



Turner B #114

REMEDIATION WORK PLAN

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

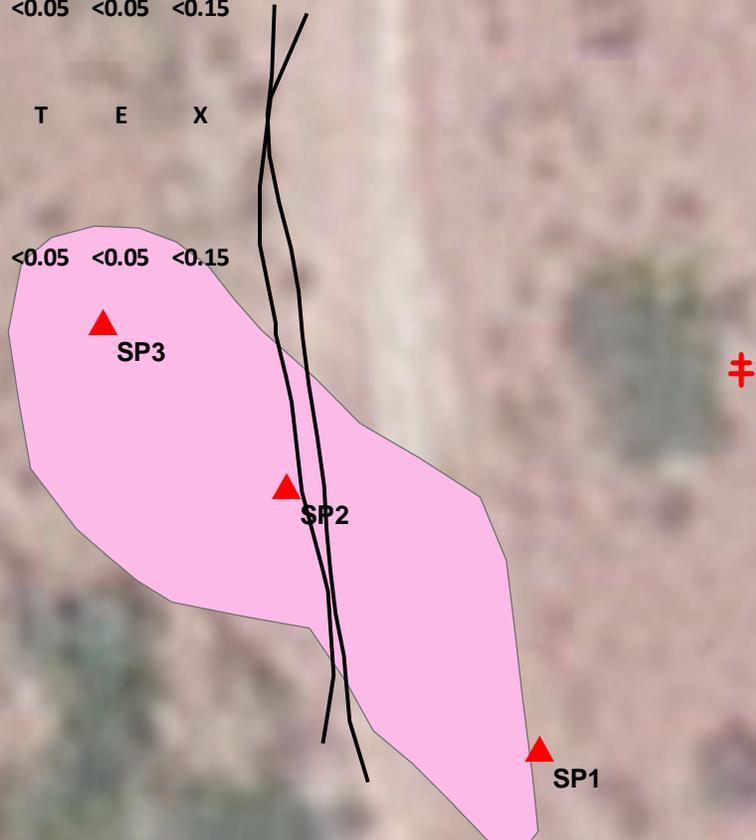
Depth	Cl-	PID	Lab Cl-	GRO	DRO	B	T	E	X
SS	1024	0.9							
1'	1024	0.1							
2'	974	0.1							
3'	524	0.1	<16	<10	26	<0.05	<0.05	<0.05	<0.15

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

Mapped: 09/11/2014 LC
 Drafted by: L. Flores
 04/20/2016

0 4 8 16 24 32
 Feet

Appendix I

INITIAL C-141

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

NMLB 1129439301 OPERATOR Initial Report Final Report

Name of Company: LINN Energy <u>269324</u>	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
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
<u>P</u>	30	17S	31E	1130	S	1120	E	Eddy

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

* Attach Additional Sheets If Necessary

2RP-934

Appendix II

GROUNDWATER STUDY

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
RA 11590 POD1			ED	2	1	3	32	17S	31E	603315	3628545	158		
RA 11590 POD3			ED	3	1	2	32	17S	31E	603932	3629260	60		
RA 11590 POD4			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

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



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

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



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.

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 cursive script that reads "Celey D. Keene".

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	Sampling Date:	06/27/2014
Reported:	07/07/2014	Sampling Type:	Soil
Project Name:	TURNER B #114	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Kathy Perez
Project Location:	NOT GIVEN		

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		
DRO >C10-C28	26.0	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
 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
 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. 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



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: <i>Linn Energy</i>		BILL TO		ANALYSIS REQUEST																				
Project Manager: <i>Brian Wall</i>		P.O. #:																						
Address:		Company: <i>Linn Energy</i>																						
City: State: Zip:		Attn: <i>Brian Wall</i>																						
Phone #: Fax #:		Address:																						
Project #: Project Owner:		City:																						
Project Name:		State: Zip:																						
Project Location: <i>Turner B 114</i>		Phone #:																						
Sampler Name: <i>Michael Alus</i>		Fax #:																						
FOR LAB USE ONLY																								
Lab I.D.	Sample I.D.	(GRAB OR (COMP. # CONTAINERS	MATRIX				PRESERV.		SAMPLING															
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	CC	TRH	BTX								
<i>H401997</i>																								
<i>1</i>	<i>sp. 1 @ 3'</i>	<i>CP</i>			<i>X</i>				<i>X</i>			<i>6/24/09 9:30</i>		<i>X</i>	<i>X</i>	<i>X</i>								
<i>2</i>	<i>sp. 2 @ 3'</i>	<i>CP</i>			<i>X</i>				<i>X</i>			<i>6/24/09 9:45</i>		<i>X</i>	<i>X</i>	<i>X</i>								
<i>3</i>	<i>sp. 3 @ 3'</i>	<i>CP</i>			<i>X</i>				<i>X</i>			<i>6/24/09 10:00</i>		<i>X</i>	<i>X</i>	<i>X</i>								

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Relinquished By: <i>[Signature]</i>	Date: <i>6/24/09</i>	Received By: <i>[Signature]</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Time: <i>2:50</i>			Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By: <i>[Signature]</i>	Date: <i>6/24/09</i>	Received By: <i>[Signature]</i>	REMARKS:	
Time: <i>11:04</i>			E-mail Results To:	
Delivered By: (Circle One)	Sample Condition	CHECKED BY: (Initials)	Ngladden@diversifiedfsi.com	
Sampler - UPS - Bus - Other: <i>32° #521</i>	Cool Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	<i>[Signature]</i>	Rpons@diversifiedfsi.com	
			Tjennings@diversifiedfsi.com	

* Cardinal cannot accept verbal changes. Please see written changes to (575) 393-2326