 | <10 | <0.05 | <0.05 | <0.05 | <0.15 | <0.3 |

### Final Bottom Samples

| CI-          | Sample | Value |
|--------------|--------|-------|
| Pt. 1 @ 1.5' | 400    |       |
| Pt. 2 @ 1.5' | 720    |       |
| Pt. 3 @ 2'   | <16    |       |
| Pt. 4 @ 2'   | 1180   |       |
| Pt. 5 @ 1'   | 80     |       |
| Pt. 6 @ 1'   | 48     |       |

### Final Wall Samples

|          | CI-  | PID  | GRO  | DRO  | B     | T     | E     | X     | BTEX |
|----------|------|------|------|------|-------|-------|-------|-------|------|
| N Wall 1 | 144  | 4.3  | <10  | <10  | <0.05 | <0.05 | <0.05 | <0.15 | <0.3 |
| N Wall 2 | 592  | 6.2  | <10  | 163  | <0.05 | <0.05 | <0.05 | <0.15 | <0.3 |
| N Wall 3 | 208  | 3.1  | <10  | <10  | <0.05 | <0.05 | <0.05 | <0.15 | <0.3 |
| E Wall   | 112  | 4.6  | <10  | <10  | <0.05 | <0.05 | <0.05 | <0.15 | <0.3 |
| W Wall   | 1140 | 2.9  | <10  | 111  | <0.05 | <0.05 | <0.05 | <0.15 | <0.3 |
| S Wall 1 | 560  | 1.2  | <10  | 38.3 | <0.05 | <0.05 | <0.05 | <0.15 | <0.3 |
| S Wall 2 | 8500 | 12.3 | 19.2 | 1020 | <0.05 | <0.05 | 0.066 | 0.194 | <0.3 |
| S Wall 3 | 672  | 4.6  | <10  | <10  | <0.05 | <0.05 | <0.05 | <0.15 | <0.3 |

### Point 6

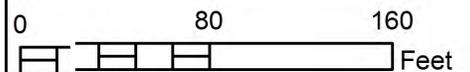
| CI- | PID  | GRO | DRO | B   | T     | E     | X     | BTEX  |      |
|-----|------|-----|-----|-----|-------|-------|-------|-------|------|
| 6"  | 1840 | 3.1 | <10 | 326 | <0.05 | <0.05 | <0.05 | <0.15 | <0.3 |

## Legend

- \* FINAL BOTTOM SAMPLES
- ▲ POINT
- VERTICAL
- ▲ WALL
- CONTROL BOX
- ✈ DEADMAN
- ⊥ ELECTRIC POLE
- ELECTRICAL BOX
- ⊗ VALVE
- WELLHEAD
- BURIED PIPELINE
- PAD/ROAD EDGE
- SURFACE PIPELINE
- SCRAPE AT 1'
- SCRAPE AT 1.5'
- SCRAPE AT 2'
- CHEMICAL TANK
- FRAC TANK
- GENERATOR
- PUMPJACK
- SPOIL PILE

Landowner: BLM  
DGW: None

## Figure 2



GPS date: 2/17/14 TG  
Drawing date: 4/10/14  
Drafted by: L. Weinheimer



# APACHE LEE FEDERAL #072

UL J SECTION 20  
T-17-S R-31-E  
EDDY COUNTY, NM

# 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 8, 2011

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: 8 Ellison Lane Eunice, NM 88231 | Telephone No. (432) 631-6982 |
| Facility Name Lee Federal # 72           | Facility Type: Oil Well      |
| Surface Owner BLM                        | Mineral Owner                |
| API No. 30-015-41253                     |                              |

**LOCATION OF RELEASE**

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|--------|
| J           | 20      | 17S      | 31E   | 1585'         | FSL              | 1650'         | FEL            | Eddy   |

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

**NATURE OF RELEASE**

|  |   |   |
|--|---|---|
| Type of Release: oil and brine water   | Volume of Release 30 Barrels ( 3 oil and 27 brine water)              | Volume Recovered Unknown                            |
| Source of Release: Well  | Date and Hour of Occurrence<br>12/17/13 at 9:00 p.m.                  | Date and Hour of Discovery<br>12/17/13 at 9:00 p.m. |
| Was Immediate Notice Given?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required | If YES, To Whom?<br>Mike Bratcher (NMOCD) and Jeffery Robertson (BLM) |   |
| By Whom? Bruce Baker   | Date and Hour 12/18/13 at 2:54 p.m.                                   |   |
| Was a Watercourse Reached?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  | If YES, Volume Impacting the Watercourse.                             |   |

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*  
TIH W/Collars hit gas bubble that unloaded the hole releasing 30 Barrels of fluid. The well was shut in.

Describe Area Affected and Cleanup Action Taken.\*  
The majority of the release was contained to the location pad with approximately 1 Barrel of fluid in pasture. The wet area on location was scraped up and disposed of at an NMOCD approved facility.

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>              | <b>OIL CONSERVATION DIVISION</b>      |                                   |
| Printed Name: Bruce Baker                  | Approved by Environmental Specialist: |                                   |
| Title: Environmental Technician            | Approval Date:                        | Expiration Date:                  |
| E-mail Address: larry.baker@apachecorp.com | Conditions of Approval:               | Attached <input type="checkbox"/> |
| Date: 12/30/13                             | Phone: (432) 631-6982                 |                                   |

\* Attach Additional Sheets If Necessary

# Appendix B

## Initial Sampling Lab

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

February 18, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: LEE FEDERAL #072

Enclosed are the results of analyses for samples received by the laboratory on 02/17/14 11:37.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [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  
 BRUCE BAKER  
 P. O. BOX 1849  
 EUNICE NM, 88231  
 Fax To: 394-2425

 Received: 02/17/2014  
 Reported: 02/18/2014  
 Project Name: LEE FEDERAL #072  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 02/14/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: VERT 1 @ 1.5 FT (H400464-01)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: MS |      |            |               |      |           |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*       | <0.050 | 0.050           | 02/17/2014 | ND              | 2.30 | 115        | 2.00          | 4.42 |           |
| Toluene*       | <0.050 | 0.050           | 02/17/2014 | ND              | 2.26 | 113        | 2.00          | 3.72 |           |
| Ethylbenzene*  | <0.050 | 0.050           | 02/17/2014 | ND              | 2.26 | 113        | 2.00          | 4.50 |           |
| Total Xylenes* | <0.150 | 0.150           | 02/17/2014 | ND              | 6.55 | 109        | 6.00          | 4.12 |           |
| Total BTEX     | <0.300 | 0.300           | 02/17/2014 | ND              |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 89.4-126

| 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>1020</b> | 16.0            | 02/18/2014 | ND              | 400 | 100        | 400           | 0.00 |           |

| TPH 8015M    |        | mg/kg           |            | Analyzed By: ms |     |            |               |      |           |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte      | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10   | <10.0  | 10.0            | 02/18/2014 | ND              | 192 | 96.0       | 200           | 7.22 |           |
| DRO >C10-C28 | <10.0  | 10.0            | 02/18/2014 | ND              | 187 | 93.7       | 200           | 11.7 |           |

Surrogate: 1-Chlorooctane 114 % 65.2-140

Surrogate: 1-Chlorooctadecane 122 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 02/17/2014  
 Reported: 02/18/2014  
 Project Name: LEE FEDERAL #072  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 02/14/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: VERT 1 @ 2 FT (H400464-02)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: MS |      |            |               |      |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 02/17/2014 | ND              | 2.30 | 115        | 2.00          | 4.42 |           |  |
| Toluene*       | <0.050 | 0.050           | 02/17/2014 | ND              | 2.26 | 113        | 2.00          | 3.72 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 02/17/2014 | ND              | 2.26 | 113        | 2.00          | 4.50 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 02/17/2014 | ND              | 6.55 | 109        | 6.00          | 4.12 |           |  |
| Total BTEX     | <0.300 | 0.300           | 02/17/2014 | ND              |      |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 96.2 % 89.4-126

| Chloride, SM4500CI-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            | 02/18/2014 | ND              | 400 | 100        | 400           | 0.00 |           |  |

| TPH 8015M    |        | mg/kg           |            | Analyzed By: ms |     |            |               |      |           |  |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte      | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| GRO C6-C10   | <10.0  | 10.0            | 02/18/2014 | ND              | 192 | 96.0       | 200           | 7.22 |           |  |
| DRO >C10-C28 | <10.0  | 10.0            | 02/18/2014 | ND              | 187 | 93.7       | 200           | 11.7 |           |  |

Surrogate: 1-Chlorooctane 107 % 65.2-140

Surrogate: 1-Chlorooctadecane 112 % 63.6-154

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 02/17/2014  
 Reported: 02/18/2014  
 Project Name: LEE FEDERAL #072  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 02/14/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: VERT 1 @ 2.5 FT (H400464-03)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: MS |      |            |               |      |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 02/17/2014 | ND              | 2.30 | 115        | 2.00          | 4.42 |           |  |
| Toluene*       | <0.050 | 0.050           | 02/17/2014 | ND              | 2.26 | 113        | 2.00          | 3.72 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 02/17/2014 | ND              | 2.26 | 113        | 2.00          | 4.50 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 02/17/2014 | ND              | 6.55 | 109        | 6.00          | 4.12 |           |  |
| Total BTEX     | <0.300 | 0.300           | 02/17/2014 | ND              |      |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 94.2 % 89.4-126

| Chloride, SM4500CI-B |            | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |  |
|----------------------|------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result     | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| <b>Chloride</b>      | <b>496</b> | 16.0            | 02/18/2014 | ND              | 400 | 100        | 400           | 0.00 |           |  |

| TPH 8015M    |        | mg/kg           |            | Analyzed By: ms |     |            |               |      |           |  |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte      | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| GRO C6-C10   | <10.0  | 10.0            | 02/18/2014 | ND              | 192 | 96.0       | 200           | 7.22 |           |  |
| DRO >C10-C28 | <10.0  | 10.0            | 02/18/2014 | ND              | 187 | 93.7       | 200           | 11.7 |           |  |

Surrogate: 1-Chlorooctane 116 % 65.2-140

Surrogate: 1-Chlorooctadecane 124 % 63.6-154

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 02/17/2014  
 Reported: 02/18/2014  
 Project Name: LEE FEDERAL #072  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 02/14/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: PT. 5 @ 6 INCHES (H400464-04)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: MS |      |            |               |      |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 02/17/2014 | ND              | 2.30 | 115        | 2.00          | 4.42 |           |  |
| Toluene*       | <0.050 | 0.050           | 02/17/2014 | ND              | 2.26 | 113        | 2.00          | 3.72 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 02/17/2014 | ND              | 2.26 | 113        | 2.00          | 4.50 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 02/17/2014 | ND              | 6.55 | 109        | 6.00          | 4.12 |           |  |
| Total BTEX     | <0.300 | 0.300           | 02/17/2014 | ND              |      |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 89.4-126

| 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>320</b> | 16.0            | 02/18/2014 | ND              | 400 | 100        | 400           | 0.00 |           |  |

| TPH 8015M    |        | mg/kg           |            | Analyzed By: ms |     |            |               |      |           |  |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte      | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| GRO C6-C10   | <10.0  | 10.0            | 02/18/2014 | ND              | 192 | 96.0       | 200           | 7.22 |           |  |
| DRO >C10-C28 | <10.0  | 10.0            | 02/18/2014 | ND              | 187 | 93.7       | 200           | 11.7 |           |  |

Surrogate: 1-Chlorooctane 98.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 103 % 63.6-154

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 02/17/2014  
 Reported: 02/18/2014  
 Project Name: LEE FEDERAL #072  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 02/14/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: PT. 6 @ 6 INCHES (H400464-05)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: MS |      |            |               |      |           |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*       | <0.050 | 0.050           | 02/17/2014 | ND              | 2.30 | 115        | 2.00          | 4.42 |           |
| Toluene*       | <0.050 | 0.050           | 02/17/2014 | ND              | 2.26 | 113        | 2.00          | 3.72 |           |
| Ethylbenzene*  | <0.050 | 0.050           | 02/17/2014 | ND              | 2.26 | 113        | 2.00          | 4.50 |           |
| Total Xylenes* | <0.150 | 0.150           | 02/17/2014 | ND              | 6.55 | 109        | 6.00          | 4.12 |           |
| Total BTEX     | <0.300 | 0.300           | 02/17/2014 | ND              |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID) 95.8 % 89.4-126

| Chloride, SM4500CI-B |             | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |
|----------------------|-------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result      | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| <b>Chloride</b>      | <b>1840</b> | 16.0            | 02/18/2014 | ND              | 400 | 100        | 400           | 0.00 |           |

| TPH 8015M              |            | mg/kg           |            | Analyzed By: ms |     |            |               |      |           |
|------------------------|------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte                | Result     | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10             | <10.0      | 10.0            | 02/18/2014 | ND              | 192 | 96.0       | 200           | 7.22 |           |
| <b>DRO &gt;C10-C28</b> | <b>326</b> | 10.0            | 02/18/2014 | ND              | 187 | 93.7       | 200           | 11.7 |           |

Surrogate: 1-Chlorooctane 87.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 93.3 % 63.6-154

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\* = Accredited Analyte

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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<br>Samples reported on an as received basis (wet) unless otherwise noted on report |



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Celey D. Keene, Lab Director/Quality Manager



# Appendix C

## Final Sampling Labs

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

February 18, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: LEE FEDERAL #072

Enclosed are the results of analyses for samples received by the laboratory on 02/17/14 16:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [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  
 BRUCE BAKER  
 P. O. BOX 1849  
 EUNICE NM, 88231  
 Fax To: 394-2425

 Received: 02/17/2014  
 Reported: 02/18/2014  
 Project Name: LEE FEDERAL #072  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 02/17/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: N. WALL #1 (H400473-01)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: MS |      |            |               |      |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 02/18/2014 | ND              | 2.30 | 115        | 2.00          | 4.42 |           |  |
| Toluene*       | <0.050 | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 3.72 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 4.50 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 02/18/2014 | ND              | 6.55 | 109        | 6.00          | 4.12 |           |  |
| Total BTEX     | <0.300 | 0.300           | 02/18/2014 | ND              |      |            |               |      |           |  |

*Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 89.4-126*

| 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>144</b> | 16.0            | 02/18/2014 | ND              | 400 | 100        | 400           | 0.00 |           |  |

| TPH 8015M    |        | mg/kg           |            | Analyzed By: ms |     |            |               |      |           |  |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte      | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| GRO C6-C10   | <10.0  | 10.0            | 02/18/2014 | ND              | 225 | 112        | 200           | 20.6 |           |  |
| DRO >C10-C28 | <10.0  | 10.0            | 02/18/2014 | ND              | 214 | 107        | 200           | 19.9 |           |  |

*Surrogate: 1-Chlorooctane 93.8 % 65.2-140*
*Surrogate: 1-Chlorooctadecane 98.1 % 63.6-154*

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

|                   |                  |                     |               |
|-------------------|------------------|---------------------|---------------|
| Received:         | 02/17/2014       | Sampling Date:      | 02/17/2014    |
| Reported:         | 02/18/2014       | Sampling Type:      | Soil          |
| Project Name:     | LEE FEDERAL #072 | Sampling Condition: | Cool & Intact |
| Project Number:   | NONE GIVEN       | Sample Received By: | Jodi Henson   |
| Project Location: | NOT GIVEN        |                     |               |

**Sample ID: N. WALL #2 (H400473-02)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: MS |      |            |               |      |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 02/18/2014 | ND              | 2.30 | 115        | 2.00          | 4.42 |           |  |
| Toluene*       | <0.050 | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 3.72 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 4.50 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 02/18/2014 | ND              | 6.55 | 109        | 6.00          | 4.12 |           |  |
| Total BTEX     | <0.300 | 0.300           | 02/18/2014 | ND              |      |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 89.4-126

| Chloride, SM4500CI-B |            | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |  |
|----------------------|------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte              | Result     | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| <b>Chloride</b>      | <b>592</b> | 16.0            | 02/18/2014 | ND              | 400 | 100        | 400           | 0.00 |           |  |

| TPH 8015M              |            | mg/kg           |            | Analyzed By: ms |     |            |               |      |           |  |
|------------------------|------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte                | Result     | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| GRO C6-C10             | <10.0      | 10.0            | 02/18/2014 | ND              | 225 | 112        | 200           | 20.6 |           |  |
| <b>DRO &gt;C10-C28</b> | <b>163</b> | 10.0            | 02/18/2014 | ND              | 214 | 107        | 200           | 19.9 |           |  |

Surrogate: 1-Chlorooctane 103 % 65.2-140

Surrogate: 1-Chlorooctadecane 115 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 02/17/2014  
 Reported: 02/18/2014  
 Project Name: LEE FEDERAL #072  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 02/17/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: N. WALL #3 (H400473-03)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: MS |      |            |               |      |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 02/18/2014 | ND              | 2.30 | 115        | 2.00          | 4.42 |           |  |
| Toluene*       | <0.050 | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 3.72 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 4.50 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 02/18/2014 | ND              | 6.55 | 109        | 6.00          | 4.12 |           |  |
| Total BTEX     | <0.300 | 0.300           | 02/18/2014 | ND              |      |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 94.4 % 89.4-126

| 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>1500</b> | 16.0            | 02/18/2014 | ND              | 400 | 100        | 400           | 0.00 |           |  |

| TPH 8015M    |        | mg/kg           |            | Analyzed By: ms |     |            |               |      |           |  |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte      | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| GRO C6-C10   | <10.0  | 10.0            | 02/18/2014 | ND              | 225 | 112        | 200           | 20.6 |           |  |
| DRO >C10-C28 | <10.0  | 10.0            | 02/18/2014 | ND              | 214 | 107        | 200           | 19.9 |           |  |

Surrogate: 1-Chlorooctane 122 % 65.2-140

Surrogate: 1-Chlorooctadecane 122 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 02/17/2014  
 Reported: 02/18/2014  
 Project Name: LEE FEDERAL #072  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 02/17/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: E. WALL (H400473-04)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: MS |      |            |               |      |           |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*       | <0.050 | 0.050           | 02/18/2014 | ND              | 2.30 | 115        | 2.00          | 4.42 |           |
| Toluene*       | <0.050 | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 3.72 |           |
| Ethylbenzene*  | <0.050 | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 4.50 |           |
| Total Xylenes* | <0.150 | 0.150           | 02/18/2014 | ND              | 6.55 | 109        | 6.00          | 4.12 |           |
| Total BTEX     | <0.300 | 0.300           | 02/18/2014 | ND              |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID) 95.7 % 89.4-126

| Chloride, SM4500CI-B |        | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 2840   | 16.0            | 02/18/2014 | ND              | 400 | 100        | 400           | 0.00 |           |

| TPH 8015M    |        | mg/kg           |            | Analyzed By: ms |     |            |               |      |           |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte      | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10   | <10.0  | 10.0            | 02/18/2014 | ND              | 225 | 112        | 200           | 20.6 |           |
| DRO >C10-C28 | <10.0  | 10.0            | 02/18/2014 | ND              | 214 | 107        | 200           | 19.9 |           |

Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 105 % 63.6-154

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 02/17/2014  
 Reported: 02/18/2014  
 Project Name: LEE FEDERAL #072  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 02/17/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: W. WALL (H400473-05)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: MS |      |            |               |      |           |  |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|--|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |  |
| Benzene*       | <0.050 | 0.050           | 02/18/2014 | ND              | 2.30 | 115        | 2.00          | 4.42 |           |  |
| Toluene*       | <0.050 | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 3.72 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 4.50 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 02/18/2014 | ND              | 6.55 | 109        | 6.00          | 4.12 |           |  |
| Total BTEX     | <0.300 | 0.300           | 02/18/2014 | ND              |      |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 94.2 % 89.4-126

| 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>1140</b> | 16.0            | 02/18/2014 | ND              | 400 | 100        | 400           | 0.00 |           |  |

| TPH 8015M              |            | mg/kg           |            | Analyzed By: ms |     |            |               |      |           |  |
|------------------------|------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|--|
| Analyte                | Result     | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |  |
| GRO C6-C10             | <10.0      | 10.0            | 02/18/2014 | ND              | 225 | 112        | 200           | 20.6 |           |  |
| <b>DRO &gt;C10-C28</b> | <b>111</b> | 10.0            | 02/18/2014 | ND              | 214 | 107        | 200           | 19.9 |           |  |

Surrogate: 1-Chlorooctane 105 % 65.2-140

Surrogate: 1-Chlorooctadecane 113 % 63.6-154

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

 Received: 02/17/2014  
 Reported: 02/18/2014  
 Project Name: LEE FEDERAL #072  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 02/17/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S. WALL #1 (H400473-06)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: MS |      |            |               |      |           |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*       | <0.050 | 0.050           | 02/18/2014 | ND              | 2.30 | 115        | 2.00          | 4.42 |           |
| Toluene*       | <0.050 | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 3.72 |           |
| Ethylbenzene*  | <0.050 | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 4.50 |           |
| Total Xylenes* | <0.150 | 0.150           | 02/18/2014 | ND              | 6.55 | 109        | 6.00          | 4.12 |           |
| Total BTEX     | <0.300 | 0.300           | 02/18/2014 | ND              |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID) 95.1 % 89.4-126

| Chloride, SM4500CI-B |            | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |
|----------------------|------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result     | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| <b>Chloride</b>      | <b>560</b> | 16.0            | 02/18/2014 | ND              | 400 | 100        | 400           | 0.00 |           |

| TPH 8015M              |             | mg/kg           |            | Analyzed By: ms |     |            |               |      |           |
|------------------------|-------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte                | Result      | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10             | <10.0       | 10.0            | 02/18/2014 | ND              | 225 | 112        | 200           | 20.6 |           |
| <b>DRO &gt;C10-C28</b> | <b>38.3</b> | 10.0            | 02/18/2014 | ND              | 214 | 107        | 200           | 19.9 |           |

Surrogate: 1-Chlorooctane 102 % 65.2-140

Surrogate: 1-Chlorooctadecane 104 % 63.6-154

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 02/17/2014  
 Reported: 02/18/2014  
 Project Name: LEE FEDERAL #072  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 02/17/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S. WALL #2 (H400473-07)**

| BTEX 8021B            |              | mg/kg           |            | Analyzed By: MS |      |            |               |      |           |
|-----------------------|--------------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte               | Result       | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*              | <0.050       | 0.050           | 02/18/2014 | ND              | 2.30 | 115        | 2.00          | 4.42 |           |
| Toluene*              | <0.050       | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 3.72 |           |
| <b>Ethylbenzene*</b>  | <b>0.066</b> | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 4.50 |           |
| <b>Total Xylenes*</b> | <b>0.194</b> | 0.150           | 02/18/2014 | ND              | 6.55 | 109        | 6.00          | 4.12 |           |
| Total BTEX            | <0.300       | 0.300           | 02/18/2014 | ND              |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID) 103 % 89.4-126

| 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>8500</b> | 16.0            | 02/18/2014 | ND              | 400 | 100        | 400           | 0.00 |           |

| TPH 8015M              |             | mg/kg           |            | Analyzed By: ms |     |            |               |      |           |
|------------------------|-------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte                | Result      | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| <b>GRO C6-C10</b>      | <b>19.2</b> | 10.0            | 02/18/2014 | ND              | 225 | 112        | 200           | 20.6 |           |
| <b>DRO &gt;C10-C28</b> | <b>1020</b> | 10.0            | 02/18/2014 | ND              | 214 | 107        | 200           | 19.9 |           |

Surrogate: 1-Chlorooctane 97.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 116 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 02/17/2014  
 Reported: 02/18/2014  
 Project Name: LEE FEDERAL #072  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 02/17/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: S. WALL #3 (H400473-08)**

| BTEX 8021B     |        | mg/kg           |            | Analyzed By: MS |      |            |               |      |           |
|----------------|--------|-----------------|------------|-----------------|------|------------|---------------|------|-----------|
| Analyte        | Result | Reporting Limit | Analyzed   | Method Blank    | BS   | % Recovery | True Value QC | RPD  | Qualifier |
| Benzene*       | <0.050 | 0.050           | 02/18/2014 | ND              | 2.30 | 115        | 2.00          | 4.42 |           |
| Toluene*       | <0.050 | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 3.72 |           |
| Ethylbenzene*  | <0.050 | 0.050           | 02/18/2014 | ND              | 2.26 | 113        | 2.00          | 4.50 |           |
| Total Xylenes* | <0.150 | 0.150           | 02/18/2014 | ND              | 6.55 | 109        | 6.00          | 4.12 |           |
| Total BTEX     | <0.300 | 0.300           | 02/18/2014 | ND              |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID) 98.3 % 89.4-126

| Chloride, SM4500CI-B |            | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |
|----------------------|------------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result     | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| <b>Chloride</b>      | <b>672</b> | 16.0            | 02/18/2014 | ND              | 400 | 100        | 400           | 0.00 |           |

| TPH 8015M    |        | mg/kg           |            | Analyzed By: ms |     |            |               |      |           |
|--------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte      | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| GRO C6-C10   | <10.0  | 10.0            | 02/18/2014 | ND              | 225 | 112        | 200           | 20.6 |           |
| DRO >C10-C28 | <10.0  | 10.0            | 02/18/2014 | ND              | 214 | 107        | 200           | 19.9 |           |

Surrogate: 1-Chlorooctane 92.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 95.9 % 63.6-154

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<br>Samples reported on an as received basis (wet) unless otherwise noted on report |



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Celey D. Keene, Lab Director/Quality Manager



February 21, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: LEE FEDERAL #072

Enclosed are the results of analyses for samples received by the laboratory on 02/20/14 14:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [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  
 BRUCE BAKER  
 P. O. BOX 1849  
 EUNICE NM, 88231  
 Fax To: 394-2425

|                   |                  |                     |               |
|-------------------|------------------|---------------------|---------------|
| Received:         | 02/20/2014       | Sampling Date:      | 02/20/2014    |
| Reported:         | 02/21/2014       | Sampling Type:      | Soil          |
| Project Name:     | LEE FEDERAL #072 | Sampling Condition: | Cool & Intact |
| Project Number:   | NONE GIVEN       | Sample Received By: | Jodi Henson   |
| Project Location: | NOT GIVEN        |                     |               |

**Sample ID: N WALL #3 (H400519-01)**

| 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>208</b> | 16.0            | 02/21/2014 | ND              | 400 | 100        | 400           | 0.00 |           |

**Sample ID: E WALL (H400519-02)**

| 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>112</b> | 16.0            | 02/21/2014 | ND              | 400 | 100        | 400           | 0.00 |           |

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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<br>Samples reported on an as received basis (wet) unless otherwise noted on report |



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Celey D. Keene, Lab Director/Quality Manager



February 24, 2014

BRUCE BAKER

APACHE - EUNICE

P. O. BOX 1849

EUNICE, NM 88231

RE: LEE FEDERAL #072

Enclosed are the results of analyses for samples received by the laboratory on 02/24/14 11:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [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  
 BRUCE BAKER  
 P. O. BOX 1849  
 EUNICE NM, 88231  
 Fax To: 394-2425

 Received: 02/24/2014  
 Reported: 02/24/2014  
 Project Name: LEE FEDERAL #072  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 02/21/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: PT. 1 @ 1.5 FT (H400545-01)**

| Chloride, SM4500CI-B |        | mg/kg           |            | Analyzed By: CK |     |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 400    | 16.0            | 02/24/2014 | ND              | 432 | 108        | 400           | 3.77 |           |

**Sample ID: PT. 2 @ 1.5 FT (H400545-02)**

| Chloride, SM4500CI-B |        | mg/kg           |            | Analyzed By: CK |     |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 720    | 16.0            | 02/24/2014 | ND              | 432 | 108        | 400           | 3.77 |           |

**Sample ID: PT. 3 @ 1.5 FT (H400545-03)**

| Chloride, SM4500CI-B |        | mg/kg           |            | Analyzed By: CK |     |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 1600   | 16.0            | 02/24/2014 | ND              | 432 | 108        | 400           | 3.77 |           |

**Sample ID: PT. 4 @ 1 FT (H400545-04)**

| Chloride, SM4500CI-B |        | mg/kg           |            | Analyzed By: CK |     |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 1200   | 16.0            | 02/24/2014 | ND              | 432 | 108        | 400           | 3.77 |           |

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 02/24/2014  
 Reported: 02/24/2014  
 Project Name: LEE FEDERAL #072  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 02/21/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: PT. 5 @ 1 FT (H400545-05)**

| 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>80.0</b> | 16.0            | 02/24/2014 | ND              | 432 | 108        | 400           | 3.77 |           |

**Sample ID: PT. 6 @ 1 FT (H400545-06)**

| 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>48.0</b> | 16.0            | 02/24/2014 | ND              | 432 | 108        | 400           | 3.77 |           |

Cardinal Laboratories

\* = Accredited Analyte

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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



---

Celey D. Keene, Lab Director/Quality Manager



March 27, 2014

BRUCE BAKER  
APACHE - EUNICE  
P. O. BOX 1849  
EUNICE, NM 88231

RE: LEE FEDERAL #072

Enclosed are the results of analyses for samples received by the laboratory on 03/18/14 16:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [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  
 BRUCE BAKER  
 P. O. BOX 1849  
 EUNICE NM, 88231  
 Fax To: 394-2425

|                   |                  |                     |               |
|-------------------|------------------|---------------------|---------------|
| Received:         | 03/18/2014       | Sampling Date:      | 03/18/2014    |
| Reported:         | 03/27/2014       | Sampling Type:      | Soil          |
| Project Name:     | LEE FEDERAL #072 | Sampling Condition: | Cool & Intact |
| Project Number:   | NONE GIVEN       | Sample Received By: | Jodi Henson   |
| Project Location: | NOT GIVEN        |                     |               |

**Sample ID: PT. 3 @ 2' (H400829-01)**

| 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            | 03/20/2014 | ND              | 400 | 100        | 400           | 3.92 |           |

**Sample ID: PT. 4 @ 2' (H400829-02)**

| 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>1180</b> | 16.0            | 03/27/2014 | ND              | 400 | 100        | 400           | 3.92 |           |

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by 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<br>Samples reported on an as received basis (wet) unless otherwise noted on report |



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Celey D. Keene, Lab Director/Quality Manager



# Appendix D

## Photo Documentation

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

# Apache Lee Federal #72

Unit Letter J, Section 20, T17S, R31E



Initial release area, facing east

1/8/14



Initial site photo, facing northwest

1/8/14



Initial site photo, facing southwest

1/8/14



Initial site photo, facing northeast

1/8/14



Collecting initial sample, facing south 1/8/14



Hand shoveling release in pasture, facing north 2/12/14



Scraping site, facing south 2/12/14



Installing vertical, facing southeast 2/14/14



Exporting soil, facing southeast

2/14/14



Sampling site, facing southeast

2/21/14



Downsizing pad, facing northwest

3/18/14



Excavation completed, facing west

3/19/14



Backfilling excavation, facing southwest 3/19/14



Importing soil, facing south 3/19/14



Watering pad, facing northwest 3/20/14



Packing backfilled area, facing northeast 3/20/14



Site completed, facing east

3/20/14



Site completed, facing northeast

3/20/14

# Appendix E

Final C-141

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

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

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 8 Ellison Lane, Eunice, NM 88231 | Telephone No. (432) 631-6982 |
| Facility Name Lee Federal #72            | Facility Type Oil Well       |
| Surface Owner BLM                        | Mineral Owner                |
| API No. 30-015-41253                     |                              |

**LOCATION OF RELEASE**

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|--------|
| J           | 20      | 17S      | 31E   | 1585'         | FSL              | 1650'         | FEL            | Eddy   |

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

**NATURE OF RELEASE**

|  |   |  |
|--|---|--|
| Type of Release oil and brine water  | Volume of Release 30 Barrels (3 oil and 27 brine water)               | Volume Recovered Unknown                         |
| Source of Release Well   | Date and Hour of Occurrence 12/17/13 at 9:00 p.m.                     | Date and Hour of Discovery 12/17/13 at 9:00 p.m. |
| Was Immediate Notice Given?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required | If YES, To Whom?<br>Mike Bratcher (NMOCD) and Jeffery Robertson (BLM) |  |
| By Whom? Bruce Baker   | Date and Hour 12/18/13 at 2:54 p.m.                                   |  |
| Was a Watercourse Reached?<br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  | If YES, Volume Impacting the Watercourse.                             |  |

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* TIH W/Collars hit gas bubble that unloaded the hole releasing 30 Barrels of fluid. The well was shut in.

Describe Area Affected and Cleanup Action Taken.\* The majority of the release was contained to the location pad with approximately 1 Barrel of fluid in the pasture. A total of 12,987 square feet of lease pad and pasture area was affected. The release area on the lease pad was scraped to remove the wet material and the excavated material was disposed of at a NMOCD approved facility. RECS personnel were on site beginning on January 8<sup>th</sup>, 2014 to assess the release. Eight samples were taken within the release area and field tested for chlorides and organic vapors. The field data for the lease pad showed elevated chloride readings at the surface. Point 3 was also sampled at 6 inches bgs and returned a field chloride reading of 480 mg/kg. The field data from the pasture area showed an elevated chloride reading at the surface of Point 6, chloride data that was below regulatory standards at 6 inches bgs at Point 7 and a surface sample below regulatory standards at Point 8. Based on the field data, BLM recommended that the pasture area be scraped down 6 inches to remove the wet material. The release in the pasture and on the lease pad was initially scraped down 6 inches. On February 14<sup>th</sup>, 2014, two samples were taken from the bottom of the 6 inch scrape on the lease pad and a vertical was installed to determine the depth of contamination. Scraping on the lease pad continued with both depth and breadth until field chloride data indicated that all bottom and wall sample points would return laboratory chloride values below regulatory standards. However, two of the walls could not meet regulatory standards. The south wall was encroaching on the pump jack and the west wall was encroaching on the access road. Both became safety issues and a decision was made to halt scraping efforts at that time. These areas will be addressed during site abandonment. Six bottom samples and 8 wall samples were taken from the scrape and submitted to a commercial laboratory to verify the accuracy of the field data. All excavated soils were taken to a NMOCD approved facility for disposal. The lease pad was backfilled with clean, imported caliche and water packed to provide and stable driving surface.

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>              | <b>OIL CONSERVATION DIVISION</b>      |                  |
| Printed Name: Bruce Baker                  | Approved by Environmental Specialist: |                  |
| Title: Environmental Technician            | Approval Date:                        | Expiration Date: |
| E-mail Address: larry.baker@apachecorp.com | Conditions of Approval:               |                  |
| Date: 7-23-14 Phone: (432) 631-6982        | Attached <input type="checkbox"/>     |                  |

\* Attach Additional Sheets If Necessary