



# H E West A #035

## CLOSURE REPORT

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API No. 30-015-29346

Release Date: July 16, 2014

Unit Letter F, Section 03, Township 17 South, Range 31 East

NMOCD Case #: 2R-3019

### June 8, 2016

**Prepared by:**

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

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# H E West A #035

## 1 INTRODUCTION

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Linn Energy (Linn) has retained Diversified Environmental (DFSI) to address environmental issues for the site detailed herein.

The site is located northeast of Loco Hills, NM, in Eddy County. The spill site resulted from an injection line failure. A total of approximately 4 bbls of produced water was released with none recovered. The impacted area is the caliche lease road and east into the pasture. An initial C-141 was submitted to the NMOCD on July 17, 2014 and approved on May 29, 2015 (Appendix I).

## 2 SITE ACTIVITIES

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On November 24, 2015, DFSI personnel were on site to obtain samples within the leak area (Appendix II). Five samples were obtained and field sampled for chloride levels, as well as BTEX. The BTEX samples were performed using a Mini Rae Photoionization Detector (PID). All clean field samples under NMOCD and BLM regulatory guidelines were submitted for laboratory analysis at Cardinal Laboratories of Hobbs, NM to obtain confirmation (Appendix III).

On December 11, 2015, DFSI personnel returned to the site to resample and fully delineate SP-5 with a drill. Due to the Caprock Escarpment, DFSI personnel encountered auger refusal at a depth of 20' bgs. The field sample results resulted in elevated chlorides and were submitted to the laboratory for analysis.

A work plan was submitted to and approved by NMOCD and BLM on January 21, 2016. Beginning February 18, 2016, DFSI personnel were on site to excavate the area surrounding SP-4 to 1' bgs and excavate the area around SP-5 to 4' bgs (Appendix IV). At 4 ft bgs, a 20-mil, reinforced poly liner was installed. The excavations were backfilled with native topsoil to ground surface and contoured to the surrounding area. Contaminated soil was properly disposed of at an NMOCD approved facility. The site was seeded with a blend of native vegetation (Appendix V).

### 3 CONCLUSION

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According to a groundwater study of the New Mexico Office of the State Engineer water records, there is no groundwater beneath this site. Based on the report and work completed, any remaining chloride and BTEX components in the vadose zone will not affect groundwater beneath this site, with vegetation expected to return to normal; therefore, DFSI, on behalf of Linn, submits the final C-141 (Appendix VI) and respectfully requests the closure of this regulatory file.

# Appendix I

INITIAL 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  
1301 W. Grand Avenue, 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

**NM OIL CONSERVATION**

ARTESIA DISTRICT

Form C-141  
Revised October 10, 2003

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC  
MAY 26 2015

**Release Notification and Corrective Action**

RECEIVED

**0AB1514928615** **2109324** **OPERATOR** ☒ Initial Report ☐ Final Report

Name of Company: Linn Operating	Contact: Brian Wall
Address: 2130 W. Bender Hobbs, NM 88240	Telephone No.: 575-738-1739
Facility Name: H.E. West A #35	Facility Type: Injection


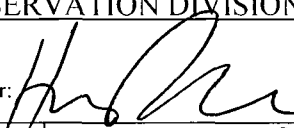
Surface Owner: Federal	Mineral Owner:	API No.: 30-015-29346
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**LOCATION OF RELEASE**

Unit Letter F	Section 03	Township 17S	Range 31E	Feet from the 1980	North/South Line North	Feet from the 860	East/West Line West	County Eddy
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Latitude: 32.8653 Longitude: -103.8627

**NATURE OF RELEASE**

Type of Release: Produced Water	Volume of Release: 4 bbls	Volume Recovered: 0
Source of Release: 2" Fiberglass pipeline	Date and Hour of Occurrence: 07/16/2014	Date and Hour of Discovery: 07/16/2014 7:30am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jeff Robertson-BLM / Mike Bratcher- NMOCD	
By Whom? Brian Wall	Date and Hour 07/17/2014 0650	
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.*: while driving my route I drove through a water puddle and smelled produced water. I got off my truck to inspect and see where the smell was coming from and found that an injection line had started leaking. The water was coming from a line that was already underwater from a rainstorm the previous day and night and mixed in with the rainwater. i shut in the lateral line and called a vacuum truck to clean up the spill. the ground was already wet from the rainstorms so it didnt have time to soak in. instead the water ran down the side of the road and into an already pooled area of rainwater. i wasnt sure so i had the vacuum truck pick up all fluid including rainwater.		
Describe Area Affected and Cleanup Action Taken.* : affected areas were a 50'x15' puddle about a half inch deep, and about 500'x10' path along the lease road. i called the operator of the injection plant to notify him that there was a leak. the leak was small enough that the line pressure from the pump had stayed up and not killed the pump from low discharge pressure. Directions to site: from US 82 and CR221 N on 221 1.4m, turn NE.5m, E.5m, N.5m, E 2miles, N.2m, E.2m, N .5m, E.3m to dry hole marker and tinhorn		
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: Brian Wall	Approved by District Supervisor: 	
Title: Construction Foreman II	Approval Date: 5/29/15	Expiration Date: N/A
E-mail Address: bwall@linenergy.com	Conditions of Approval:	Attached <input type="checkbox"/>

Remediation per O.C.D. Rules & Guidelines  
SUBMIT REMEDIATION PROPOSAL NO  
LATER THAN: 012915

2RD. 3019

Date: 07/17/2014	Phone: 806-367-0645		
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\* Attach Additional Sheets If Necessary

# Appendix II

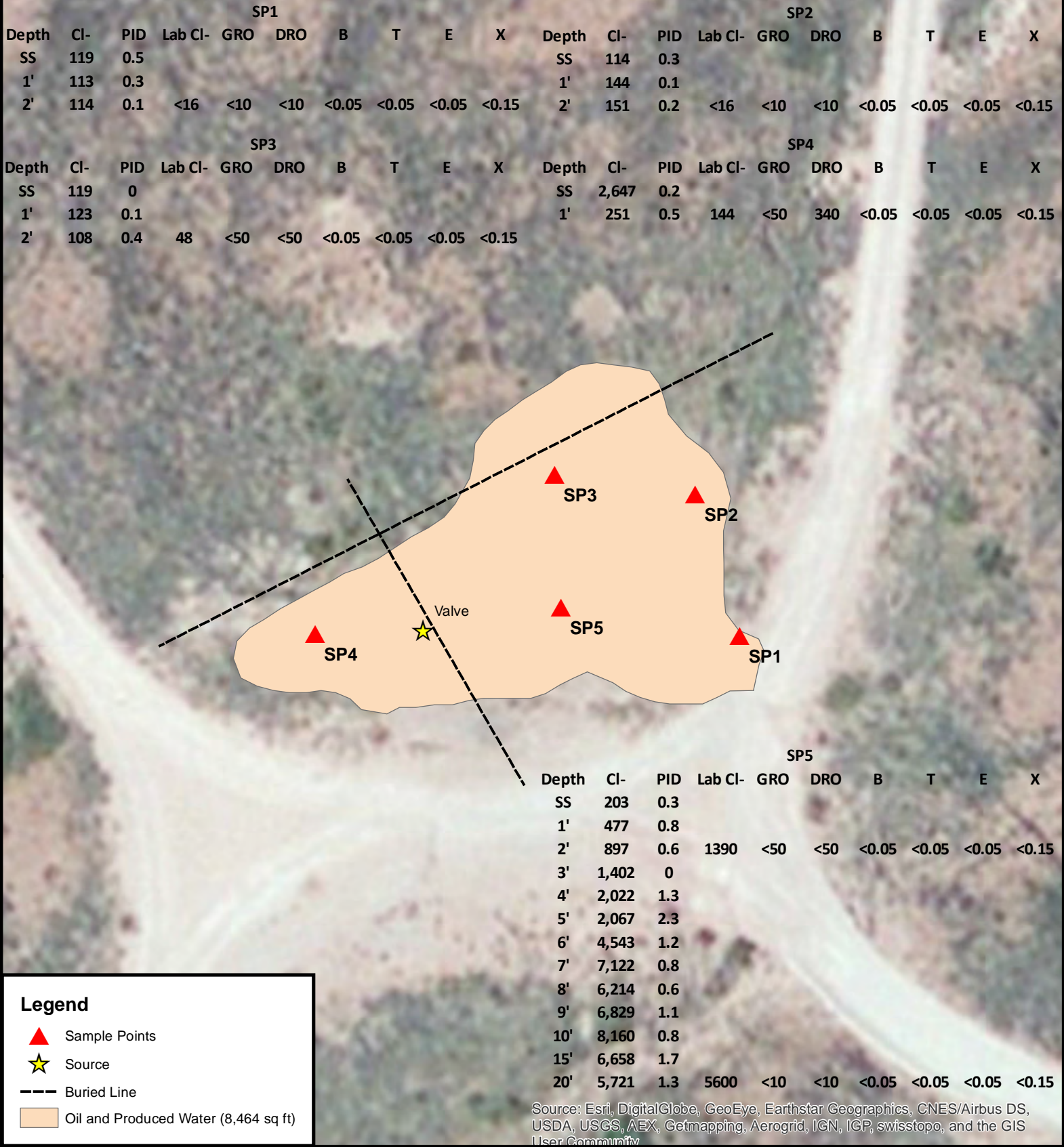
## SITE MAP

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



# Site Diagram



**Linn**  
**H E West A #035**  
**Unit Letter F, Section 3, T17S, R31E**  
**Eddy County, NM**  
**API #: 30-015-29346**  
**NMOCD Case #: 2R-3019**

Mapped: 4/4/2016 CF  
 Drafted by: L. Flores  
 04/07/2016

# Appendix III

## LABORATORY ANALYSES

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

December 01, 2015

RICK RICKMAN

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: H. E. WEST A #35

Enclosed are the results of analyses for samples received by the laboratory on 11/23/15 15:58.

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

Received:	11/23/2015	Sampling Date:	11/23/2015
Reported:	12/01/2015	Sampling Type:	Soil
Project Name:	H. E. WEST A #35	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

**Sample ID: SAMPLE POINT 1 @ 2' (H503092-01)**

BTEX 8021B			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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 BTEX	<0.300	0.300	11/25/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 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	416	104	400	3.77	

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 94.7 % 35-147

Surrogate: 1-Chlorooctadecane 101 % 28-171

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: 11/23/2015  
 Reported: 12/01/2015  
 Project Name: H. E. WEST A #35  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 11/23/2015  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Judy Garcia

**Sample ID: SAMPLE POINT 2 @ 2' (H503092-02)**

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	11/25/2015	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 BTEx	<0.300	0.300	11/25/2015	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	<16.0	16.0	11/25/2015	ND	416	104	400	3.77	

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 99.0 % 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  
 RICK RICKMAN  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received:	11/23/2015	Sampling Date:	11/23/2015
Reported:	12/01/2015	Sampling Type:	Soil
Project Name:	H. E. WEST A #35	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

**Sample ID: SAMPLE POINT 3 @ 2' (H503092-03)**

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	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) 101 % 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	48.0	16.0	11/25/2015	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	11/24/2015	ND	198	98.8	200	2.97	
DRO >C10-C28	<50.0	50.0	11/24/2015	ND	197	98.6	200	3.60	

Surrogate: 1-Chlorooctane 81.8 % 35-147

Surrogate: 1-Chlorooctadecane 95.7 % 28-171

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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:	11/23/2015	Sampling Date:	11/23/2015
Reported:	12/01/2015	Sampling Type:	Soil
Project Name:	H. E. WEST A #35	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

**Sample ID: SAMPLE POINT 4 @ 1' (H503092-04)**

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) 101 % 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	144	16.0	11/25/2015	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	11/24/2015	ND	198	98.8	200	2.97	
DRO >C10-C28	340	50.0	11/24/2015	ND	197	98.6	200	3.60	

Surrogate: 1-Chlorooctane 90.2 % 35-147

Surrogate: 1-Chlorooctadecane 131 % 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  
 RICK RICKMAN  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received:	11/23/2015	Sampling Date:	11/23/2015
Reported:	12/01/2015	Sampling Type:	Soil
Project Name:	H. E. WEST A #35	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Judy Garcia
Project Location:	NOT GIVEN		

**Sample ID: SAMPLE POINT 5 @ 2' (H503092-05)**

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) 101 % 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	1390	16.0	11/25/2015	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	11/24/2015	ND	198	98.8	200	2.97	
DRO >C10-C28	<50.0	50.0	11/24/2015	ND	197	98.6	200	3.60	

Surrogate: 1-Chlorooctane 84.4 % 35-147

Surrogate: 1-Chlorooctadecane 93.2 % 28-171

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C 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: <u>Linn</u>				<b>BILL TO</b>				<b>ANALYSIS REQUEST</b>																			
Project Manager: <u>Rick Rickman</u>				P.O. #:																							
Address:				Company:																							
City:		State:		Zip:		Attn:																					
Phone #:		Fax #:		Address:																							
Project #:		Project Owner:		City:																							
Project Name: <u>Linn</u>		State:		Zip:		Phone #:																					
Project Location: <u>H.E. West A #35</u>				Fax #:																							
Sampler Name: <u>Chris Flores</u>																											
FOR LAB USE ONLY				MATRIX				PRESERV.		SAMPLING																	
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME													
<u>H503092</u> 1 2 3 4 5	Sample Pt 1 @ 2'	G	1			✓					✓		11/23/2015 { 1:30 pm 2:00 pm 2:30 pm 2:45 pm	1:00 pm 1:30 pm 2:00 pm 2:30 pm 2:45 pm	X	X	X										
	Sample Pt 2 @ 2'	G	1			✓					✓				X	X	X										
	Sample Pt 3 @ 2'	G	1			✓					✓				X	X	X										
	Sample Pt 4 @ 1'	G	1			✓					✓				X	X	X										
	Sample Pt 5 @ 2'	G	1			✓					✓				X	X	X										

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 the client for the 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 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: <u>Chris Flores</u> Relinquished By: _____	Date: <u>11/23/2015</u> Time: <u>1:58</u>	Received By: <u>Judy Merced</u> Received By: _____	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #: _____ Add'l Fax #: _____
Delivered By: (Circle One) Sampler - UPS - Bus - Other: <u>6.00</u>			Sample Condition Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	
CHECKED BY: (Initials) <u>GF</u>			REMARKS: <u>email to: lcrenshaw@diversifiedfs.com</u> <u>6000</u>	

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

December 22, 2015

RICK RICKMAN

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: H. E. WEST A #35

Enclosed are the results of analyses for samples received by the laboratory on 12/17/15 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](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 OPERATING-HOBBS  
 RICK RICKMAN  
 2130 W. BENDER  
 HOBBS NM, 88240  
 Fax To: (575) 738-1740

Received:	12/17/2015	Sampling Date:	12/17/2015
Reported:	12/22/2015	Sampling Type:	Soil
Project Name:	H. E. WEST A #35	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SAMPLE PT. 5 @ 20' (H503286-01)**

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	12/21/2015	ND	2.20	110	2.00	1.51	
Toluene*	<0.050	0.050	12/21/2015	ND	2.25	113	2.00	1.29	
Ethylbenzene*	<0.050	0.050	12/21/2015	ND	2.06	103	2.00	2.62	
Total Xylenes*	<0.150	0.150	12/21/2015	ND	6.56	109	6.00	1.77	
Total BTX	<0.300	0.300	12/21/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	5600	16.0	12/18/2015	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	<10.0	10.0	12/18/2015	ND	186	93.2	200	0.854		
DRO >C10-C28	<10.0	10.0	12/18/2015	ND	176	88.2	200	1.06		

Surrogate: 1-Chlorooctane 104 % 35-147

Surrogate: 1-Chlorooctadecane 101 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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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.



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Celey D. Keene, Lab Director/Quality Manager





### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 4 of 4

[illegible]

# Appendix IV

## SITE PHOTOS

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# Linn H E West A #035

Unit Letter F, Section 3, T17S, R31E | NMOCD Case #: 2R-3019



Collecting sample, facing northwest 11/23/2015



Collecting sample, facing north 11/23/2015



Backfill completed, facing northeast 4/1/2016



Seeding site, facing northwest 4/1/2016



Seeding site, facing east 4/1/2016



Seeding site, facing southeast 4/1/2016



# Appendix V

## SEEDING REPORT

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

# DIVERSIFIED FIELD SERVICES, INC.

Project: H.E. west 35

Date Started: April 1<sup>st</sup> 2016

Seed and lbs used: 1 acre of LPC


Date Completed: April 8<sup>th</sup> 2016

Diversified Field Services, Inc.  
Worth Printing  
Clovis, NM 87601  
Phone: 505-762-4759  
www.dfsseed.com

Diversified Construction  
2 Acre LPC Mix  
1 Acre Bags @ 31.77 Bulk Pounds Each  
Job:                     

Lot: A-13694-1

Item	Origin	Purity	Germ	Dormant	Total Germination	Test Date	Total PLS Pounds
Quins Bristlegrass VNS	Oklahoma	16.39%	84.00%	12.00%	96.00%	12/15	10.00
Sand Bluestem Woodward	Texas	16.57%	95.00%	0.00%	95.00%	11/15	10.00
Little Bluestem Ardous	Texas	10.04%	94.00%	0.00%	94.00%	11/15	6.00
S <sup>W</sup> Leontis Gramma El Reno	Texas	20.31%	86.00%	7.00%	93.00%	09/15	12.00
Coreopsis Plains	Oregon	8.87%	71.00%	0.00%	71.00%	02/16	4.00
Sand Dropseed VNS	New Mexico	3.28%	23.00%	73.00%	96.00%	11/15	2.00
Other Crop:	7.56%						
Weed Seed:	0.13%						
Inert Matter:	16.85%						
There Are 2 Bags For This Mix This Bag Weighs 31.77 Bulk Pounds Use This Bag For 1 Acres							
Total Bulk Pounds:							64

Supervisor: 

# Appendix VI

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 Energy	Contact: EL Gonzales	
Address: 2130 W Bender, Hobbs, NM 88240	Telephone No. 575-738-1739	
Facility Name: HE West A #35	Facility Type: Injection	
Surface Owner: Federal	Mineral Owner:	API No. 30-015-29346

**LOCATION OF RELEASE**

Unit Letter F	Section 03	Township 17S	Range 31E	Feet from the 1980	North/South Line North	Feet from 860	East/West Line West	County Eddy
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Latitude: 32.8653 Longitude: -103.8627

**NATURE OF RELEASE**

Type of Release: Produced Water	Volume of Release: 4 bbls	Volume Recovered: 0
Source of Release: 2" Fiberglass pipeline	Date and Hour of Occurrence 07/16/2014	Date and Hour of Discovery 07/16/2014 7:30 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Jeff Robertson-BLM / Mike Bratcher - NMOCD	
By Whom? Brian Wall	Date and Hour: 07/17/2014 0650	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.\*

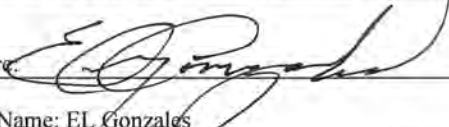
Describe Cause of Problem and Remedial Action Taken.\*

Affected areas were 50'x15' puddle about a half inch deep, and about 500'x10' path along the lease road. Operator of the injection plant was called to notify him of the leak. Leak with small enough that the line pressure from the pump stayed up and not killed the pump from low discharge pressure.

Describe Area Affected and Cleanup Action Taken.

On November 24, 2015, DFSI personnel were on site to obtain samples within the leak area. Five samples were obtained and field sampled for chloride levels, as well as BTEX. The BTEX samples were performed using a Mini Rae Photoionization Detector (PID). All clean field samples under NMOCD and BLM regulatory guidelines were submitted for laboratory analysis at Cardinal Laboratories of Hobbs, NM to obtain confirmation. On December 11, 2015, DFSI personnel returned to the site to resample and fully delineate SP-5 with a drill. Due to the Caprock Escarpment, DFSI personnel encountered auger refusal at a depth of 20' bgs. The field sample results resulted in elevated chlorides and were submitted to the laboratory for analysis. A work plan was submitted to and approved by NMOCD and BLM on January 21, 2016. Beginning February 18, 2016, DFSI personnel were on site to excavate the area surrounding SP-4 to 1' bgs and excavate the area around SP-5 to 4' bgs. At 4 ft bgs, a 20-mil, reinforced poly liner was installed. The excavations were backfilled with native topsoil to ground surface and contoured to the surrounding area. Contaminated soil was properly disposed of at an NMOCD approved facility. The site was seeded with a blend of native vegetation.

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: EL 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: 3/29/2016 Phone: 575-504-8002		

\* Attach Additional Sheets If Necessary