



H E West B #33

REMEDIATION WORK PLAN

API No. 30-015-25944

Release Date: February 12th, 2015

Unit Letter L, Section 3, Township 17 South, Range 31 East

February 18, 2015

Prepared by:

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

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

RE: Linn Energy H E West #33 – Remediation Work Plan
UL/L, Section 03, T17S, R31E
API No. 30-015-25944

Mrs. Patterson,

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

The site is located northeast of Loco Hills NM, in Lea County. The leak site resulted from a truck hitting the well and breaking off a tubing valve. The impacted area is the caliche pad and south into the pasture. A site map is attached. A C-141 was submitted to the NMOCD on February 17th, 2015.

Site Assessment and Delineation

On February 17th, 2015 DFSI personnel responded to the location and placed a berm around the well to contain the fluid. DFSI personnel scraped up the saturated soil in the pasture and on the caliche pad. We took four samples of the spill area. Each sample was tested for chloride levels as well as TPH. The TPH samples were performed using a Mini Rae Photoionization Detector (PID). All field samples that field tested below state/BLM requirements were taken to Cardinal Lab of Hobbs to obtain confirmation samples. The results are 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 250 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:

Scrape the caliche pad to 6" bgs and backfill with clean caliche. Remove the pasture impacted soil down to 3' bgs. DFSI proposes to use the surrounding terrain for backfill and contour; then seed 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

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

Site Diagram

Linn, HE West B Federal #33
Eddy County, NM
Drafted By: Lance Crenshaw, 2-12-15

0 0.005 0.01 0.02 Miles

Legend



Misc_points

Types


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

Pipeline





Type

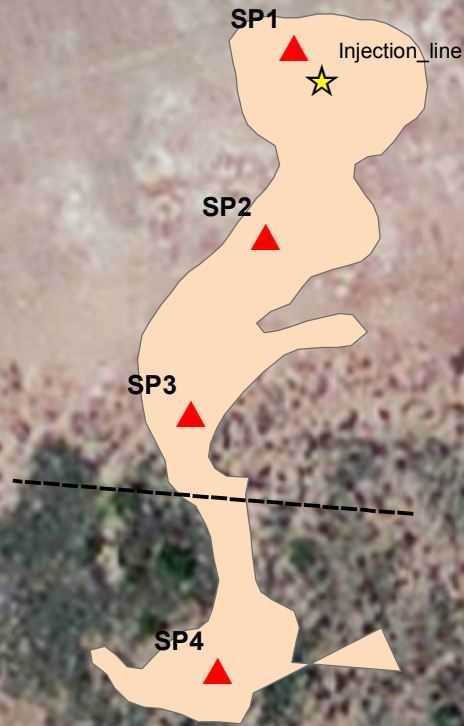
-  Above Ground Line
-  Buried Line

Spill

-  <all other values>

Spill_Media

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



Spill Area:
8,088 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, IGN, swisstopo, and the GIS User Community

Diversified Environmental Services

Company Name:	<u>Linn Energy</u>
Location Name:	<u>H.E. West Fed B 33</u>

SP Date: 2/12/2015
Rel Date:

[illegible]

	Lab Confirmation Sample
	Field Sampling
	Needs Delineation and confirmation samples



H E West B #33

API No. 30-015-25944

Release Date: February 12th, 2015

Unit Letter L, Section 3, Township 17 South, Range 31 East







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

February 20, 2015

RICK RICKMAN

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: H. E. WEST B #33

Enclosed are the results of analyses for samples received by the laboratory on 02/13/15 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.

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

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	02/13/2015	Sampling Date:	02/13/2015
Reported:	02/20/2015	Sampling Type:	Soil
Project Name:	H. E. WEST B #33	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 1 @ 3' (H500437-01)

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	02/20/2015	ND	1.76	87.9	2.00	14.0	
Toluene*	<0.050	0.050	02/20/2015	ND	1.77	88.3	2.00	14.6	
Ethylbenzene*	<0.050	0.050	02/20/2015	ND	1.77	88.6	2.00	14.2	
Total Xylenes*	<0.150	0.150	02/20/2015	ND	5.20	86.7	6.00	14.8	
Total BTX	<0.300	0.300	02/20/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	448	16.0	02/17/2015	ND	416	104	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	<10.0	10.0	02/18/2015	ND	208	104	200	0.438	
DRO >C10-C28	<10.0	10.0	02/18/2015	ND	196	98.0	200	0.534	

Surrogate: 1-Chlorooctane 94.2 % 47.2-157

Surrogate: 1-Chlorooctadecane 91.0 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 02/13/2015
 Reported: 02/20/2015
 Project Name: H. E. WEST B #33
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 02/13/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 2 @ 9' (H500437-02)

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	02/20/2015	ND	1.76	87.9	2.00	14.0		
Toluene*	<0.050	0.050	02/20/2015	ND	1.77	88.3	2.00	14.6		
Ethylbenzene*	<0.050	0.050	02/20/2015	ND	1.77	88.6	2.00	14.2		
Total Xylenes*	<0.150	0.150	02/20/2015	ND	5.20	86.7	6.00	14.8		
Total BTEX	<0.300	0.300	02/20/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	528	16.0	02/17/2015	ND	416	104	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	<10.0	10.0	02/18/2015	ND	208	104	200	0.438	
DRO >C10-C28	<10.0	10.0	02/18/2015	ND	196	98.0	200	0.534	

Surrogate: 1-Chlorooctane 96.5 % 47.2-157

Surrogate: 1-Chlorooctadecane 89.8 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	02/13/2015	Sampling Date:	02/13/2015
Reported:	02/20/2015	Sampling Type:	Soil
Project Name:	H. E. WEST B #33	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 3 @ SURFACE AFTER SCRAPE (H500437-03)

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	02/20/2015	ND	1.76	87.9	2.00	14.0		
Toluene*	<0.050	0.050	02/20/2015	ND	1.77	88.3	2.00	14.6		
Ethylbenzene*	<0.050	0.050	02/20/2015	ND	1.77	88.6	2.00	14.2		
Total Xylenes*	<0.150	0.150	02/20/2015	ND	5.20	86.7	6.00	14.8		
Total BTX	<0.300	0.300	02/20/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 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	256	16.0	02/17/2015	ND	416	104	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	<10.0	10.0	02/18/2015	ND	208	104	200	0.438	
DRO >C10-C28	<10.0	10.0	02/18/2015	ND	196	98.0	200	0.534	

Surrogate: 1-Chlorooctane 96.8 % 47.2-157

Surrogate: 1-Chlorooctadecane 97.4 % 52.1-176

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received:	02/13/2015	Sampling Date:	02/13/2015
Reported:	02/20/2015	Sampling Type:	Soil
Project Name:	H. E. WEST B #33	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 4 @ 3' (H500437-04)

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	02/20/2015	ND	1.76	87.9	2.00	14.0		
Toluene*	<0.050	0.050	02/20/2015	ND	1.77	88.3	2.00	14.6		
Ethylbenzene*	<0.050	0.050	02/20/2015	ND	1.77	88.6	2.00	14.2		
Total Xylenes*	<0.150	0.150	02/20/2015	ND	5.20	86.7	6.00	14.8		
Total BTEx	<0.300	0.300	02/20/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	128	16.0	02/17/2015	ND	416	104	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	<10.0	10.0	02/18/2015	ND	208	104	200	0.438	
DRO >C10-C28	<10.0	10.0	02/18/2015	ND	196	98.0	200	0.534	

Surrogate: 1-Chlorooctane 96.7 % 47.2-157

Surrogate: 1-Chlorooctadecane 92.5 % 52.1-176

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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

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	H.E. West B # 33	Facility Type	Injection
Surface Owner	Federal	Mineral Owner	API No. 30-015-25944

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	03	17S	31E	1980	South	660	West	Eddy

Latitude 32.86183 Longitude -103.86335

NATURE OF RELEASE

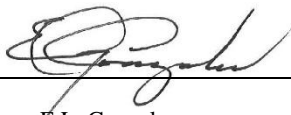
Type of Release	Produced Water	Volume of Release	70 bbls	Volume Recovered	60 bbls
Source of Release	Well head	Date and Hour of Occurrence	02/12/2015	Date and Hour of Discovery	02/12/2015 0600
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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.* drilling rig near the West B 33 called LINN to report a leak-Bobby Sooter was contacted and he responded along with Eddie Jaramillo and Rick Rickman. It appeared that the well had been hit by a truck as dual wheel marks were at the well head. The damage results were the tubing valve and tubing below being broken off at the top of the well head and fluid was back flowing on to location

Describe Area Affected and Cleanup Action Taken.* estimated 40 bbls. Of fluid picked up in adjacent pasture and estimate of 30 bbls from location, equipment near location was used to dike well pad and contain fluid along with a vacuum truck tied to the well head. Delineation to be done contact made with Apache drilling company man Chris Johnson 806-787-9911 requesting his help to identify the company that may have hit the well

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

Signature: 	OIL CONSERVATION DIVISION		
Printed Name: 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: 02/17/2015	Phone: 505-504-8002		

* Attach Additional Sheets If Necessary