



Lea D #23

REMEDIATION WORK PLAN

API No. 30-015-29703

Release Date: July 3, 2015

Unit Letter F, Section 26, Township 17 South, Range 31 East

December 21, 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

Mike Bratcher
Environmental Specialist
NM Oil Conservation District-Division 2
811 S. First St.
Artesia, NM 88210

RE: **Linn Energy, Lea D #23 – Remediation Work Plan**
UL/F, Section 26, T17S, R31E
API No. 30-015-29703

Mr. Bratcher,

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

The site is located southwest of Maljamar, NM, in Eddy County. The leak site resulted from a fuse giving out on a flow line. The impacted area was approximately a 10 x 10 area in the pasture northeast of the Lea D #7 injection well. Approximately three gallons of oil and produced water was released, with none recovered. A C-141 was drafted on July 7, 2015. The C-141 is attached.

Site Assessment and Delineation

On November 20, 2015 DFSI personnel sampled three 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). The field samples that field tested below state/BLM requirements were taken to Cardinal Lab of Hobbs to obtain confirmation sample. The results are attached.

On December 8, 2015, DFSI personnel returned to the location to drill one bore hole. Drilling refusal was attained at 50' BGS. That sample was taken to a commercial lab for confirmation.

DFSI has conducted a groundwater study of the area and has determined that according to the Chevron-Texaco depth to groundwater map, the average depth to groundwater for this area is 300 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 areas of SP2 and SP3 to 4' BGS, then install a 20-mil liner or impervious river rock. Then backfill with native topsoil and re seed the entire affected area with a BLM, OCD approved seed mix.

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

cc Shelly Tucker

Attachments: Initial Form C-141
Site/Sample Map
Sample Data
Lab Analytical 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	Lea D #23	Facility Type	Oil Producer
Surface Owner	Federal	Mineral Owner	API No. 30-015-29703

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	26	17S	31E	1322	North	1322	West	Eddy

Latitude 32.8092232 Longitude -103.8445892 NAD83

NATURE OF RELEASE


Type of Release	Oil / Produced Water	Volume of Release	3 gal / 3 gal	Volume Recovered	0 / 0
Source of Release	flow line fuse	Date and Hour of Occurrence	07/03/2015	Date and Hour of Discovery	07/03/2015 1:13pm
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.* As I was driving to the Lea D #23 just north east of Lea D #7 injection well I saw the flow line from well #23 spraying fluid into the pasture. I drove to the Lea D #23 and shut the well in to stop it from making a bigger mess. The fluid was coming out from an old fuse that gave out. I called the roustabout gang to come and refuse the flow line and also called a backhoe to come and clean up the impacted area.

Describe Area Affected and Cleanup Action Taken.* The impacted area was about a 10ft by 10ft area

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: 	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: E.L. Gonzales	Approved by Environmental Specialist:		
Title: Production Supervisor	Approval Date:	Expiration Date:	
E-mail Address: elgonzaes@linenergy.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 07/07/2015	Phone: 505-504-8002		

* Attach Additional Sheets If Necessary

Site Diagram

Linn, Lea D #23
UL/F, Sec. 26 T17S R31E
Eddy County, NM
Drafted By: Lance Crenshaw, 11/18/15

0 0.0025 0.005 0.01 Miles

Legend

Misc_points

Types

- Electrical Box
- Power Pole
- Headers
- Injection
- Pumpjacks
- Tanks
- Valves
- Other
- Soil Bores
- sample_pts
- Source

Pipeline

Type

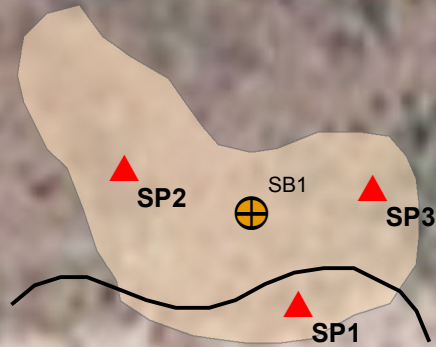
- Above Ground Line
- Buried Line

Spill

- <all other values>

Spill_Media

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



Spill Area:
1,847 sq. ft.

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-c
 swisstopo, and the GIS User Communi



Lea D #23

PHOTO PAGE

12/21/2015



Spill area in pasture



Preparing to drill bore hole



Hand-augering for soil sample

Diversified Environmental Services

Company Name:	Linn
Location Name:	Lea D #23

SP Date: 11/20/2015
Rel Date:

[illegible][illegible][illegible][illegible][illegible]

	Lab Confirmation Sample
	Field Sampling
	Needs Delineation and confirmation samples



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

November 30, 2015

DENNIS POTTER

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: LEA D #23

Enclosed are the results of analyses for samples received by the laboratory on 11/20/15 16:40.

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.

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
 DENNIS POTTER
 2130 W. BENDER
 HOBBS NM, 88240
 Fax To: (575) 738-1740

Received: 11/20/2015
 Reported: 11/30/2015
 Project Name: LEA D #23
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 11/20/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SAMPLE POINT 1 @ 2' (H503085-01)

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	11/25/2015	ND	2.11	106	2.00	3.99	
Toluene*	<0.050	0.050	11/25/2015	ND	2.11	105	2.00	4.90	
Ethylbenzene*	<0.050	0.050	11/25/2015	ND	2.22	111	2.00	4.05	
Total Xylenes*	<0.150	0.150	11/25/2015	ND	6.40	107	6.00	3.31	
Total BTX	<0.300	0.300	11/25/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	<16.0	16.0	11/25/2015	ND	400	100	400	14.8	

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	11/24/2015	ND	198	98.8	200	2.97	
DRO >C10-C28	<10.0	10.0	11/24/2015	ND	197	98.6	200	3.60	

Surrogate: 1-Chlorooctane 105 % 35-147

Surrogate: 1-Chlorooctadecane 111 % 28-171

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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



ANALYSIS REQUEST

[illegible]

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Relinquished By:	Date: 11/20/2015	Received By:	Date:
<i>[Signature]</i>	Time:	<i>[Signature]</i>	
Relinquished By:	Date:	Received By:	Date:
<i>[Signature]</i>		<i>[Signature]</i>	

Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #:
Fax Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Fax #:
REMARKS:			
Email to: lorenshaw@diversifiedsi.com			

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Relinquished By:	Date: 11/20/2015	Received By:	Date:
<i>[Signature]</i>	Time:	<i>[Signature]</i>	
Relinquished By:	Date:	Received By:	Date:
<i>[Signature]</i>		<i>[Signature]</i>	

Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #:
Fax Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Fax #:
REMARKS:			
Email to: lorenshaw@diversifiedsi.com			

Time:		5.20	
Delivered By: (Circle One)		Sample Condition	
Cool		<input checked="" type="checkbox"/> Intact	
Yes		<input checked="" type="checkbox"/> Yes	
No		<input type="checkbox"/> No	
Sampler - UPS - Bus - Other:		CHECKED BY: (Initials)	
			
		M. J. Anderson	
		c flores	

1. What is the purpose of the study?



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

December 14, 2015

DENNIS POTTER

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: LEA D #23

Enclosed are the results of analyses for samples received by the laboratory on 12/08/15 16:45.

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.

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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 style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received: 12/08/2015
 Reported: 12/14/2015
 Project Name: LEA D #23
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 12/08/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SOIL BORE 1 @ 50' (H503200-01)

BTEx 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.063	0.050	12/11/2015	ND	1.75	87.7	2.00	2.38	
Toluene*	2.49	0.050	12/11/2015	ND	1.75	87.5	2.00	2.03	
Ethylbenzene*	4.30	0.050	12/11/2015	ND	1.82	91.1	2.00	2.56	
Total Xylenes*	9.61	0.150	12/11/2015	ND	5.38	89.7	6.00	2.04	
Total BTEX	16.5	0.300	12/11/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 168 % 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	1250	16.0	12/11/2015	ND	400	100	400	3.92	

TPH 8015M			mg/kg					Analyzed By: MS	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	53.4	10.0	12/10/2015	ND	203	101	200	0.611	
DRO >C10-C28	137	10.0	12/10/2015	ND	195	97.4	200	1.22	

Surrogate: 1-Chlorooctane 85.6 % 35-147

Surrogate: 1-Chlorooctadecane 84.8 % 28-171

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



New Mexico Office of the State Engineer **Water Column/Average Depth to Water**

No records found.

PLSS Search:

Section(s): 26

Township: 17S

Range: 31E