



Barclay Fed #27

REMEDIATION WORK PLAN

API No. 30-015-30883

Release Date: April 19th, 2015

Unit Letter I, Section 1, Township 23 South, Range 31 East

April 22, 2015

Prepared by:

Environmental Department
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 Energy Barclay Fed #27 – Remediation Work Plan
UL/I, Section 1, T23S, R31E
API No. 30-015-30883

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 east of Loving NM, in Eddy County. The leak site resulted from a failure of a steel flow line. The impacted area is the west and east sides of the caliche road near the intersection. Approx. 1 bbs of produced water was released, and 0 bbl recovered. Approx. 1 bbl of oil was released, and 0 bbl recovered. A C-141 was submitted to the NMOCD on April 20th, 2015.

Site Assessment and Delineation

On April 20th, 2015 DFSI personnel delineated vertically in two sample points of the leak area. Field samples were taken on two sample points, each sample was tested for chlorides levels as well as BTEX. The BTEX samples were performed using a Mini Rae Photoionization Detector (PID). All clean field samples from sample point one 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 232 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:

Remove the contaminated soil in the affected area to 3' bgs and backfill. We plan to use the surrounding soil and re contour the affected area. Then seed with a BLM, NMOCD 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 Jeff Robertson, Heather Patterson

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

Excavation Plat

Linn, Barclay Federal #27
UL/I, Sec. 01 T23S R31E
Lea County, NM
Drafted By: Lance Crenshaw, 4-20-15

0 0.00325 0.0065 0.013 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:
172 sq. ft.

SP1

SP2

Spill Area:
628 sq. ft.

Lance Crenshaw
GIS Technician

Soil Remediation and Ground Water Remediation
Environmental Assessments
Regulatory Compliance



Environmental

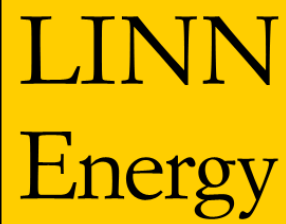
DFS

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



Barclay Fed #27

PHOTO PAGE





4/20/2015

SP Date: 4/20/2015
Rel Date:

	Lab Confirmation Sample
	Field Sampling
	Needs Delineation and confirmation samples



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

April 24, 2015

BOB AKIN

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: BARCLAY FED #27

Enclosed are the results of analyses for samples received by the laboratory on 04/21/15 14:55.

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, flowing style.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	04/21/2015	Sampling Date:	04/20/2015
Reported:	04/24/2015	Sampling Type:	Soil
Project Name:	BARCLAY FED #27	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP. 1 @ 3' (H501034-01)

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	04/22/2015	ND	2.13	106	2.00	0.0278		
Toluene*	<0.050	0.050	04/22/2015	ND	1.90	95.2	2.00	0.400		
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.81	90.3	2.00	0.992		
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.72	95.4	6.00	1.48		
Total BTX	<0.300	0.300	04/22/2015	ND						

Surrogate: 4-Bromofluorobenzene (PID) 111 % 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	320	16.0	04/22/2015	ND	416	104	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	04/22/2015	ND	200	99.9	200	5.98		
DRO >C10-C28	<10.0	10.0	04/22/2015	ND	214	107	200	9.62		

Surrogate: 1-Chlorooctane 99.6 % 47.2-157

Surrogate: 1-Chlorooctadecane 96.1 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 04/21/2015
 Reported: 04/24/2015
 Project Name: BARCLAY FED #27
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 04/20/2015
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP. 1 @ 4' (H501034-02)

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	04/22/2015	ND	2.13	106	2.00	0.0278	
Toluene*	<0.050	0.050	04/22/2015	ND	1.90	95.2	2.00	0.400	
Ethylbenzene*	<0.050	0.050	04/22/2015	ND	1.81	90.3	2.00	0.992	
Total Xylenes*	<0.150	0.150	04/22/2015	ND	5.72	95.4	6.00	1.48	
Total BTX	<0.300	0.300	04/22/2015	ND					

Surrogate: 4-Bromofluorobenzene (PID) 114 % 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	96.0	16.0	04/22/2015	ND	416	104	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	04/22/2015	ND	200	99.9	200	5.98	
DRO >C10-C28	<10.0	10.0	04/22/2015	ND	214	107	200	9.62	

Surrogate: 1-Chlorooctane 105 % 47.2-157

Surrogate: 1-Chlorooctadecane 99.8 % 52.1-176

Cardinal Laboratories

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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

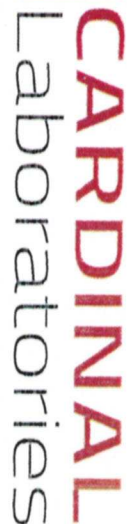
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Celey D. Keene, Lab Director/Quality Manager



Page 5 of 5

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

[illegible]



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
C 02258	C	ED		3	2	26	23S	31E		618055	3571853*	662		
C 02348	C	ED		1	4	3	26	23S	31E	617648	3571068	700	430	270
C 02492		ED		4	4	4	06	23S	31E	612056	3577320*	135	85	50
C 02492 POD2	C	ED		3	2	2	07	23S	31E	611767	3576996	400	125	275
C 02664		ED		3	3	2	05	23S	31E	613049	3578138*	4291	354	3937
C 02725		ED		1	1	1	05	23S	31E	612240	3578731*	532		
C 02773		ED		4	1	3	03	23S	31E	615668	3577762*	880		
C 02774		ED		3	1	3	04	23S	31E	613857	3577745*	1660		
C 02775		ED		1	1	1	05	23S	31E	612240	3578731*	529		
C 02776		ED		2	1	1	05	23S	31E	612440	3578731*	661		
C 02777	CUB	ED		4	4	4	10	23S	31E	616974	3575662	890		
C 02865		ED		4	4	4	06	23S	31E	612056	3577320*	174		
C 02954 EXPL		ED		3	1	4	20	23S	31E	613114	3572906*	905		
C 03140		ED		4	2	4	04	23S	31E	615266	3577758*	684		
C 03351	C	ED		4	1	4	04	23S	31E	614917	3577861	320	168	152
C 03520 POD1	C	ED		3	1	1	07	23S	31E	610733	3576905	500		

Average Depth to Water: **232 feet**

Minimum Depth: **85 feet**

Maximum Depth: **430 feet**

Record Count: 16

Basin/County Search:

County: Eddy

PLSS Search:

Township: 23S

Range: 31E

*UTM location was derived from PLSS - see Help

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
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	Barclay Federal #27	Facility Type	
Surface Owner	Federal	Mineral Owner	
		API No.	30-015-30883

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	01	23S	31E	1980	South	660	East	Lea

Latitude 32.3315309423989 Longitude -103.725142245464

NATURE OF RELEASE

Type of Release	Oil / Produced Water	Volume of Release	1 bbl / 2 bbl	Volume Recovered	0 / 0
Source of Release	Steel pipeline	Date and Hour of Occurrence	04/19/2015	Date and Hour of Discovery	04/19/2015 11:30am
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 type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			


If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

UPON CHECKING WELLS, I WAS IN ROUTE TO THE BARCLAY FEDERAL #20 AND I NOTICED THE SPILL ON BOTH SIDES OF THE ROAD COMING FROM THE #20 FLOWLINE. I TURNED OFF THE WELL AND CLOSED THE VALVES ON THE WELL HEAD. I CALLED MY FOREMAN BOB AKIN.

Describe Area Affected and Cleanup Action Taken.* Affected area was 30ft x 50ft.

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: 04/20/2015	Phone: 505-504-8002		

* Attach Additional Sheets If Necessary