Turner B South #108

REMEDIATION WORK PLAN

API No. 30-015-28984

Release Date: September 28th, 2011

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

March 4, 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 Turner B South #108– Remediation Work Plan**
UL/K, Section 30, T17S, R31E
API No. 30-015-28984

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 east of Loco Hills, NM, in Eddy County. The leak site resulted from a failure of a flow line. The impacted area is the north and east sides of the caliche pad and some pasture impact northeast of the pad. A C-141 was submitted to the NMOCD on October 21th, 2011.

Site Assessment and Delineation

On May 27th, 2014 DFSI personnel obtained samples of the spill area in five sample points. Please see map for sample point orientation. Each sample was tested for chloride levels as well as BTEX. The BTEX samples were performed using a Mini Rae Photoionization Detector (PID). All field samples that tested clean were taken to Cardinal Labs 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 350 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:

The pit area will be excavated to 2' bgs. At the base of the excavation, a 6" compacted caliche rock layer will be installed in hinder the flow of water through the vadose zone. After the 6" compact caliche layer is installed, the excavation will be backfilled with topsoil to ground surface and contoured to the surrounding area. Excavated soils will be disposed of at an approved facility. The site will be seeded with an approved 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.

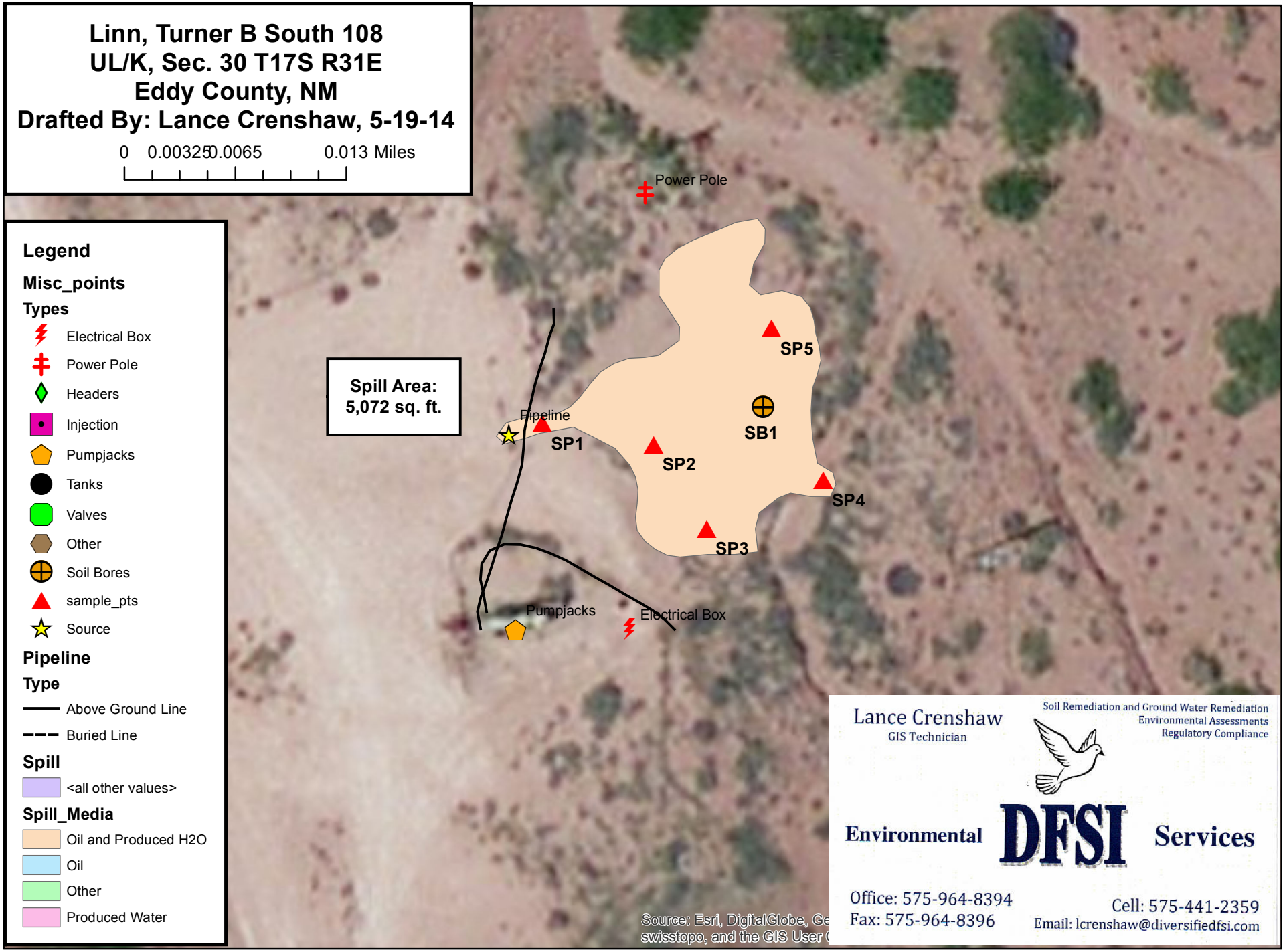
Sincerely,

Michael Burton

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

Attachments: Photo Page
Groundwater survey
Written Order

Site Diagram



Turner B South #108

Photo page

Spill/pit area

Spill/pit area

Diversified Environmental Services

Company Name: Linn Energy
Location Name: Turner B #108
SP Date: 5/27/2014
Rel Date: 9/28/2011

SP1	CHL	PID
1'	2999	2.2
2'	4023	2.1
3'	1099	1.2
4'	624	1.2
5'	499	1.3
5'	80	<10

SP2	CHL	PID
1'	9722	1.4
2'	8522	1.2
3'	5023	1.1
4'	5498	0.9
5'	7022	1
6'	3449	0
7'	3199	0.9
8'	1949	0.1
9'	1274	0.1
10'	2474	0.1
11'	474	0.1
12'	724	0.1
13'	573	0.1
13'	112	<10

SP3	CHL	PID
1'	8423	2.41
2'	7272	1.42
3'	8697	0.9
4'	7472	0.9
5'	4523	0.1
6'	2474	0.2
7'	1924	0.3
8'	1974	0.1
9'	1274	0.2
10'	2474	0.1
11'	1449	0
12'	874	0
13'	724	0
14'	724	0
14'	208	<10

SP4	CHL	PID
1'	7797	0
2'	5498	0
3'	5948	0
4'	2559	0
5'	3074	0.1
6'	5498	0.1
7'	4773	0
8'	6073	0
9'	3348	0
10'	3224	0.1
11'	3373	0.2
12'	2324	0.1
13'	2124	0.1
14'	1549	0.1
15'	2024	0.2
16'	2499	0.1

SP5	CHL	PID
1'	5948	2.38
2'	3298	1.41
3'	2474	2.11
4'	2699	1.09
5'	1524	0.9
6'	2049	0.9
7'	3623	1.2
8'	3798	0.8
9'	2624	0.6
10'	2024	0.1
11'	1424	0.1
12'	1574	0.1
13'	1449	0.1
14'	1374	0.1
15'	624	0.1
16'	2499	0.1

	Lab Confirmation Sample
	Field Sampling
	Needs Delineation and confirmation samples

CARDINAL Laboratories

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

June 06, 2014

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: TURNER B #108

Enclosed are the results of analyses for samples received by the laboratory on 05/30/14 13:50.

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 accreditated 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,

Mike Snyder

Organic Supervisor

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	05/30/2014	Sampling Date:	05/27/2014
Reported:	06/06/2014	Sampling Type:	Soil
Project Name:	TURNER B #108	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 1 @ 5' (H401673-01)

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	06/06/2014	ND	1.92	95.8	2.00	0.523	
Toluene*	<0.050	0.050	06/06/2014	ND	2.04	102	2.00	0.675	
Ethylbenzene*	<0.050	0.050	06/06/2014	ND	1.83	91.6	2.00	0.338	
Total Xylenes*	<0.150	0.150	06/06/2014	ND	5.80	96.7	6.00	0.173	
Total BTEX	<0.300	0.300	06/06/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**80.0**	16.0	06/05/2014	ND	400	100	400	0.00	

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	06/06/2014	ND	133	66.4	200	7.86	
DRO >C10-C28	<10.0	10.0	06/06/2014	ND	148	73.9	200	11.8	

Surrogate: 1-Chlorooctane *73.4 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *69.1 %* *63.6-154*

Cardinal Laboratories *=Accredited Analyte

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Mike Snyder, Organic Supervisor

CARDINAL Laboratories

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Analytical Results For:

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

Received:	05/30/2014	Sampling Date:	05/28/2014
Reported:	06/06/2014	Sampling Type:	Soil
Project Name:	TURNER B #108	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 2 @ 13' (H401673-02)

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	06/06/2014	ND	1.92	95.8	2.00	0.523	
Toluene*	<0.050	0.050	06/06/2014	ND	2.04	102	2.00	0.675	
Ethylbenzene*	<0.050	0.050	06/06/2014	ND	1.83	91.6	2.00	0.338	
Total Xylenes*	<0.150	0.150	06/06/2014	ND	5.80	96.7	6.00	0.173	
Total BTEX	<0.300	0.300	06/06/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	06/05/2014	ND	400	100	400	0.00	

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	06/06/2014	ND	133	66.4	200	7.86	
DRO >C10-C28	<10.0	10.0	06/06/2014	ND	148	73.9	200	11.8	

Surrogate: 1-Chlorooctane *98.4 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *108 %* *63.6-154*

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Mike Snyder, Organic Supervisor

CARDINAL Laboratories

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Analytical Results For:

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

Received:	05/30/2014	Sampling Date:	05/29/2014
Reported:	06/06/2014	Sampling Type:	Soil
Project Name:	TURNER B #108	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 3 @ 14' (H401673-03)

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	06/06/2014	ND	1.92	95.8	2.00	0.523	
Toluene*	<0.050	0.050	06/06/2014	ND	2.04	102	2.00	0.675	
Ethylbenzene*	<0.050	0.050	06/06/2014	ND	1.83	91.6	2.00	0.338	
Total Xylenes*	<0.150	0.150	06/06/2014	ND	5.80	96.7	6.00	0.173	
Total BTEX	<0.300	0.300	06/06/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	06/05/2014	ND	400	100	400	0.00	

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	06/06/2014	ND	133	66.4	200	7.86	
DRO >C10-C28	<10.0	10.0	06/06/2014	ND	148	73.9	200	11.8	

Surrogate: 1-Chlorooctane *92.5 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *88.1 %* *63.6-154*

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Mike Snyder, Organic Supervisor

CARDINAL Laboratories

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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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Mike Snyder, Organic Supervisor

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	Linn Energy
Project Manager:	Brian Wall
Address:	
City:	State: Zip:
Phone #:	Fax #:
Project #:	Project Owner:
Project Name:	
Project Location:	Turner B 108
Sampler Name:	Michael Alves

BILL TO

P.O. #:	
Company:	Linn Energy
Attn:	Brian Wall
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	CL	TPH	BTEX
H401673																	
1	Sp.1@5'	G	1			X					X		5/27/14	11:00	X	X	X
2	Sp.2@13'	G	1			X					X		5/28/14	9:00	X	X	X
3	Sp.3@14'	G	1			X					X		5/29/14	11:30	X	X	X

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Relinquished By:	Date: 5/29/14	Received By: Jodi Henson	
Relinquished By:	Time: 1:50	Received By:	
	Date:		
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

3.6°C

Sample Condition		CHECKED BY: (Initials)
Cool: ☑ Yes ☐ No	Intact: ☑ Yes ☐ No	

Phone Result:	☐ Yes	☐ No	Add'l Phone #:
Fax Result:	☐ Yes	☐ No	Add'l Fax #:

REMARKS:

E-mail Results To:
Ngladden@diversifiedfsi.com
Rpons@diversifiedfsi.com
Tjennings@diversifiedfsi.com

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

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-basin Code	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): 30, 29, 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.

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

30-015-28984

Release Notification and Corrective Action

nMLB1129440331

OPERATOR

☒ Initial Report ☐ Final Report

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 South #108	Facility Type: Producing Oil Well

Surface Owner: BLM	Mineral Owner: BLM	Lease No.: 3001528984

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	30	17S	31E	2190	S	1700	W	Eddy

Latitude: 32 48' 22.018" **Longitude:** -103 54' 21.284"

NATURE OF RELEASE

Type of Release: ~~Oil & roduced~~ Water	Volume of Release: 50 bbls	Volume Recovered: 25 bbls
Source of Release: Flowline	Date and Hour of Occurrence: 09/28/11-1500	Date and Hour of Discovery: 09/28//11-1530
~~Was Immediate Notice Given?~~ ☒ Yes ☐ No ☐ 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? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*:

Describe Cause of Problem and Remedial Action Taken.*: Line over-pressured causing line to leak. Well was shut in and repairs made ot the line.

Describe Area Affected and Cleanup Action Taken.* : Release covers approxiamtely 3600 square feet of surface area. Approxiamtely 70% is on the lease road. the remainder is confined to pasture adjacent to the road area. 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:

Printed Name: Jose Hernandez

Title: Foreman

E-mail Address: jhernandez@linneenrgy.com

Date: 10/14/11 Phone: 575-738-1739

OIL CONSERVATION DIVISION

Approved by ~~District Supervisor~~: Signed By

Approval Date: OCT 21 2011 Expiration Date:

Conditions of Approval: Attached ☐

Remediation per OCD Rules & Guidelines. **SUBMIT REMEDIATION PROPOSAL NOT LATER THAN:** 11/21/2011

2RP-935

* Attach Additional Sheets If Necessary