



Linn Energy JL Keel B #90

REMEDIATION PLAN

API No. 30-015-28248

Release Date: Unknown

Unit Letter F, Section 08, Township 17 South, Range 31 East

RP# 2RP-702

BLM Event# 11NU048TG

March 26, 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 JL Keel B #90 – Remediation Work Plan
UL/F, Section 08, T17S, R31E
API No. 30-015-28248

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 south west of Maljamar NM, in Eddy County. The leak site resulted from a hydrocarbon and produced water leak. The source of the leak was due to a leak on the stuffing box. A C-141 was submitted to the NMOCD on March 30, 2011 (2RP-708). The BLM Event Number for this release is 11NU048TG.

Site Assessment and Delineation

On February 13, 2014 DFSI personnel obtained surface sample of the leak area, which included SP1-SP16. Surface sampling indicated that further delineation was needed to properly sample this site. On April 22, 2014, DFSI personnel obtained full delineation on each sample point. On March 12, 2015 DFSI personnel re assessed the site.

Field samples were taken on sixteen 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 found under the BLM/ NMOCD standards, 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 236 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:

Scrape the affected area of the caliche pad to 6" bgs and backfill with clean caliche. Then we will berm the southwest side of the pad to ensure any new releases stay on the location. The area in the pasture is mainly in a small drainage. We plan to blend the terrain into the drainage and put windrows to slow down the flow of rainwater. When the erosion windrows are completed we will seed with BLM approved seed mix.

Following the approval of one of the above plan and after the remediation has taken place, 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,

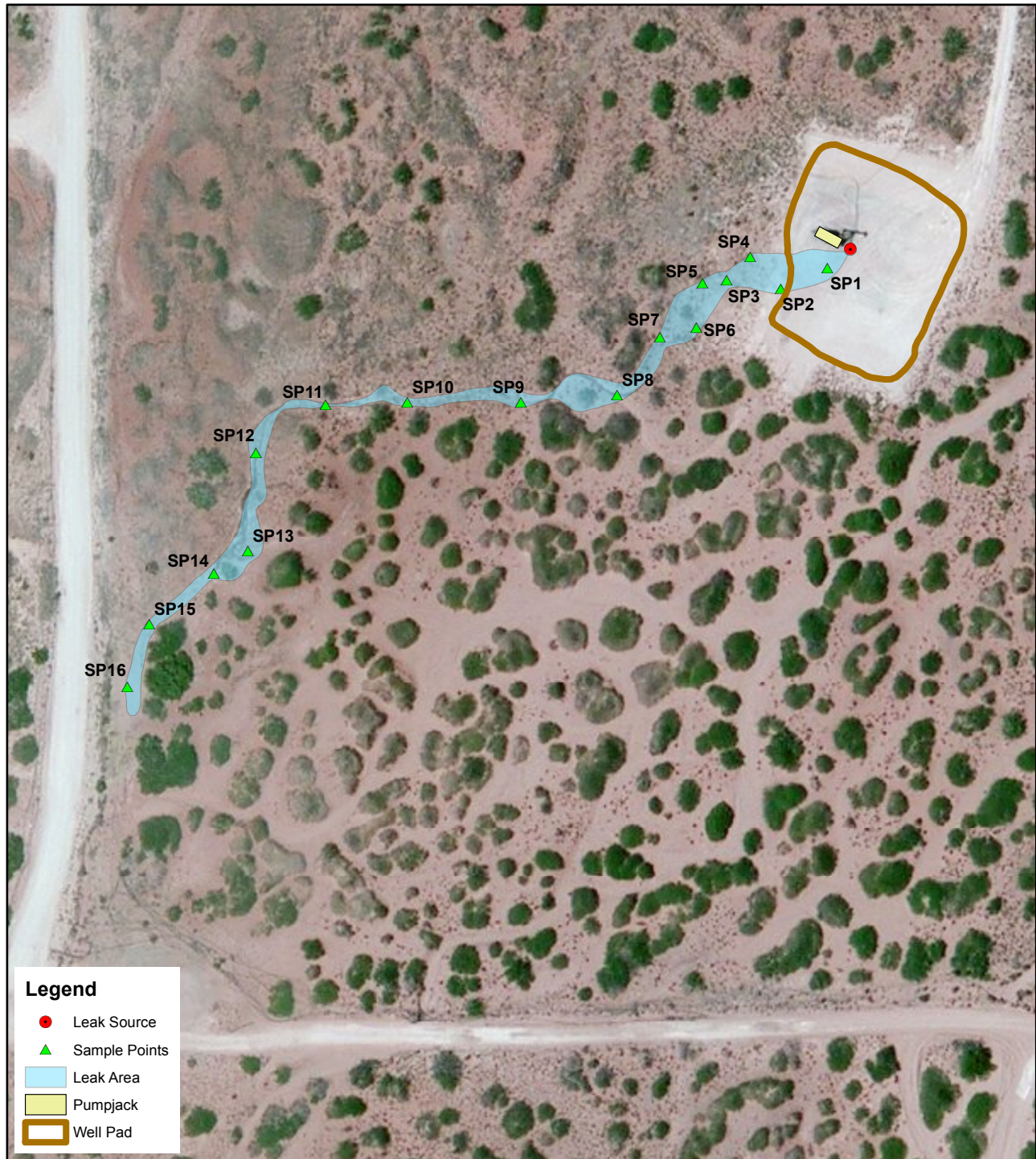


Michael Burton
Environmental Operations Director
Diversified Field Service, Inc.
206 W. Synder
Hobbs, NM 88240
Office: (575)964-8394
Mobile: (575)390-5454
Fax: (575)964-8396
Email: mburton@diversifiedfsi.com

cc Jeff Robertson
NM Bureau of Land Management

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

Site Diagram with Sample Points



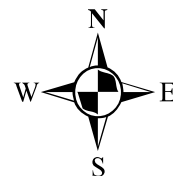
Legend

- Leak Source
- ▲ Sample Points
- Leak Area
- Pumpjack
- Well Pad



Linn Energy J.L. Keel B #90

UL/F, Sec 8, T17S R31E
Eddy County, NM



Drafted by: A.C. Ruth
Draft Date: 2/19/2014

0 40 80 160 240
Feet

Linn Energy J.L. Keel B #90

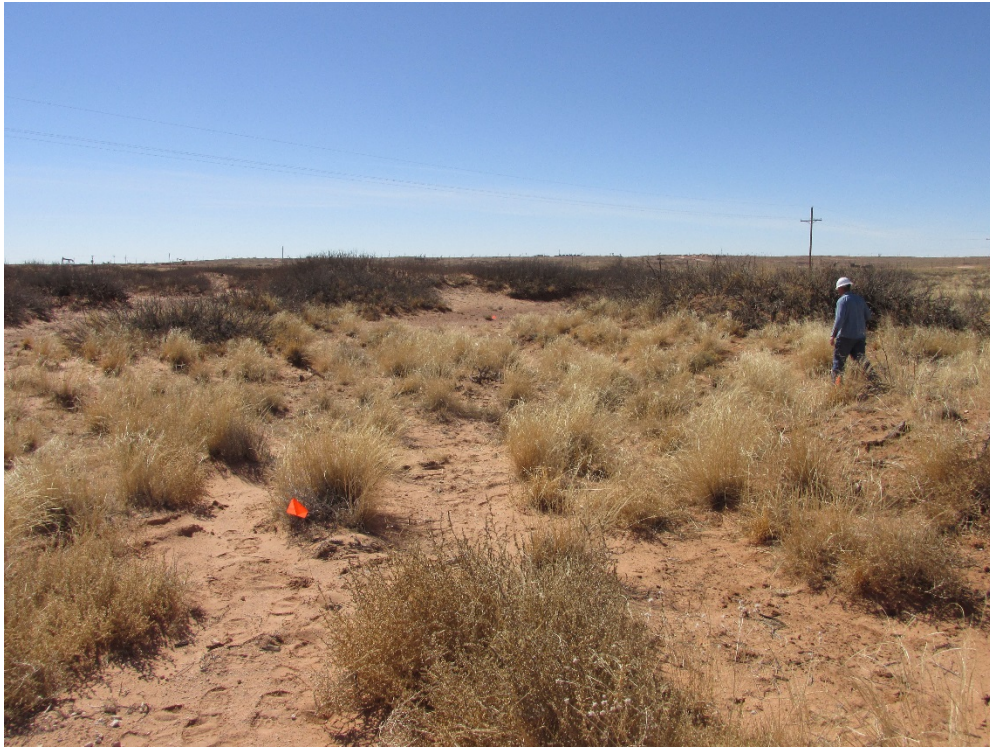
Unit Letter F, Section 8, T17S R31E



Sign marking location and spill area 02-13-14



Initial spill source location 02-13-14



Impacted pasture area 02-13-14



Impacted pasture area 02-13-14



Pasture and drainage 3/13/15



Pasture and drainage 3/13/15

Company Name: Linn Energy
Location Name: JL Keel B #90

SP Date: 2/13/2014
4/22/2014

Release Date: 3/31/2011

[illegible]

Delineate further

[illegible]

Delineate further

	Lab Confirmation Sample
	Field Sampling
	Needs Delineation and confirmation samples

April 28, 2014

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: J. L. KEEL B #90

Enclosed are the results of analyses for samples received by the laboratory on 04/22/14 15:55.

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,



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:	04/22/2014	Sampling Date:	04/22/2014
Reported:	04/28/2014	Sampling Type:	Soil
Project Name:	J. L. KEEL B #90	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 1 @ 5' (H401209-01)

BTX 8021B			mg/kg		Analyzed By: CK				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/24/2014	ND	1.89	94.5	2.00	8.49	
Toluene*	<0.050	0.050	04/24/2014	ND	1.88	94.2	2.00	8.41	
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.88	94.0	2.00	8.50	
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.61	93.4	6.00	8.54	
Total BTX	<0.300	0.300	04/24/2014	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	144	16.0	04/24/2014	ND	400	100	400	4.08	

TPH 8015M			mg/kg		Analyzed By: CK				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	191	95.5	200	7.88	
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	210	105	200	9.28	

Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 98.3 % 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: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 2 @ 2' (H401209-02)

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/24/2014	ND	1.89	94.5	2.00	8.49	
Toluene*	<0.050	0.050	04/24/2014	ND	1.88	94.2	2.00	8.41	
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.88	94.0	2.00	8.50	
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.61	93.4	6.00	8.54	
Total BTX	<0.300	0.300	04/24/2014	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	288	16.0	04/24/2014	ND	400	100	400	4.08	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	191	95.5	200	7.88	
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	210	105	200	9.28	

Surrogate: 1-Chlorooctane 108 % 65.2-140

Surrogate: 1-Chlorooctadecane 97.5 % 63.6-154

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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: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 3 @ 2' (H401209-03)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.89	94.5	2.00	8.49		
Toluene*	<0.050	0.050	04/24/2014	ND	1.88	94.2	2.00	8.41		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.88	94.0	2.00	8.50		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.61	93.4	6.00	8.54		
Total BTX	<0.300	0.300	04/24/2014	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	288	16.0	04/24/2014	ND	400	100	400	4.08	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	191	95.5	200	7.88	
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	210	105	200	9.28	

Surrogate: 1-Chlorooctane 107 % 65.2-140

Surrogate: 1-Chlorooctadecane 107 % 63.6-154

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

Received:	04/22/2014	Sampling Date:	04/22/2014
Reported:	04/28/2014	Sampling Type:	Soil
Project Name:	J. L. KEEL B #90	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 4 @ 2' (H401209-04)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.89	94.5	2.00	8.49		
Toluene*	<0.050	0.050	04/24/2014	ND	1.88	94.2	2.00	8.41		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.88	94.0	2.00	8.50		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.61	93.4	6.00	8.54		
Total BTX	<0.300	0.300	04/24/2014	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	48.0	16.0	04/24/2014	ND	400	100	400	4.08	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	191	95.5	200	7.88	
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	210	105	200	9.28	

Surrogate: 1-Chlorooctane 102 % 65.2-140

Surrogate: 1-Chlorooctadecane 99.4 % 63.6-154

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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:	04/22/2014	Sampling Date:	04/22/2014
Reported:	04/28/2014	Sampling Type:	Soil
Project Name:	J. L. KEEL B #90	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 5 @ 2' (H401209-05)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.89	94.5	2.00	8.49		
Toluene*	<0.050	0.050	04/24/2014	ND	1.88	94.2	2.00	8.41		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.88	94.0	2.00	8.50		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.61	93.4	6.00	8.54		
Total BTX	<0.300	0.300	04/24/2014	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	128	16.0	04/24/2014	ND	400	100	400	4.08	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/23/2014	ND	191	95.5	200	7.88	
DRO >C10-C28	<10.0	10.0	04/23/2014	ND	210	105	200	9.28	

Surrogate: 1-Chlorooctane 99.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 94.9 % 63.6-154

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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:	04/22/2014	Sampling Date:	04/22/2014
Reported:	04/28/2014	Sampling Type:	Soil
Project Name:	J. L. KEEL B #90	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 6 @ 1' (H401209-06)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.89	94.5	2.00	8.49		
Toluene*	<0.050	0.050	04/24/2014	ND	1.88	94.2	2.00	8.41		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.88	94.0	2.00	8.50		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.61	93.4	6.00	8.54		
Total BTX	<0.300	0.300	04/24/2014	ND						

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

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	04/24/2014	ND	400	100	400	4.08	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/24/2014	ND	193	96.7	200	6.41	
DRO >C10-C28	215	10.0	04/24/2014	ND	215	107	200	1.79	

Surrogate: 1-Chlorooctane 97.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 106 % 63.6-154

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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: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 7 @ 2' (H401209-07)

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	04/24/2014	ND	1.89	94.5	2.00	8.49	
Toluene*	<0.050	0.050	04/24/2014	ND	1.88	94.2	2.00	8.41	
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.88	94.0	2.00	8.50	
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.61	93.4	6.00	8.54	
Total BTEx	<0.300	0.300	04/24/2014	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	112	16.0	04/24/2014	ND	400	100	400	4.08	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/24/2014	ND	193	96.7	200	6.41	
DRO >C10-C28	<10.0	10.0	04/24/2014	ND	215	107	200	1.79	

Surrogate: 1-Chlorooctane 96.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 103 % 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: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 8 @ 2' (H401209-08)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.89	94.5	2.00	8.49		
Toluene*	<0.050	0.050	04/24/2014	ND	1.88	94.2	2.00	8.41		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.88	94.0	2.00	8.50		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.61	93.4	6.00	8.54		
Total BTX	<0.300	0.300	04/24/2014	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	432	16.0	04/24/2014	ND	400	100	400	4.08	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/24/2014	ND	193	96.7	200	6.41	
DRO >C10-C28	1090	10.0	04/24/2014	ND	215	107	200	1.79	

Surrogate: 1-Chlorooctane 120 % 65.2-140

Surrogate: 1-Chlorooctadecane 133 % 63.6-154

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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: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 9 @ 2' (H401209-09)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/24/2014	ND	1.89	94.5	2.00	8.49		
Toluene*	<0.050	0.050	04/24/2014	ND	1.88	94.2	2.00	8.41		
Ethylbenzene*	<0.050	0.050	04/24/2014	ND	1.88	94.0	2.00	8.50		
Total Xylenes*	<0.150	0.150	04/24/2014	ND	5.61	93.4	6.00	8.54		
Total BTX	<0.300	0.300	04/24/2014	ND						

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

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	04/24/2014	ND	400	100	400	4.08	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/24/2014	ND	193	96.7	200	6.41	
DRO >C10-C28	<10.0	10.0	04/24/2014	ND	215	107	200	1.79	

Surrogate: 1-Chlorooctane 97.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 98.9 % 63.6-154

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Analytical Results For:

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

Received:	04/22/2014	Sampling Date:	04/22/2014
Reported:	04/28/2014	Sampling Type:	Soil
Project Name:	J. L. KEEL B #90	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 10 @ 2' (H401209-10)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/25/2014	ND	1.89	94.5	2.00	8.49		
Toluene*	<0.050	0.050	04/25/2014	ND	1.88	94.2	2.00	8.41		
Ethylbenzene*	<0.050	0.050	04/25/2014	ND	1.88	94.0	2.00	8.50		
Total Xylenes*	<0.150	0.150	04/25/2014	ND	5.61	93.4	6.00	8.54		
Total BTX	<0.300	0.300	04/25/2014	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	04/24/2014	ND	400	100	400	4.08	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/24/2014	ND	193	96.7	200	6.41	
DRO >C10-C28	17.4	10.0	04/24/2014	ND	215	107	200	1.79	

Surrogate: 1-Chlorooctane 111 % 65.2-140

Surrogate: 1-Chlorooctadecane 108 % 63.6-154

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Analytical Results For:

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

Received: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 11 @ 1' (H401209-11)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/25/2014	ND	1.89	94.5	2.00	8.49		
Toluene*	<0.050	0.050	04/25/2014	ND	1.88	94.2	2.00	8.41		
Ethylbenzene*	<0.050	0.050	04/25/2014	ND	1.88	94.0	2.00	8.50		
Total Xylenes*	<0.150	0.150	04/25/2014	ND	5.61	93.4	6.00	8.54		
Total BTX	<0.300	0.300	04/25/2014	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	<16.0	16.0	04/24/2014	ND	400	100	400	4.08	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/24/2014	ND	193	96.7	200	6.41	
DRO >C10-C28	<10.0	10.0	04/24/2014	ND	215	107	200	1.79	

Surrogate: 1-Chlorooctane 100 % 65.2-140

Surrogate: 1-Chlorooctadecane 101 % 63.6-154

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Analytical Results For:

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

Received: 04/22/2014
Reported: 04/28/2014
Project Name: J. L. KEEL B #90
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 04/22/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SP 12 @ 1' (H401209-12)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/25/2014	ND	1.89	94.5	2.00	8.49		
Toluene*	<0.050	0.050	04/25/2014	ND	1.88	94.2	2.00	8.41		
Ethylbenzene*	<0.050	0.050	04/25/2014	ND	1.88	94.0	2.00	8.50		
Total Xylenes*	<0.150	0.150	04/25/2014	ND	5.61	93.4	6.00	8.54		
Total BTX	<0.300	0.300	04/25/2014	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	96.0	16.0	04/24/2014	ND	400	100	400	4.08	

TPH 8015M		mg/kg		Analyzed By: CK				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	04/24/2014	ND	193	96.7	200	6.41	
DRO >C10-C28	2320	100	04/24/2014	ND	215	107	200	1.79	

Surrogate: 1-Chlorooctane 83.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 155 % 63.6-154

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Analytical Results For:

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

 Received: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 13 @ 1' (H401209-13)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/25/2014	ND	1.89	94.5	2.00	8.49		
Toluene*	<0.050	0.050	04/25/2014	ND	1.88	94.2	2.00	8.41		
Ethylbenzene*	<0.050	0.050	04/25/2014	ND	1.88	94.0	2.00	8.50		
Total Xylenes*	<0.150	0.150	04/25/2014	ND	5.61	93.4	6.00	8.54		
Total BTX	<0.300	0.300	04/25/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	128	16.0	04/24/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/24/2014	ND	193	96.7	200	6.41	
DRO >C10-C28	<10.0	10.0	04/24/2014	ND	215	107	200	1.79	

Surrogate: 1-Chlorooctane 107 % 65.2-140

Surrogate: 1-Chlorooctadecane 106 % 63.6-154

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Analytical Results For:

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

Received:	04/22/2014	Sampling Date:	04/22/2014
Reported:	04/28/2014	Sampling Type:	Soil
Project Name:	J. L. KEEL B #90	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 14 @ 1' (H401209-14)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/25/2014	ND	1.89	94.5	2.00	8.49		
Toluene*	<0.050	0.050	04/25/2014	ND	1.88	94.2	2.00	8.41		
Ethylbenzene*	<0.050	0.050	04/25/2014	ND	1.88	94.0	2.00	8.50		
Total Xylenes*	<0.150	0.150	04/25/2014	ND	5.61	93.4	6.00	8.54		
Total BTX	<0.300	0.300	04/25/2014	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	16.0	16.0	04/24/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	04/24/2014	ND	193	96.7	200	6.41	
DRO >C10-C28	<100	100	04/24/2014	ND	215	107	200	1.79	

Surrogate: 1-Chlorooctane 98.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 130 % 63.6-154

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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: 04/22/2014
 Reported: 04/28/2014
 Project Name: J. L. KEEL B #90
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

Sampling Date: 04/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 15 @ 1' (H401209-15)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/25/2014	ND	1.89	94.5	2.00	8.49		
Toluene*	<0.050	0.050	04/25/2014	ND	1.88	94.2	2.00	8.41		
Ethylbenzene*	<0.050	0.050	04/25/2014	ND	1.88	94.0	2.00	8.50		
Total Xylenes*	<0.150	0.150	04/25/2014	ND	5.61	93.4	6.00	8.54		
Total BTX	<0.300	0.300	04/25/2014	ND						

Surrogate: 4-Bromofluorobenzene (PID) 100 % 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	224	16.0	04/24/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/24/2014	ND	193	96.7	200	6.41	
DRO >C10-C28	<10.0	10.0	04/24/2014	ND	215	107	200	1.79	

Surrogate: 1-Chlorooctane 85.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 82.3 % 63.6-154

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Analytical Results For:

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

Received:	04/22/2014	Sampling Date:	04/22/2014
Reported:	04/28/2014	Sampling Type:	Soil
Project Name:	J. L. KEEL B #90	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 16 @ 1' (H401209-16)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	04/25/2014	ND	1.89	94.5	2.00	8.49		
Toluene*	<0.050	0.050	04/25/2014	ND	1.88	94.2	2.00	8.41		
Ethylbenzene*	<0.050	0.050	04/25/2014	ND	1.88	94.0	2.00	8.50		
Total Xylenes*	<0.150	0.150	04/25/2014	ND	5.61	93.4	6.00	8.54		
Total BTX	<0.300	0.300	04/25/2014	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	32.0	16.0	04/24/2014	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	04/24/2014	ND	193	96.7	200	6.41	
DRO >C10-C28	<10.0	10.0	04/24/2014	ND	215	107	200	1.79	

Surrogate: 1-Chlorooctane 95.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 95.6 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
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



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

2326 #54



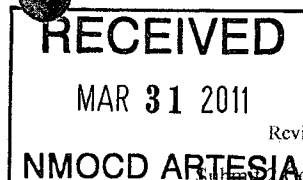
CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1

[illegible]

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



Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

nkmw 1109552874 OPERATOR ☒ Initial Report ☐ Final Report

Name of Company Linn Energy <i>269324</i>	Contact Dennis Potter
Address PO Box 69, Loco Hills, NM 88255	Telephone No. 575 677 2327
Facility Name J L Keel B #90	Facility Type Oil Well

Surface Owner BLM	Mineral Owner BLM	Lease No. NMLC029435B API 30-015-28248
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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
F	8	17S	31E					Eddy

Latitude N32.84915 Longitude W103.89658 (Release Site)

NATURE OF RELEASE

Type of Release Produced Water/Hydrocarbons	Volume of Release Unknown	Volume Recovered Unknown
Source of Release Flow Line	Date and Hour of Occurrence Unknown	Date and Hour of Discovery Feb11
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
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.* N/A		
Describe Cause of Problem and Remedial Action Taken.* The release appears to be from the well head/sluffing box or possibly a flow line failure. The fluid exited the location on the south side and entered the pasture running southwest between two sand dunes before pooling approximately 400' from the location. The affected area is approximately 4' x 400'. The natural contour of the land contained the release into a narrow area. The affected area will be delineated and a work plan submitted to NM OCD and BLM for review and approval.		
Describe Area Affected and Cleanup Action Taken.*		
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: <i>Dennis Potter</i>	OIL CONSERVATION DIVISION	
Printed Name: Dennis Potter	Approved by District Supervisor <i>Mike Brannan</i>	
Title: Assistant Production Foreman	Approval Date: <i>4/5/11</i>	Expiration Date:
E-mail Address: dpotter@linenergy.com	Conditions of Approval: Attached <input type="checkbox"/>	
Date: 30Mar11 Phone: 505 206 7673	REMEDATION per OCD Rules and Guidelines. <u>SUBMIT REMEDIATION PROPOSAL BY:</u> <i>5/5/11</i>	

* Attach Additional Sheets If Necessary

2 RP-708

(E)

OPERATOR'S COPY

Number 11TG007

Page 1 of 2

☒ Certified Mail - Return
Receipt Requested
70101870000352261368

☐ Hand Delivered Received
by

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

NOTICE OF INCIDENTS OF NONCOMPLIANCE

Identification	
IID	
Lease	NMLC029435B
CA	
Unit	
PA	

Bureau of Land Management Office CARLSBAD FIELD OFFICE				Operator LINN OPERATING INC.			
Address 620 E GREENE STREET CARLSBAD NM 88220				Address 600 TRAVIS STREET SUITE 5100 HOUSTON TX 77002			
Telephone 575-234-5958				Attention			
Inspector GREGSTON				Attn Addr			
Site Name J L KEEL B	Well or Facility 90	1/4 1/4 Section SE NW 8	Township 17S	Range 31E	Meridian NMP	County EDDY	State NM
Site Name	Well or Facility	1/4 1/4 Section	Township	Range	Meridian	County	State

THE FOLLOWING VIOLATION WAS FOUND BY BUREAU OF LAND MANAGEMENT INSPECTORS ON THE DATE AND AT THE SITE LISTED ABOVE

Date	Time (24 - hour clock)	Violation	Gravity of Violation
03/15/2011		NTL-3A, 43 CFR 3163.1(e)	MINOR
Corrective Action To Be Completed By	Date Corrected	Assessment for Noncompliance	Assessment Reference
04/01/2011			43 CFR 3163.1(f)

Remarks

Operator failed to provide a written report on an undesirable event on this location within 15 days as required under NTL-3A and failed to comply with subsequent verbal requests by the Authorized Officer to provide a spill report. The following actions must be completed by 04/01/11. Failure to comply with this Incident of Noncompliance could result in assessments and civil penalties. (Remarks continued on following page(s).)

When violation is corrected, sign this notice and return to above address.

Company Representative Title Asst. Production Foreman Signature [Signature] Date 3-30-11

Company Comments

phone: 505-206-7673

WARNING

Incidents of Noncompliance correction and reporting timeframes begin upon receipt of this Notice or 7 business days after the date it is mailed, whichever is earlier. Each violation must be corrected within the prescribed time from receipt of this Notice and reported to the Bureau of Land Management office at the address shown above. Please note that you already may have been assessed for noncompliance (see amount under "Assessment for Noncompliance"). If you do not comply as noted above under "Corrective Action To Be Completed By" you may incur an additional assessment under (43 CFR 3163.1) and may also incur Civil Penalties (43 CFR 3163.2). All self-certified corrections must be postmarked no later than the next business day after the prescribed time for correction.

Section 109(d)(1) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3163.2(f)(1), provides that any person who "knowingly or willfully" prepares, maintains, or submits, false, inaccurate, or misleading reports, notices, affidavits, record, data, or other written information required by this part shall be liable for a civil penalty of up to \$25,000 per violation for each day such violation continues, not to exceed a maximum of 20 days.

REVIEW AND APPEAL RIGHTS

A person contesting a violation shall request a State Director review of the Incidents of Noncompliance. This request must be filed within 20 working days of receipt of the Incidents of Noncompliance with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

Signature of Bureau of Land Management Authorized Officer <u>[Signature]</u>	Date 03/15/11	Time 18:10
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FOR OFFICE USE ONLY

Number 51	Date	Assessment	Penalty	Termination
Type of Inspection SV				

Bratcher, Mike, EMNRD

From: Vernon Black [vernon@hungry-horse.com]
Sent: Thursday, March 31, 2011 3:41 PM
To: Bratcher, Mike, EMNRD; Terry_gregston@nm.blm.gov; avalero@linenergy.com; dpotter@linenergy.com
Subject: Emailing: Initial C 141 J L Keel B #90
Attachments: Initial C 141 J L Keel B #90.pdf

Your message is ready to be sent with the following file or link attachments:

Initial C 141 J L Keel B #90

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.