



# Turner B #114

## REMEDIATION WORK PLAN

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API No. 30-015-29187

Release Date: September 28, 2011

Unit Letter P, Section 30, Township 17 South, Range 31 East

RP# 2RP-934

April 20, 2016

**Prepared by:**

Michael Burton, Environmental Operations Director  
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 – Turner B #114 – Remediation Work Plan**  
UL/P, Section 30, T17S, R31E  
API No. 30-015-29187  
NMOCD Case #: 2R-934

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 southeast of Loco Hills, NM, in Eddy County. The spill resulted from an over pressured line, releasing a total of 2 barrels of produced water and oil, with none recovered. The impacted area is within a lease road, approximately 100'x20' in size, with a minimal impact on the pasture area. An initial C-141 was submitted to the NMOCD on October 14, 2011, and approved on October 21, 2011 (Appendix I).

### **Site Assessment and Delineation**

On June 27, 2014, DFSI personnel were on site to obtain samples within the leak area (Figure 1). Three 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). Field samples were submitted for analysis at Cardinal Laboratories of Hobbs, NM to obtain confirmation, resulting in concentrations below NMOCD and BLM regulatory guidelines (Appendix II).

DFSI has conducted a groundwater study of the area and has determined, according to the New Mexico Office of the State Engineer, there is no groundwater beneath this site. Therefore, no eminent danger of groundwater impact or threat to life is anticipated (Appendix V).

## Conclusion

After careful review, DFSI on behalf of Linn Energy would like to propose the following:

Excavate the area to a depth of 2' bgs. The entire area will be backfilled with clean, imported soil to ground surface and contoured to the surrounding area. The pasture area will be seeded with an approved BLM-NMOCD mix.

Following the approval of one of the above plans, 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

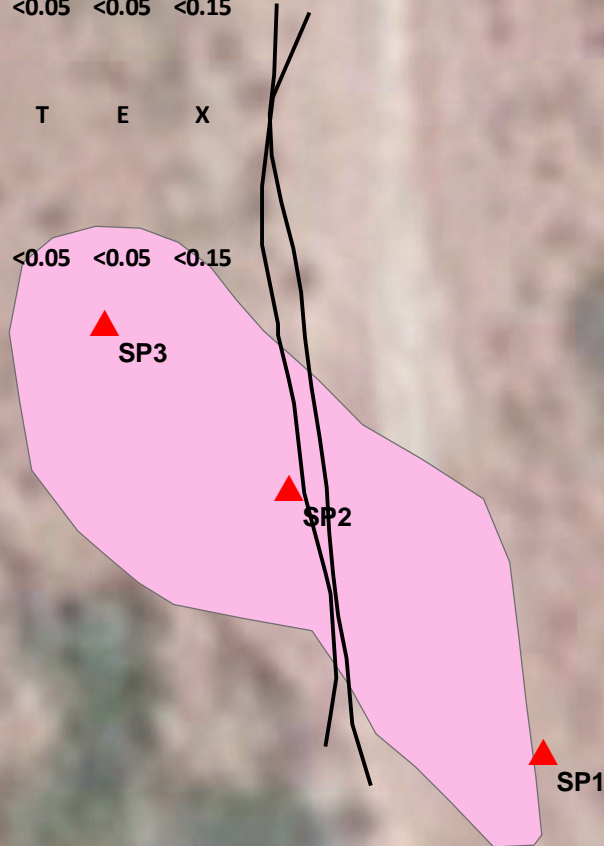
Figure 1 – Site Map  
Appendix I – Initial C-141  
Appendix II – Groundwater Study  
Appendix III – Laboratory Analysis

# Site Diagram

SP1									
Depth	Cl-	PID	Lab Cl-	GRO	DRO	B	T	E	X
SS	1024	0.9							
1'	1024	0.1							
2'	974	0.1							
3'	524	0.1	<16	<10	26	<0.05	<0.05	<0.05	<0.15

SP2									
Depth	Cl-	PID	Lab Cl-	GRO	DRO	B	T	E	X
SS	1074	0.9							
1'	999	0.5							
2'	874	0.5							
3'	549	0.1	<16	<10	<10	<0.05	<0.05	<0.05	<0.15

SP3									
Depth	Cl-	PID	Lab Cl-	GRO	DRO	B	T	E	X
SS	1399	0.1							
1'	1324	0.3							
2'	774	0.1							
3'	499	0.2	<16	<10	<10	<0.05	<0.05	<0.05	<0.15



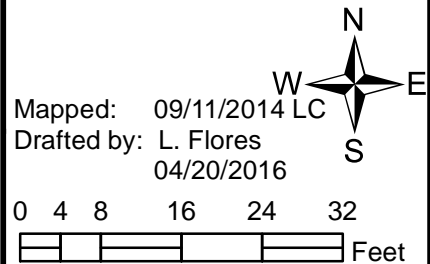
## Legend

- ▲ Sample Points
- ⛶ Power Pole
- Above Ground Line
- Produced Water (1,529 sq ft)

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



**Linn**  
**Turner B #114**  
**Unit Letter P, Sec. 30, T17S, R31E**  
**Eddy County, NM**  
**API #: 30-015-29187**  
**NMOCD Case #: 2R-934**



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

RECEIVED

OCT 14 2011

NMOCD ARTESIA

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

30-015-29187

Release Notification and Corrective Action

Name of Company: LINN Energy 269324		Contact: Joe Hernandez
Address: 2130 W Bender Blvd. - Hobbs, NM		Telephone No.: 575-942-8675
Facility Name: Turner B Well #114		Facility Type: Producing Oil Well
Surface Owner: BLM		Mineral Owner: BLM
		Lease No.: LC-029395-B

LOCATION OF RELEASE

Unit Letter P	Section 30	Township 17S	Range 31E	Feet from the 1130	North/South Line S	Feet from the 1120	East/West Line E	County Eddy
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Latitude: 32 48' 5.4" Longitude: 103 54' 15.9"

NATURE OF RELEASE

Type of Release: Produced Water 7 Oil	Volume of Release: 2	Volume Recovered: 0
Source of Release: Flowline Leak	Date and Hour of Occurrence: 09/28/11-0900	Date and Hour of Discovery: 09/28/11 - 0945
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? T Gregston, BLM, M. Bratcher NMOCD	
By Whom? Fred Holmes	Date and Hour: 09/29/11-0730	
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.\*: Over-pressure of line caused small leak to develop. Well was shut in and the line repaired

Describe Area Affected and Cleanup Action Taken.\* : Area impacted is approximately 100' x 20' and confined mostly to the road area. A smaller portion of the spill area impacted pasture land. Corrective action plan is pending.

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: Jose Hernandez	Signed By:	
Title: Foreman	Approved by District Supervisor:	Approval Date: OCT 21 2011
E-mail Address: jhernandez@linneenergy.com	Conditions of Approval:	Expiration Date:
Date: 10/14/11 Phone: 575-738-1739	Remediation per OCD Rules & Guidelines. SUBMIT REMEDIATION PROPOSAL NOT LATER THAN: 11/21/2011	Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary

2RP-934

# Appendix II

## GROUNDWATER STUDY

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



# 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="#">RA 11590 POD1</a>			ED	2	1	3	32	17S	31E	603315	3628545	158		
<a href="#">RA 11590 POD3</a>			ED	3	1	2	32	17S	31E	603932	3629260	60		
<a href="#">RA 11590 POD4</a>			ED	4	1	1	32	17S	31E	603308	3629253	55		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 3

### PLSS Search:

**Section(s):** 19, 20, 21, 29, 30, 31, 32 **Township:** 17S **Range:** 31E



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

No records found.

**PLSS Search:**

**Section(s):** 24, 25, 36

**Township:** 17S

**Range:** 30E

# Appendix III

## LABORATORY ANALYSIS

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



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

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July 07, 2014

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: TURNER B #114

Enclosed are the results of analyses for samples received by the laboratory on 07/01/14 14:50.

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

Received: 07/01/2014  
 Reported: 07/07/2014  
 Project Name: TURNER B #114  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 06/27/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Kathy Perez

**Sample ID: SP. 1 @ 3' (H401997-01)**

BTEX 8260B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/04/2014	ND	1.83	91.3	2.00	23.7	
Toluene*	<0.050	0.050	07/04/2014	ND	1.60	79.9	2.00	24.4	
Ethylbenzene*	<0.050	0.050	07/04/2014	ND	1.50	74.9	2.00	23.3	
Total Xylenes*	<0.150	0.150	07/04/2014	ND	4.68	78.0	6.00	25.1	
Total BTEX	<0.300	0.300	07/04/2014	ND					

Surrogate: Dibromofluoromethane 100 % 61.3-142

Surrogate: Toluene-d8 106 % 71.3-129

Surrogate: 4-Bromofluorobenzene 91.7 % 65.7-141

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	07/07/2014	ND	432	108	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	07/03/2014	ND	183	91.5	200	1.68	
<b>DRO &gt;C10-C28</b>	<b>26.0</b>	10.0	07/03/2014	ND	199	99.5	200	0.594	

Surrogate: 1-Chlorooctane 112 % 65.2-140

Surrogate: 1-Chlorooctadecane 120 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Received: 07/01/2014  
Reported: 07/07/2014  
Project Name: TURNER B #114  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 06/27/2014  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Kathy Perez

**Sample ID: SP. 2 @ 3' (H401997-02)**

BTEx 8260B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/04/2014	ND	1.83	91.3	2.00	23.7		
Toluene*	<0.050	0.050	07/04/2014	ND	1.60	79.9	2.00	24.4		
Ethylbenzene*	<0.050	0.050	07/04/2014	ND	1.50	74.9	2.00	23.3		
Total Xylenes*	<0.150	0.150	07/04/2014	ND	4.68	78.0	6.00	25.1		
Total BTEx	<0.300	0.300	07/04/2014	ND						

Surrogate: Dibromofluoromethane 98.7 % 61.3-142

Surrogate: Toluene-d8 102 % 71.3-129

Surrogate: 4-Bromofluorobenzene 94.9 % 65.7-141

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	07/07/2014	ND	432	108	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	07/03/2014	ND	183	91.5	200	1.68	
DRO >C10-C28	<10.0	10.0	07/03/2014	ND	199	99.5	200	0.594	

Surrogate: 1-Chlorooctane 112 % 65.2-140

Surrogate: 1-Chlorooctadecane 120 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received: 07/01/2014  
 Reported: 07/07/2014  
 Project Name: TURNER B #114  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 06/27/2014  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Kathy Perez

**Sample ID: SP. 3 @ 3' (H401997-03)**

BTEx 8260B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	07/04/2014	ND	1.83	91.3	2.00	23.7		
Toluene*	<0.050	0.050	07/04/2014	ND	1.60	79.9	2.00	24.4		
Ethylbenzene*	<0.050	0.050	07/04/2014	ND	1.50	74.9	2.00	23.3		
Total Xylenes*	<0.150	0.150	07/04/2014	ND	4.68	78.0	6.00	25.1		
Total BTEX	<0.300	0.300	07/04/2014	ND						

*Surrogate: Dibromofluoromethane* 102 % 61.3-142  
*Surrogate: Toluene-d8* 108 % 71.3-129  
*Surrogate: 4-Bromofluorobenzene* 98.3 % 65.7-141

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	07/07/2014	ND	432	108	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	07/03/2014	ND	183	91.5	200	1.68	
DRO >C10-C28	<10.0	10.0	07/03/2014	ND	199	99.5	200	0.594	

*Surrogate: 1-Chlorooctane* 112 % 65.2-140  
*Surrogate: 1-Chlorooctadecane* 120 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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

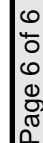
\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

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