

**RECEIVED**

*By JKeyes at 2:00 pm, Nov 09, 2015*

**LINN  
Energy**

**APPROVED**

*By JKeyes at 2:00 pm, Nov 09, 2015*

CMU #005

## REMEDIATION WORK PLAN

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API No. 30-025-01440

Release Date: October 9, 2015

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

November 5, 2015

**Prepared by:**

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

Kellie Jones  
Environmental Specialist  
NM Oil Conservation District-Division 2  
1625 N. French  
Hobbs, NM 88240

**RE: Linn Energy, CMU #005– Remediation Work Plan**  
UL/B, Section 17, T17S, R33E  
API No. 30-025-01440

Ms. Jones,

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 from an injection line failure between the CMU #005 and the CMU #006. The impacted area is entirely in the pasture. Approximately 7 bbls of produced water was released, with none recovered. A site map is attached. This spill occurred on top of the Caprock Escarpment. A C-141 was drafted to the NMOCD on October 9, 2015.

### **Site Assessment and Delineation**

On October 9, 2015 DFSI personnel responded to the release site and dug up the line so a crew could fix it. DFSI then scraped up the affected area to minimize the environmental impact

On October 19, 2015 DFSI personnel returned to the site and sampled the spill area. DFSI sampled 10 points of the spill area. The samples were tested for chloride levels as well as BTEX. The BTEX samples were performed using a Mini Rae Photoionization Detector (PID). Due to the Caprock Escarpment, DFSI personnel encountered auger refusal at depths of 1' and 2' BGS. Clean samples were attained on four of the 10 samples and sent to a lab for confirmation. Those samples, along with the field sampling results, are attached.

On October 29, 2015, DFSI personnel returned to the location and drilled three soil bores to fully delineate the spill. Those samples were sent to a commercial laboratory for confirmation. Those samples are also attached.

DFSI has conducted a groundwater study of the area and has determined that according to the New Mexico Office of the State Engineer the average depth to groundwater for this area is 180 foot below ground surface. Therefore, no eminent danger of groundwater impact or threat to life is anticipated.

## Conclusion

After careful review DFSI, on behalf of Linn Energy, would like to propose the following: Excavate the entire spill to 1' BGS except the area of SB #3, which will be excavated to 3' BGS. Native topsoil will then be brought in for backfill, and all contaminated materials will be hauled to an approved NM State Disposal. Once backfilled, the area will be seeded with an approved BLM mixture.

Following the approval of the above plan, DFSI will submit all proper closure documentation to the NMOCD and BLM in accordance to the State and Federal Guidelines set forth.

Please feel free to contact me with any questions concerning this remediation plan request.

Sincerely,



Michael Burton  
Environmental Operations Director  
Diversified Field Service, Inc.  
206 West Snyder  
Hobbs, NM 88240  
Office: (575)964-8394  
Mobile: (575)390-5454  
Fax: (575)964-8396  
Email: Mburton@diversifiedfsi.com

Attachments: Initial Form C-141  
Site/Sample Map  
Sample Data  
Groundwater Data

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 #5	Facility Type	Injection
Surface Owner	State	Mineral Owner	API No. 30-025-01440

### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	17	17S	33E	660	North	1980	East	LEA

Latitude 32.8400612 Longitude -103.6832886

### NATURE OF RELEASE

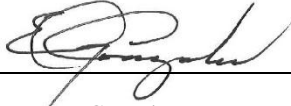
Type of Release	Produced Water	Volume of Release	7bbls	Volume Recovered	0
Source of Release	FG Pipeline	Date and Hour of Occurrence	10/09/2015	Date and Hour of Discovery	10/09/2015 9:00am
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not 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 approx. 9am had an inj leak between CMU #5 and CMU #6. Upon arrival water was blowing out of the ground towards the southwest. Got line shut off and dug out and found a hole had come in the line.

Describe Area Affected and Cleanup Action Taken.\* Water sprayed out in pasture about 480' at longest point and 120' at widest point.

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: 10/12/2015	Phone: 505-504-8002		

\* Attach Additional Sheets If Necessary

# Site Diagram

Linn, CMU #005  
UL/B, Sec. 17 T17S R33E  
Lea County, NM  
Drafted By: Lance Crenshaw, 10-16-15

0 0.01 0.02 0.04 Miles

Spill Area:  
66,046 sq. ft.

## Legend



### Misc\_points

#### Types


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

### Pipeline





#### Type

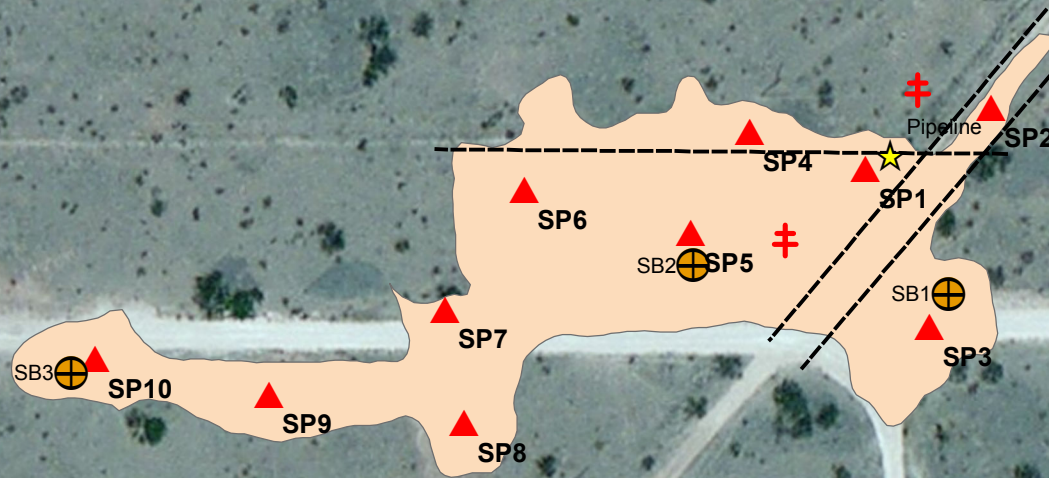
-  Above Ground Line
-  Buried Line

### 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

Source: Esri, DigitalGlobe, GeoEye, I-  
swisstopo, and the GIS User Communi





CMU #005

## PHOTO PAGE



Spill area in pasture before scrape

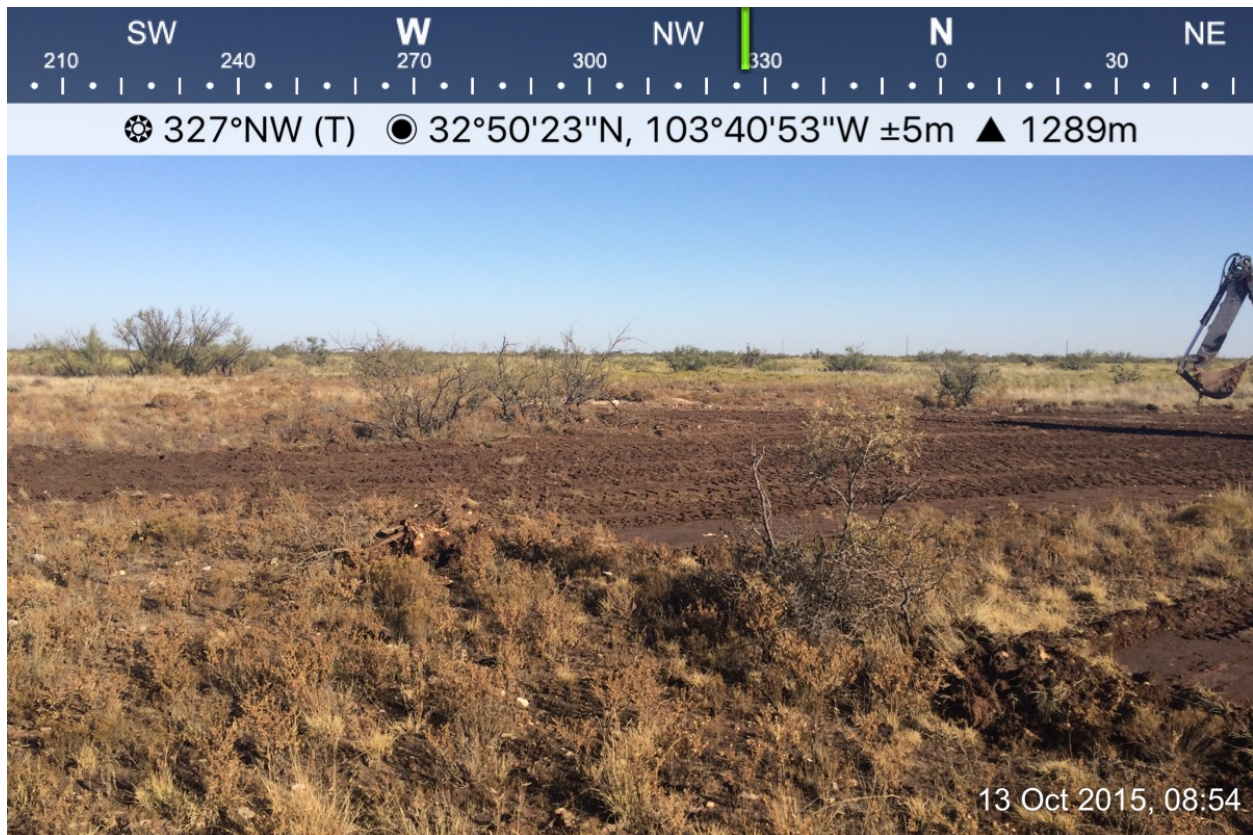


Spill area in pasture before initial scrape



Spill in pasture area after initial scrape





Spill in pasture area after initial scrape



Using drill soil bore #1





Collecting soil bore sample

## Diversified Environmental Services

Company Name:	Linn
Location Name:	CMU #005

SP Date: 10/19/2015  
Rel Date:

[illegible]

	Lab Confirmation Sample
	Field Sampling
	Needs Delineation and confirmation samples

## Diversified Environmental Services

[illegible]

	Lab Confirmation Sample
	Field Sampling
	Needs Delineation and confirmation samples





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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October 27, 2015

BOB AKIN

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: CMU #005

Enclosed are the results of analyses for samples received by the laboratory on 10/22/15 8:35.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

LINN OPERATING-HOBBS  
 BOB AKIN  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received: 10/22/2015  
 Reported: 10/27/2015  
 Project Name: CMU #005  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 10/19/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SAMPLE POINT 1 @ 1' (H502753-01)**

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	10/26/2015	ND	1.92	96.2	2.00	1.04	
Toluene*	<0.050	0.050	10/26/2015	ND	2.12	106	2.00	0.847	
Ethylbenzene*	<0.050	0.050	10/26/2015	ND	1.94	96.8	2.00	0.126	
Total Xylenes*	<0.150	0.150	10/26/2015	ND	6.20	103	6.00	0.185	
Total BTX	<0.300	0.300	10/26/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 85.6-137

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	10/23/2015	ND	432	108	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	10/22/2015	ND	214	107	200	1.67	
DRO >C10-C28	<10.0	10.0	10/22/2015	ND	218	109	200	0.773	

Surrogate: 1-Chlorooctane 81.1 % 47.2-157

Surrogate: 1-Chlorooctadecane 87.9 % 52.1-176

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:**

LINN OPERATING-HOBBS  
 BOB AKIN  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received: 10/22/2015  
 Reported: 10/27/2015  
 Project Name: CMU #005  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 10/19/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SAMPLE POINT 2 @ SURFACE (H502753-02)**

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	10/26/2015	ND	1.92	96.2	2.00	1.04	
Toluene*	<0.050	0.050	10/26/2015	ND	2.12	106	2.00	0.847	
Ethylbenzene*	<0.050	0.050	10/26/2015	ND	1.94	96.8	2.00	0.126	
Total Xylenes*	<0.150	0.150	10/26/2015	ND	6.20	103	6.00	0.185	
Total BTEX	<0.300	0.300	10/26/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 85.6-137

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	10/23/2015	ND	432	108	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	10/22/2015	ND	214	107	200	1.67	
DRO >C10-C28	<10.0	10.0	10/22/2015	ND	218	109	200	0.773	

Surrogate: 1-Chlorooctane 84.2 % 47.2-157

Surrogate: 1-Chlorooctadecane 90.9 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

LINN OPERATING-HOBBS  
 BOB AKIN  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received: 10/22/2015  
 Reported: 10/27/2015  
 Project Name: CMU #005  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 10/19/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SAMPLE POINT 4 @ 1' (H502753-03)**

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	10/26/2015	ND	1.92	96.2	2.00	1.04	
Toluene*	<0.050	0.050	10/26/2015	ND	2.12	106	2.00	0.847	
Ethylbenzene*	<0.050	0.050	10/26/2015	ND	1.94	96.8	2.00	0.126	
Total Xylenes*	<0.150	0.150	10/26/2015	ND	6.20	103	6.00	0.185	
Total BTEx	<0.300	0.300	10/26/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 85.6-137

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	10/23/2015	ND	432	108	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	10/22/2015	ND	214	107	200	1.67	
DRO >C10-C28	<10.0	10.0	10/22/2015	ND	218	109	200	0.773	

Surrogate: 1-Chlorooctane 88.7 % 47.2-157

Surrogate: 1-Chlorooctadecane 97.2 % 52.1-176

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

LINN OPERATING-HOBBS  
 BOB AKIN  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received: 10/22/2015  
 Reported: 10/27/2015  
 Project Name: CMU #005  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 10/19/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SAMPLE POINT 6 @ 1' (H502753-04)**

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	10/26/2015	ND	1.92	96.2	2.00	1.04	
Toluene*	<0.050	0.050	10/26/2015	ND	2.12	106	2.00	0.847	
Ethylbenzene*	<0.050	0.050	10/26/2015	ND	1.94	96.8	2.00	0.126	
Total Xylenes*	<0.150	0.150	10/26/2015	ND	6.20	103	6.00	0.185	
Total BTEx	<0.300	0.300	10/26/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 85.6-137

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	10/23/2015	ND	432	108	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	10/22/2015	ND	214	107	200	1.67	
DRO >C10-C28	<10.0	10.0	10/22/2015	ND	218	109	200	0.773	

Surrogate: 1-Chlorooctane 86.0 % 47.2-157

Surrogate: 1-Chlorooctadecane 94.4 % 52.1-176

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

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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager





CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

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

Company Name: Linn Operating  
Project Manager: Linn Operating

Address:

City:

State:

Zip:

Phone #:

Fax #:

Project #:

Project Owner:

Project Name: Linn

Project Location: Cmu #005

Sampler Name: Chris Flores

P.O. #:

Company: Linn Operating  
Attn:

Address:

City:

State:

Zip:

Phone #:

Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

#502753

Sample Point 1 @ 1'  
Sample Point 2 @ 3m  
Sample Point 4 @ 1'  
Sample Point 6 @ 1'

(G)RAB OR (C)OMP.

# CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE TIME

Chloride

BTEX

TPH

## Diversified Environmental Services

Company Name:	Linn
Location Name:	CMU #005

SP Date: 10/28/2015  
Rel Date:

[illegible]

	Lab Confirmation Sample
	Field Sampling
	Needs Delineation and confirmation samples



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

November 05, 2015

MIKE BURTON

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: CMU #005

Enclosed are the results of analyses for samples received by the laboratory on 10/29/15 15:30.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



**Analytical Results For:**

LINN OPERATING-HOBBS  
 MIKE BURTON  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received:	10/29/2015	Sampling Date:	10/28/2015
Reported:	11/05/2015	Sampling Type:	Soil
Project Name:	CMU #005	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SOIL BORE 1 @ 6" (H502843-01)**

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	11/04/2015	ND	2.16	108	2.00	1.39	
Toluene*	<0.050	0.050	11/04/2015	ND	2.35	118	2.00	0.0452	
Ethylbenzene*	<0.050	0.050	11/04/2015	ND	2.15	108	2.00	1.22	
Total Xylenes*	<0.150	0.150	11/04/2015	ND	6.85	114	6.00	1.21	
Total BTX	<0.300	0.300	11/04/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	464	16.0	11/03/2015	ND	384	96.0	400	4.08		

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	11/03/2015	ND	207	103	200	1.98	
DRO >C10-C28	<10.0	10.0	11/03/2015	ND	219	110	200	1.62	

Surrogate: 1-Chlorooctane 109 % 35-147

Surrogate: 1-Chlorooctadecane 118 % 28-171

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

LINN OPERATING-HOBBS  
 MIKE BURTON  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received:	10/29/2015	Sampling Date:	10/28/2015
Reported:	11/05/2015	Sampling Type:	Soil
Project Name:	CMU #005	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SOIL BORE 1 @ 1' (H502843-02)**

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	11/04/2015	ND	2.16	108	2.00	1.39	
Toluene*	<0.050	0.050	11/04/2015	ND	2.35	118	2.00	0.0452	
Ethylbenzene*	<0.050	0.050	11/04/2015	ND	2.15	108	2.00	1.22	
Total Xylenes*	<0.150	0.150	11/04/2015	ND	6.85	114	6.00	1.21	
Total BTEX	<0.300	0.300	11/04/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	11/03/2015	ND	384	96.0	400	4.08	

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	11/03/2015	ND	207	103	200	1.98	
DRO >C10-C28	<10.0	10.0	11/03/2015	ND	219	110	200	1.62	

Surrogate: 1-Chlorooctane 99.1 % 35-147

Surrogate: 1-Chlorooctadecane 107 % 28-171

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

LINN OPERATING-HOBBS  
 MIKE BURTON  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received: 10/29/2015  
 Reported: 11/05/2015  
 Project Name: CMU #005  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 10/28/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SOIL BORE 2 @ 1' (H502843-03)**

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	11/04/2015	ND	2.16	108	2.00	1.39	
Toluene*	<0.050	0.050	11/04/2015	ND	2.35	118	2.00	0.0452	
Ethylbenzene*	<0.050	0.050	11/04/2015	ND	2.15	108	2.00	1.22	
Total Xylenes*	<0.150	0.150	11/04/2015	ND	6.85	114	6.00	1.21	
Total BTEx	<0.300	0.300	11/04/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	11/03/2015	ND	384	96.0	400	4.08	

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	11/03/2015	ND	207	103	200	1.98	
DRO >C10-C28	<10.0	10.0	11/03/2015	ND	219	110	200	1.62	

Surrogate: 1-Chlorooctane 111 % 35-147

Surrogate: 1-Chlorooctadecane 120 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 LINN OPERATING-HOBBS  
 MIKE BURTON  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

 Received: 10/29/2015  
 Reported: 11/05/2015  
 Project Name: CMU #005  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 10/28/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SOIL BORE 2 @ 2' (H502843-04)**

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	11/05/2015	ND	2.16	108	2.00	1.39	
Toluene*	<0.050	0.050	11/05/2015	ND	2.35	118	2.00	0.0452	
Ethylbenzene*	<0.050	0.050	11/05/2015	ND	2.15	108	2.00	1.22	
Total Xylenes*	<0.150	0.150	11/05/2015	ND	6.85	114	6.00	1.21	
Total BTEx	<0.300	0.300	11/05/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	880	16.0	11/03/2015	ND	384	96.0	400	4.08	

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	11/03/2015	ND	207	103	200	1.98	
DRO >C10-C28	<10.0	10.0	11/03/2015	ND	219	110	200	1.62	

Surrogate: 1-Chlorooctane 110 % 35-147

Surrogate: 1-Chlorooctadecane 120 % 28-171

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**

LINN OPERATING-HOBBS  
 MIKE BURTON  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received: 10/29/2015  
 Reported: 11/05/2015  
 Project Name: CMU #005  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 10/28/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SOIL BORE 3 @ 3' (H502843-05)**

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	11/05/2015	ND	2.06	103	2.00	1.01	
Toluene*	<0.050	0.050	11/05/2015	ND	2.29	115	2.00	1.45	
Ethylbenzene*	<0.050	0.050	11/05/2015	ND	2.11	105	2.00	2.28	
Total Xylenes*	<0.150	0.150	11/05/2015	ND	6.71	112	6.00	2.34	
Total BTEX	<0.300	0.300	11/05/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	11/03/2015	ND	384	96.0	400	4.08	

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	11/03/2015	ND	207	103	200	1.98	
DRO >C10-C28	<10.0	10.0	11/03/2015	ND	219	110	200	1.62	

Surrogate: 1-Chlorooctane 105 % 35-147

Surrogate: 1-Chlorooctadecane 118 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

LINN OPERATING-HOBBS  
 MIKE BURTON  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received: 10/29/2015  
 Reported: 11/05/2015  
 Project Name: CMU #005  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 10/28/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SOIL BORE 3 @ 4' (H502843-06)**

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	11/05/2015	ND	2.06	103	2.00	1.01	
Toluene*	<0.050	0.050	11/05/2015	ND	2.29	115	2.00	1.45	
Ethylbenzene*	<0.050	0.050	11/05/2015	ND	2.11	105	2.00	2.28	
Total Xylenes*	<0.150	0.150	11/05/2015	ND	6.71	112	6.00	2.34	
Total BTEX	<0.300	0.300	11/05/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	11/03/2015	ND	384	96.0	400	4.08	

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	11/03/2015	ND	207	103	200	1.98	
DRO >C10-C28	<10.0	10.0	11/03/2015	ND	219	110	200	1.62	

Surrogate: 1-Chlorooctane 107 % 35-147

Surrogate: 1-Chlorooctadecane 121 % 28-171

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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

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Celey D. Keene, Lab Director/Quality Manager







# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,  
O=orphaned,  
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
<a href="#">L 03622</a>	L	LE					17	17S	33E	623053	3633703*	226	180	46

Average Depth to Water: **180 feet**

Minimum Depth: **180 feet**

Maximum Depth: **180 feet**

Record Count: 1

### PLSS Search:

Section(s): 17

Township: 17S

Range: 33E

\*UTM location was derived from PLSS - see Help

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