

**RECEIVED**

*By OCD District 1 at 11:25 am, May 18, 2015*

**APPROVED**

*By OCD District 1 at 11:25 am, May 18, 2015*



# Caprock Maljamar Unit #283

## CLOSURE REPORT

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API No. 30-025-34193

Release Date: January 28<sup>th</sup>, 2015

Unit Letter O, Section 33, Township 17 South, Range 33 East

**April 27, 2015**

**Prepared by:**

Environmental Department  
Diversified Field Service, Inc.  
206 W. Snyder  
Hobbs, NM 88240  
Phone: (575)964-8394  
Fax: (575)393-8396

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# Caprock Maljamar Unit #283

## 1 INTRODUCTION

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Linn Energy (Linn) has retained Diversified Field Service, Inc. (DFSI) to address environmental issues for the site detailed herein.

The site is located southeast of Maljamar, NM, in Lea County. The leak site resulted a failure of an injection line. A C-141 (Appendix I) was submitted to the NMOCD on January 28, 2015.

## 2 SITE ACTIVITIES

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On January 28, 2015 DFSI personnel delineated down to the caprock of the leak area. Field samples were taken on six sample points, each sample was tested for chloride levels as well as BTEX. The BTEX samples were performed using a Mini Rae Photoionization Detector (PID). All 1' field samples were taken to Cardinal Lab of Hobbs to obtain confirmation samples. The results are attached (Appendix IV).

On April 14, 2015, DFSI personnel visited the site to begin the excavation process. The caliche pad was dug out 6" below ground surface (bgs). The affected pasture area was excavated to 1'bgs. Native topsoil was brought in to backfill the pasture area, and fresh caliche was brought in to backfill the pad. All contaminated soil and caliche was hauled to an approved disposal facility.

The location will be seeded with a BLM-OCD approved mix once approved by Linn Energy, Inc.

## 3 CONCLUSION

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According to the U.S. Geological Survey and the NM Office of the State Engineer, there were no records of groundwater in the immediate vicinity, however depth to groundwater in the area averages greater than 150'bgs indicating no potential threat to groundwater or life forms.

# Appendix I

INITIAL FORM C-141

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Diversified Field Service, Inc.  
206 W. Snyder  
Hobbs, NM 88240  
(575) 964-8394

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 | Linn Operating Inc.                | Contact       | E.L. Gonzales        |
| Address         | 2130 W Bender Blvd Hobbs, NM 88240 | Telephone No. | 575-738-1739         |
| Facility Name   | CMU C #283                         | Facility Type | Injection            |
| Surface Owner   | State                              | Mineral Owner | API No. 30-025-34193 |

### LOCATION OF RELEASE

|             |         |          |       |               |                  |               |                |        |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|--------|
| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
| O           | 28      | 17S      | 33E   | 1033          | South            | 1975          | East           | Lea    |

Latitude 32.8011717539685 Longitude -103.666034130641

### NATURE OF RELEASE

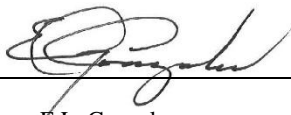
|                             |  |   |            |                            |                   |
|-----------------------------|--|---|------------|----------------------------|-------------------|
| Type of Release             | Produced Water   | Volume of Release                         | 10 bbls    | Volume Recovered           | 5bbls             |
| Source of Release           | Steel pipeline   | Date and Hour of Occurrence               | 01/28/2015 | Date and Hour of Discovery | 01/28/2015 7:20am |
| Was Immediate Notice Given? | <input type="checkbox"/> Yes <input 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 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.\* At appx 7:20am I received a phone call that I had an injection leak at CMU C#283. We got line shut in and dug down to find that it was leaking around the threads on the collar of the pipe. Line coming into injection well is a 2 3/8 steel plastic coated line. We stripped back one joint and replaced with fiber glass line.

Describe Area Affected and Cleanup Action Taken.\* Appx 10bbls was spilled water ran about 192'ft from well head east to edge of location, and gathered just off location. The wind carried the mist east out in the pasture appx another 150' from the edge of location. Water misted out in the pasture on north side of location about 100' long and appx 110' wide. Clean up will be determined.

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:  | <b>OIL CONSERVATION DIVISION</b>      |                  |                                   |
| Printed Name: E.L. Gonzales  | Approved by Environmental Specialist: |                  |                                   |
| Title: Production Supervisor   | Approval Date:                        | Expiration Date: |                                   |
| E-mail Address: elgonzales@linenergy.com   | Conditions of Approval:               |                  | Attached <input type="checkbox"/> |
| Date: 01/28/2015   | Phone: 505-504-8002                   |                  |                                   |

\* Attach Additional Sheets If Necessary

# Appendix II

## SITE PHOTOS

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# Linn Energy, CMU #283

Unit Letter O, Section 28, T17S R33E



Initial spill photos



Excavation on caliche pad





Excavation on pad and in pasture area



Backfilled pad and pasture area





Completely backfilled pad area



Completed location

# Appendix III

## SITE MAP

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Diversified Field Service, Inc.  
206 W. Snyder  
Hobbs, NM 88240  
(575) 964-8394

# Site Diagram

Linn, CMU C #283  
UL/O, Sec. 28 T17S R33E  
Lea County, NM  
Drafted By: Lance Crenshaw, 2-16-15

0 0.004 0.008 0.016 Miles

Spill Area:  
16,333 sq. ft.

## Legend



### Misc\_points

#### Types


-  Electrical Box
-  Power Pole
-  Headers
-  Injection
-  Pumpjacks
-  Tanks
-  Valves
-  Other
-  Soil Bores
-  sample\_pts
-  Source

### Pipeline





#### Type

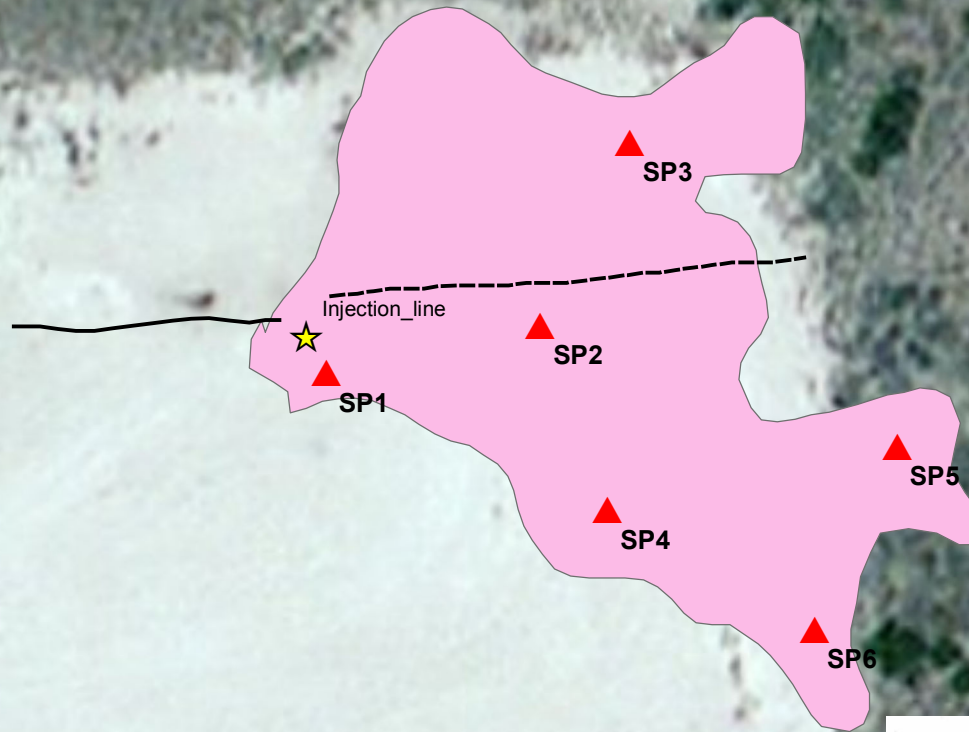
-  Above Ground Line
-  Buried Line

### Spill

-  <all other values>

### Spill\_Media

-  Oil and Produced H2O
-  Oil
-  Other
-  Produced Water



Lance Crenshaw  
GIS Technician

Soil Remediation and Ground Water Remediation  
Environmental Assessments  
Regulatory Compliance



Environmental

**DFS**

Services

Office: 575-964-8394

Fax: 575-964-8396

Cell: 575-441-2359

Email: [lcrenshaw@diversifiedfsi.com](mailto:lcrenshaw@diversifiedfsi.com)

Source: Esri, DigitalGlobe, GeoEye, IGN, swisstopo, and the GIS User Community

# Appendix IV

## LABORATORY ANALYSES

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Diversified Field Service, Inc.  
206 W. Snyder  
Hobbs, NM 88240  
(575) 964-8394

February 05, 2015

JOE HERNANDEZ

LINN ENERGY

RR1, BOX 24 B

KINGFISHER, OK 73750

RE: CMU 283

Enclosed are the results of analyses for samples received by the laboratory on 01/30/15 11:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [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:**

LINN ENERGY  
 JOE HERNANDEZ  
 RR1, BOX 24 B  
 KINGFISHER OK, 73750  
 Fax To: (405) 375-6693

Received: 01/30/2015  
 Reported: 02/05/2015  
 Project Name: CMU 283  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 01/30/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP1 @ 1' (H500277-01)**

| BTX 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           | 02/02/2015 | ND              | 1.84 | 92.2       | 2.00          | 2.11 |           |
| Toluene*       | <0.050 | 0.050           | 02/02/2015 | ND              | 1.75 | 87.5       | 2.00          | 3.16 |           |
| Ethylbenzene*  | <0.050 | 0.050           | 02/02/2015 | ND              | 1.66 | 82.9       | 2.00          | 3.88 |           |
| Total Xylenes* | <0.150 | 0.150           | 02/02/2015 | ND              | 4.93 | 82.2       | 6.00          | 4.21 |           |
| Total BTX      | <0.300 | 0.300           | 02/02/2015 | ND              |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

| Chloride, SM4500Cl-B |        | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 960    | 16.0            | 02/02/2015 | ND              | 416 | 104        | 400           | 7.41 |           |

| 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            | 01/30/2015 | ND              | 207 | 104        | 200           | 1.08 |           |
| DRO >C10-C28 | <10.0  | 10.0            | 01/30/2015 | ND              | 215 | 107        | 200           | 2.00 |           |

Surrogate: 1-Chlorooctane 103 % 47.2-157

Surrogate: 1-Chlorooctadecane 124 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

LINN ENERGY  
 JOE HERNANDEZ  
 RR1, BOX 24 B  
 KINGFISHER OK, 73750  
 Fax To: (405) 375-6693

Received: 01/30/2015  
 Reported: 02/05/2015  
 Project Name: CMU 283  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 01/30/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP2 @ 1' (H500277-02)**

| 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           | 02/02/2015 | ND           | 1.84            | 92.2       | 2.00          | 2.11 |           |  |
| Toluene*       | <0.050 | 0.050           | 02/02/2015 | ND           | 1.75            | 87.5       | 2.00          | 3.16 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 02/02/2015 | ND           | 1.66            | 82.9       | 2.00          | 3.88 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 02/02/2015 | ND           | 4.93            | 82.2       | 6.00          | 4.21 |           |  |
| Total BTEx     | <0.300 | 0.300           | 02/02/2015 | ND           |                 |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

| Chloride, SM4500CI-B |        | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 3320   | 16.0            | 02/02/2015 | ND              | 416 | 104        | 400           | 7.41 |           |

| 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            | 01/30/2015 | ND              | 207 | 104        | 200           | 1.08 |           |
| DRO >C10-C28 | <10.0  | 10.0            | 01/30/2015 | ND              | 215 | 107        | 200           | 2.00 |           |

Surrogate: 1-Chlorooctane 110 % 47.2-157

Surrogate: 1-Chlorooctadecane 124 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

LINN ENERGY  
 JOE HERNANDEZ  
 RR1, BOX 24 B  
 KINGFISHER OK, 73750  
 Fax To: (405) 375-6693

Received: 01/30/2015  
 Reported: 02/05/2015  
 Project Name: CMU 283  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 01/30/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP3 @ 1' (H500277-03)**

| 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           | 02/02/2015 | ND              | 1.84 | 92.2       | 2.00          | 2.11 |           |
| Toluene*       | <0.050 | 0.050           | 02/02/2015 | ND              | 1.75 | 87.5       | 2.00          | 3.16 |           |
| Ethylbenzene*  | <0.050 | 0.050           | 02/02/2015 | ND              | 1.66 | 82.9       | 2.00          | 3.88 |           |
| Total Xylenes* | <0.150 | 0.150           | 02/02/2015 | ND              | 4.93 | 82.2       | 6.00          | 4.21 |           |
| Total BTEx     | <0.300 | 0.300           | 02/02/2015 | ND              |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID) 100 % 61-154

| Chloride, SM4500CI-B |        | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 2080   | 16.0            | 02/02/2015 | ND              | 416 | 104        | 400           | 7.41 |           |

| 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            | 02/02/2015 | ND              | 207 | 104        | 200           | 1.08 |           |
| DRO >C10-C28 | <10.0  | 10.0            | 02/02/2015 | ND              | 215 | 107        | 200           | 2.00 |           |

Surrogate: 1-Chlorooctane 106 % 47.2-157

Surrogate: 1-Chlorooctadecane 119 % 52.1-176

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

LINN ENERGY  
 JOE HERNANDEZ  
 RR1, BOX 24 B  
 KINGFISHER OK, 73750  
 Fax To: (405) 375-6693

Received: 01/30/2015  
 Reported: 02/05/2015  
 Project Name: CMU 283  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 01/30/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP4 @ 1' (H500277-04)**

| 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           | 02/02/2015 | ND           | 1.87            | 93.3       | 2.00          | 6.89 |           |  |
| Toluene*       | <0.050 | 0.050           | 02/02/2015 | ND           | 1.78            | 89.0       | 2.00          | 7.61 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 02/02/2015 | ND           | 1.67            | 83.6       | 2.00          | 9.24 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 02/02/2015 | ND           | 5.01            | 83.5       | 6.00          | 9.64 |           |  |
| Total BTEx     | <0.300 | 0.300           | 02/02/2015 | ND           |                 |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 61-154

| Chloride, SM4500CI-B |        | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 1330   | 16.0            | 02/02/2015 | ND              | 416 | 104        | 400           | 7.41 |           |

| 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            | 02/02/2015 | ND              | 207 | 104        | 200           | 1.08 |           |
| DRO >C10-C28 | <10.0  | 10.0            | 02/02/2015 | ND              | 215 | 107        | 200           | 2.00 |           |

Surrogate: 1-Chlorooctane 93.7 % 47.2-157

Surrogate: 1-Chlorooctadecane 106 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

LINN ENERGY  
 JOE HERNANDEZ  
 RR1, BOX 24 B  
 KINGFISHER OK, 73750  
 Fax To: (405) 375-6693

Received: 01/30/2015  
 Reported: 02/05/2015  
 Project Name: CMU 283  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 01/30/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP5 @ 1' (H500277-05)**

| 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           | 02/02/2015 | ND              | 1.87 | 93.3       | 2.00          | 6.89 |           |  |
| Toluene*       | <0.050 | 0.050           | 02/02/2015 | ND              | 1.78 | 89.0       | 2.00          | 7.61 |           |  |
| Ethylbenzene*  | <0.050 | 0.050           | 02/02/2015 | ND              | 1.67 | 83.6       | 2.00          | 9.24 |           |  |
| Total Xylenes* | <0.150 | 0.150           | 02/02/2015 | ND              | 5.01 | 83.5       | 6.00          | 9.64 |           |  |
| Total BTEx     | <0.300 | 0.300           | 02/02/2015 | ND              |      |            |               |      |           |  |

Surrogate: 4-Bromofluorobenzene (PID) 100 % 61-154

| Chloride, SM4500Cl-B |        | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 1640   | 16.0            | 02/02/2015 | ND              | 416 | 104        | 400           | 7.41 |           |

| 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            | 02/02/2015 | ND              | 207 | 104        | 200           | 1.08 |           |
| DRO >C10-C28 | <10.0  | 10.0            | 02/02/2015 | ND              | 215 | 107        | 200           | 2.00 |           |

Surrogate: 1-Chlorooctane 102 % 47.2-157

Surrogate: 1-Chlorooctadecane 115 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

LINN ENERGY  
 JOE HERNANDEZ  
 RR1, BOX 24 B  
 KINGFISHER OK, 73750  
 Fax To: (405) 375-6693

Received: 01/30/2015  
 Reported: 02/05/2015  
 Project Name: CMU 283  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 01/30/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SP6 @ 1' (H500277-06)**

| 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           | 02/02/2015 | ND              | 1.87 | 93.3       | 2.00          | 6.89 |           |
| Toluene*       | <0.050 | 0.050           | 02/02/2015 | ND              | 1.78 | 89.0       | 2.00          | 7.61 |           |
| Ethylbenzene*  | <0.050 | 0.050           | 02/02/2015 | ND              | 1.67 | 83.6       | 2.00          | 9.24 |           |
| Total Xylenes* | <0.150 | 0.150           | 02/02/2015 | ND              | 5.01 | 83.5       | 6.00          | 9.64 |           |
| Total BTEx     | <0.300 | 0.300           | 02/02/2015 | ND              |      |            |               |      |           |

Surrogate: 4-Bromofluorobenzene (PID) 101 % 61-154

| Chloride, SM4500CI-B |        | mg/kg           |            | Analyzed By: AP |     |            |               |      |           |
|----------------------|--------|-----------------|------------|-----------------|-----|------------|---------------|------|-----------|
| Analyte              | Result | Reporting Limit | Analyzed   | Method Blank    | BS  | % Recovery | True Value QC | RPD  | Qualifier |
| Chloride             | 1150   | 16.0            | 02/02/2015 | ND              | 416 | 104        | 400           | 7.41 |           |

| 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            | 02/02/2015 | ND              | 207 | 104        | 200           | 1.08 |           |
| DRO >C10-C28 | <10.0  | 10.0            | 02/02/2015 | ND              | 215 | 107        | 200           | 2.00 |           |

Surrogate: 1-Chlorooctane 104 % 47.2-157

Surrogate: 1-Chlorooctadecane 120 % 52.1-176

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\*=Accredited Analyte

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**Notes and Definitions**

|     |  |
|-----|--|
| ND  | Analyte NOT DETECTED at or above the reporting limit   |
| RPD | Relative Percent Difference  |
| **  | Samples not received at proper temperature of 6°C or below.  |
| *** | Insufficient time to reach temperature.  |
| -   | Chloride by SM4500Cl-B does not require samples be received at or below 6°C<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



**(575) 393-2326 FAX (575) 393-2476**

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# Appendix V

FINAL C-141

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Diversified Field Service, Inc.  
206 W. Snyder  
Hobbs, NM 88240  
(575) 964-8394



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 | Linn Operating Inc.                | Contact       | E.L. Gonzales        |
| Address         | 2130 W Bender Blvd Hobbs, NM 88240 | Telephone No. | 575-738-1739         |
| Facility Name   | CMU C #283                         | Facility Type | Injection            |
| Surface Owner   | State                              | Mineral Owner | API No. 30-025-34193 |

### LOCATION OF RELEASE

|             |         |          |       |               |                  |               |                |        |
|-------------|---------|----------|-------|---------------|------------------|---------------|----------------|--------|
| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
| O           | 28      | 17S      | 33E   | 1033          | South            | 1975          | East           | Lea    |

Latitude 32.8011717539685 Longitude -103.666034130641

### NATURE OF RELEASE

|                             |  |   |            |                            |                   |
|-----------------------------|--|---|------------|----------------------------|-------------------|
| Type of Release             | Produced Water   | Volume of Release                         | 10 bbls    | Volume Recovered           | 5bbls             |
| Source of Release           | Steel pipeline   | Date and Hour of Occurrence               | 01/28/2015 | Date and Hour of Discovery | 01/28/2015 7:20am |
| Was Immediate Notice Given? | <input type="checkbox"/> Yes <input 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 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.\* At appx 7:20am I received a phone call that I had an injection leak at CMU C#283. We got line shut in and dug down to find that it was leaking around the threads on the collar of the pipe. Line coming into injection well is a 2 3/8 steel plastic coated line. We stripped back one joint and replaced with fiber glass line.

Describe Area Affected and Cleanup Action Taken.\* Appx 10bbls was spilled water ran about 192'ft from well head east to edge of location, and gathered just off location. The wind carried the mist east out in the pasture appx another 150'from the edge of location. Water misted out in the pasture on north side of location about 100' long and appx 110' wide.

On January 28, 2015 DFSI personnel delineated down to the caprock of the leak area. Field samples were taken on six sample points, each sample was tested for chloride levels as well as BTEX. The BTEX samples were performed using a Mini Rae Photoionization Detector (PID). All 1' field samples were taken to Cardinal Lab of Hobbs to obtain confirmation samples. The results are attached (Appendix IV). On April 14, 2015, DFSI personnel visited the site to begin the excavation process. The caliche pad was dug out 6" below ground surface (bgs). The affected pasture area was excavated to 1' bgs. Native topsoil was brought in to backfill the pasture area, and fresh caliche was brought in to backfill the pad. All contaminated soil and caliche was hauled to an approved disposal facility. The location will be seeded with a BLM-OCD approved mix once approved by Linn Energy, Inc.

According to the U.S. Geological Survey and the NM Office of the State Engineer, there were no records of groundwater in the immediate vicinity, however depth to groundwater in the area averages greater than 150' bgs indicating no potential threat to groundwater or life forms.

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:  | <b>OIL CONSERVATION DIVISION</b>      |                  |                                   |
| Printed Name: E.L. Gonzales  | Approved by Environmental Specialist: |                  |                                   |
| Title: Production Supervisor   | Approval Date:                        | Expiration Date: |                                   |
| E-mail Address: elgonzales@linenergy.com   | Conditions of Approval:               |                  | Attached <input type="checkbox"/> |
| Date: 04/27/2015   | Phone: 505-504-8002                   |                  |                                   |

\* Attach Additional Sheets If Necessary