

LINN ENERGY

2130 W. Bender Blvd.
Hobbs, NM 88241
Phone 575.738.1739

J.L. Keel A #28
2RP-2028

Termination Request

API No. 3001528231

Release Date: Discovered on June 27th, 2011

Unit Letter J, Section 7, Township 17S, Range 31E



PO Box 2948 | Hobbs, NM 88241 | Phone 575.393.2967

April 21st, 2014

Mike Bratcher

New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau – District 2
811 S. First St.
Artesia, NM 88210

**RE: Termination Request
Linn Energy – J.L. Keel A #28 (2RP-2028)
UL/J sec. 7 T17S R31E
API No. 3001528231**

Mr. Bratcher:

Linn Energy (Linn) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site.

Background and Previous Work

The site is located approximately 4.7 miles northeast of Loco Hills, New Mexico at UL/J sec. 7 T17S R31E. This site is in an area of no known groundwater.

While BLM was inspecting another site in the area on June 27th, 2011, BLM discovered a flow line release to the J.L. Keel A #28 injection well. A total of 6,762 sq ft of pasture land was affected by the release. An initial C-141 was sent to NMOCD and BLM on October 28th, 2013 (Appendix A). NMOCD responded on October 29th, 2013 with the remediation permit number.

RECS personnel were on site beginning on October 25th, 2013 to assess the site. The release was sampled at the surface and at depth at six points throughout the release area (Figure 1). The samples were field tested for chlorides and hydrocarbons and representative samples were taken to a commercial laboratory for analysis (Appendix B). The release on the east side of the road was located over a former pit area. Laboratory chloride readings from the surface on the east side were above 250 mg/kg, except at Point 4 where the chloride reading was non-detect. Gasoline Range Organics (GRO) readings and BTEX readings from the surface samples on the east side were non-detect. Diesel Range Organics (DRO) readings at the surface on the east side were elevated, except for Point 4, but still below regulatory standards. Point 2 was augured to determine the depth of contamination. At 7 ft bgs, laboratory sampling showed a chloride value below 250 mg/kg and GRO, DRO and BTEX values of non-detect.

On the west side of the release road, laboratory analysis showed chloride, GRO, DRO and BTEX values of non-detect or near non-detect.

On November 1st, 2013, RECS met with BLM at the site. BLM recommended that the release on the east side of the lease road and the pit area be capped with 6 inches of caliche and then 2 ft of clean, imported topsoil. The site would then be seeded with a blend of native vegetation. Vegetation provides an infiltration barrier for the site, since plants capture water through their roots thereby reducing the amount of water traveling through the vadose zone.

The area to the west side of the lease road did not need to be addressed since sampling indicates no ecological detriment occurred to the area.

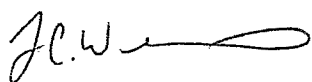
A Corrective Action Plan (CAP) detailing these actions was submitted to NMOCD and BLM on November 14th, 2013. BLM approved the CAP on November 15th, 2013 and NMOCD approved the CAP on February 13th, 2014. CAP activities began at the site on February 18th, 2014. A total of 180 yards of caliche was imported to the site and used to top-cap the east release area and pit. The caliche was watered and roller packed to provide a compact surface. A total of 694 yards of clean topsoil was imported to the site to backfill over the caliche to a depth of 2 ft. A sample of the imported soil was taken to a commercial laboratory for analysis and returned a chloride result of non-detect (Appendix C). On March 10th, 2014, soil amendments were added to the site and the site was seeded with BLM mix #2 and #4.

Photo documentation of all activities can be found in Appendix D.

Given that the corrective actions have been completed as approved by NMOCD and BLM, Linn respectfully requested 'remediation termination' and site closure. A final C-141 for the site can be found in Appendix E.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-2967 or me if you have any questions or wish to discuss the site.

Sincerely,

A handwritten signature in black ink, appearing to read 'J.C.W.' followed by a long, horizontal, wavy line.

Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

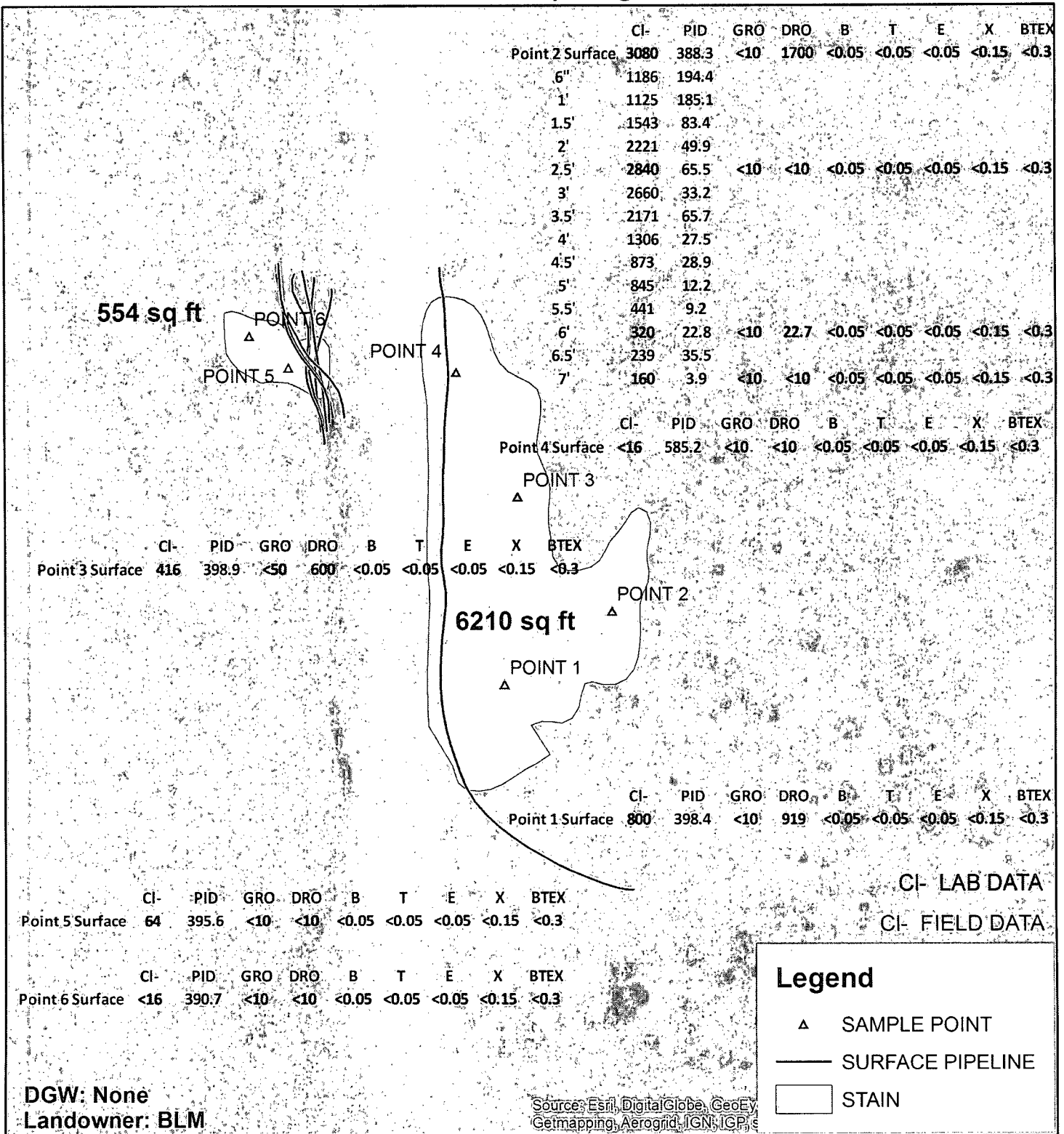
Attachments:

- Figure 1 – Initial Sampling Data
- Appendix A – Initial C-141
- Appendix B – Initial Laboratory Analyses
- Appendix C – Imported Soil Lab
- Appendix D – Photo Documentation
- Appendix E – Final C-141

Figures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948, Hobbs, NM 88241
Phone 575.393.2967

Initial Sampling Data

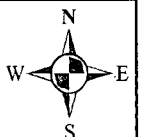


RECS
RICE ENVIRONMENTAL
CONSULTING & SAFETY

Linn J.L. Keel
A #28

LEGALS: UL/J sec. 7
T-17-S R-31-E
EDDY COUNTY, NM
NMOCD Case #: 2RP-2028

Figure 1



0 25 50
Feet

GPS date: 10/25/13 KS
Drawing date: 11/4/13
Drafted by: L. Weinheimer

Appendix A

Initial C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

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 Energy	Contact	Brian Wall
Address	2130 W. Bender Blvd., Hobbs, NM 88240	Telephone No.	(806) 367-0645
Facility Name	J.L. Keel A #28	Facility Type	Flow Line Release

Surface Owner	BLM	Mineral Owner		API No.	3001528231
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LOCATION OF RELEASE

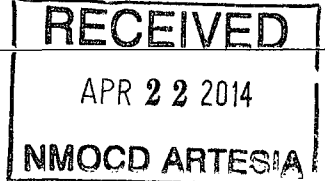
Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	7	17S	31E	2196	FSL	2028	FEL	EDDY

Latitude 32°50'52.24"N Longitude 103°54'26.222"W

NATURE OF RELEASE

Type of Release	Produced water/Oil	Volume of Release	Unknown	Volume Recovered	None
Source of Release	Break in flow line	Date and Hour of Occurrence	Unknown	Date and Hour of Discovery	6/27/11
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" 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 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.*

While BLM was inspecting another site in the area, BLM discovered a flow line release to the J.L. Keel A #28 injection well. A total of 6762 sq ft of pasture land was affected by the release.

Describe Area Affected and Cleanup Action Taken.*

The site will be assessed vertically and horizontally and a Corrective Action Plan will be written with recommendations to remediate the site.

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.

OIL CONSERVATION DIVISION

Signature: Fred B Wall	Approved by Environmental Specialist:		
Printed Name: Brian Wall	Approval Date:		
Title: Construction Foreman II	Expiration Date:		Attached <input type="checkbox"/>
E-mail Address: Bwall@linenergy.com	Conditions of Approval:		
Date:	Phone: (806) 367-0645		

* Attach Additional Sheets If Necessary

Appendix B

Initial Laboratory Analyses

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967



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

November 04, 2013

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: J. L. KEEL A #28

Enclosed are the results of analyses for samples received by the laboratory on 10/25/13 16:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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/ga/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:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	10/25/2013	Sampling Date:	10/25/2013
Reported:	11/04/2013	Sampling Type:	Soil
Project Name:	J. L. KEEL A #28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: POINT 1 @ SURFACE (H302605-01)

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	10/29/2013	ND	1.68	83.8	2.00	3.80	
Toluene*		<0.050	0.050	10/29/2013	ND	1.71	85.5	2.00	3.52	
Ethylbenzene*		<0.050	0.050	10/29/2013	ND	1.72	86.0	2.00	3.73	
Total Xylenes*		<0.150	0.150	10/29/2013	ND	5.10	85.0	6.00	3.31	
Total BTEX		<0.300	0.300	10/29/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 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	800	16.0	10/29/2013	ND	400	100	400	3.92	

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	10/29/2013	ND	210	105	200	1.98	
DRO >C10-C28	919	10.0	10/29/2013	ND	202	101	200	1.03	

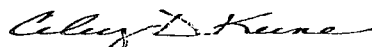
Surrogate: 1-Chlorooctane 98.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 127 % 63.6-154

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	10/25/2013	Sampling Date:	10/25/2013
Reported:	11/04/2013	Sampling Type:	Soil
Project Name:	J. L. KEEL A #28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: POINT 2 @ SURFACE (H302605-02)

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	10/29/2013	ND	1.68	83.8	2.00	3.80	
Toluene*	<0.050	0.050	10/29/2013	ND	1.71	85.5	2.00	3.52	
Ethylbenzene*	<0.050	0.050	10/29/2013	ND	1.72	86.0	2.00	3.73	
Total Xylenes*	<0.150	0.150	10/29/2013	ND	5.10	85.0	6.00	3.31	
Total BTEX	<0.300	0.300	10/29/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 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	3080	16.0	10/29/2013	ND	400	100	400	3.92	

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	10/29/2013	ND	210	105	200	1.98	
DRO >C10-C28	1700	10.0	10/29/2013	ND	202	101	200	1.03	

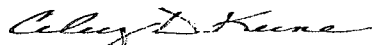
Surrogate: 1-Chlorooctane 98.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 142 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
JACOB KAMPLAIN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	10/25/2013	Sampling Date:	10/25/2013
Reported:	11/04/2013	Sampling Type:	Soil
Project Name:	J. L. KEEL A #28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: POINT 3 @ SURFACE (H302605-03)

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	10/29/2013	ND	1.68	83.8	2.00	3.80	
Toluene*	<0.050	0.050	10/29/2013	ND	1.71	85.5	2.00	3.52	
Ethylbenzene*	<0.050	0.050	10/29/2013	ND	1.72	86.0	2.00	3.73	
Total Xylenes*	<0.150	0.150	10/29/2013	ND	5.10	85.0	6.00	3.31	
Total BTEX	<0.300	0.300	10/29/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 105 % 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	416	16.0	10/29/2013	ND	400	100	400	3.92	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	10/29/2013	ND	210	105	200	1.98	
DRO >C10-C28	600	50.0	10/29/2013	ND	202	101	200	1.03	

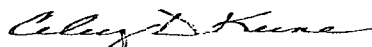
Surrogate: 1-Chlorooctane 89.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 121 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celest D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	10/25/2013	Sampling Date:	10/25/2013
Reported:	11/04/2013	Sampling Type:	Soil
Project Name:	J. L. KEEL A #28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: POINT 4 @ SURFACE (H302605-04)

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	10/29/2013	ND	1.68	83.8	2.00	3.80	
Toluene*	<0.050	0.050	10/29/2013	ND	1.71	85.5	2.00	3.52	
Ethylbenzene*	<0.050	0.050	10/29/2013	ND	1.72	86.0	2.00	3.73	
Total Xylenes*	<0.150	0.150	10/29/2013	ND	5.10	85.0	6.00	3.31	
Total BTX	<0.300	0.300	10/29/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 105 % 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	10/29/2013	ND	400	100	400	3.92	

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	10/29/2013	ND	210	105	200	1.98	
DRO >C10-C28	<10.0	10.0	10/29/2013	ND	202	101	200	1.03	

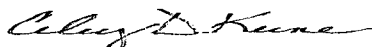
Surrogate: 1-Chlorooctane 96.3 % 65.2-140

Surrogate: 1-Chlorooctadecane 100 % 63.6-154

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

 Received: 10/25/2013
 Reported: 11/04/2013
 Project Name: J. L. KEEL A #28
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 10/25/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: POINT 5 @ SURFACE (H302605-05)

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	10/29/2013	ND	1.68	83.8	2.00	3.80		
Toluene*	<0.050	0.050	10/29/2013	ND	1.71	85.5	2.00	3.52		
Ethylbenzene*	<0.050	0.050	10/29/2013	ND	1.72	86.0	2.00	3.73		
Total Xylenes*	<0.150	0.150	10/29/2013	ND	5.10	85.0	6.00	3.31		
Total BTEX	<0.300	0.300	10/29/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 106 % 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	64.0	16.0	10/29/2013	ND	400	100	400	3.92		

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	10/29/2013	ND	210	105	200	1.98	
DRO >C10-C28	<10.0	10.0	10/29/2013	ND	202	101	200	1.03	

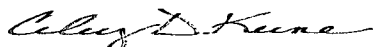
Surrogate: 1-Chlorooctane 100 % 65.2-140

Surrogate: 1-Chlorooctadecane 104 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

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RICE ENVIRONMENTAL CONSULTING & SAFETY
JACOB KAMPLAIN
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Fax To: (575) 397-1471

Received: 10/25/2013
Reported: 11/04/2013
Project Name: J. L. KEEL A #28
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/25/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 6 @ SURFACE (H302605-06)

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	11/01/2013	ND	2.06	103	2.00	0.153	
Toluene*	<0.050	0.050	11/01/2013	ND	2.05	103	2.00	0.309	
Ethylbenzene*	<0.050	0.050	11/01/2013	ND	2.07	104	2.00	0.301	
Total Xylenes*	<0.150	0.150	11/01/2013	ND	5.96	99.4	6.00	0.106	
Total BTEX	<0.300	0.300	11/01/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 104 % 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	10/29/2013	ND	400	100	400	3.92	

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	10/29/2013	ND	210	105	200	1.98	
DRO >C10-C28	<10.0	10.0	10/29/2013	ND	202	101	200	1.03	

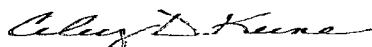
Surrogate: 1-Chlorooctane 97.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 97.4 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

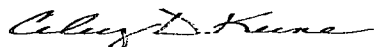
Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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Relinquished By:		Date:	Received By:	Phone Result:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
Kyle Schnaidt		10-25-13	Jodi Benson	Fax Result:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:		Date:	Received By:	REMARKS:		
		Time:		kschnaidt@rice-ecs.com		
Delivered By: (Circle One)		Time:		Knorman@rice-ecs.com		
Sampler - UPS - Bus - Other:		Sample Condition	CHECKED BY:	Kjones@riceswd.com; jkamplain@rice-ecs.com		
		Cool Intact	Unit	hconder@rice-ecs.com; Lweinheimer@rice-ecs.com		
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
		<input type="checkbox"/> No <input type="checkbox"/> No				

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393, 6476

es to 505-393-
#54

November 04, 2013

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: J. L. KEEL A #28

Enclosed are the results of analyses for samples received by the laboratory on 10/28/13 16:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. 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.

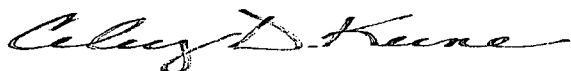
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

 Received: 10/28/2013
 Reported: 11/04/2013
 Project Name: J. L. KEEL A #28
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 10/28/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: POINT 2 @ 2.5' (H302611-01)

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	11/01/2013	ND	2.06	103	2.00	0.153		
Toluene*	<0.050	0.050	11/01/2013	ND	2.05	103	2.00	0.309		
Ethylbenzene*	<0.050	0.050	11/01/2013	ND	2.07	104	2.00	0.301		
Total Xylenes*	<0.150	0.150	11/01/2013	ND	5.96	99.4	6.00	0.106		
Total BTEX	<0.300	0.300	11/01/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 107 % 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	2840	16.0	10/29/2013	ND	416	104	400	3.92	

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	10/29/2013	ND	199	99.5	200	3.71	
DRO >C10-C28	<10.0	10.0	10/29/2013	ND	189	94.6	200	5.97	

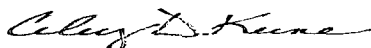
Surrogate: 1-Chlorooctane 89.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 97.8 % 63.6-154

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 RICE ENVIRONMENTAL CONSULTING & SAFETY
 JACOB KAMPLAIN
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

Received:	10/28/2013	Sampling Date:	10/28/2013
Reported:	11/04/2013	Sampling Type:	Soil
Project Name:	J. L. KEEL A #28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: POINT 2 @ 6' (H302611-02)

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	11/01/2013	ND	2.06	103	2.00	0.153	
Toluene*	<0.050	0.050	11/01/2013	ND	2.05	103	2.00	0.309	
Ethylbenzene*	<0.050	0.050	11/01/2013	ND	2.07	104	2.00	0.301	
Total Xylenes*	<0.150	0.150	11/01/2013	ND	5.96	99.4	6.00	0.106	
Total BTEX	<0.300	0.300	11/01/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 106 % 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	320	16.0	10/29/2013	ND	416	104	400	3.92	

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	10/29/2013	ND	199	99.5	200	3.71	
DRO >C10-C28	22.7	10.0	10/29/2013	ND	189	94.6	200	5.97	

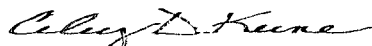
Surrogate: 1-Chlorooctane 74.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 76.4 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
JACOB KAMPLAIN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received:	10/28/2013	Sampling Date:	10/28/2013
Reported:	11/04/2013	Sampling Type:	Soil
Project Name:	J. L. KEEL A #28	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: POINT 2 @ 7' (H302611-03)

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	11/01/2013	ND	2.06	103	2.00	0.153	
Toluene*	<0.050	0.050	11/01/2013	ND	2.05	103	2.00	0.309	
Ethylbenzene*	<0.050	0.050	11/01/2013	ND	2.07	104	2.00	0.301	
Total Xylenes*	<0.150	0.150	11/01/2013	ND	5.96	99.4	6.00	0.106	
Total BTEX	<0.300	0.300	11/01/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 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	160	16.0	10/29/2013	ND	416	104	400	3.92	

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	10/29/2013	ND	199	99.5	200	3.71	
DRO >C10-C28	<10.0	10.0	10/29/2013	ND	189	94.6	200	5.97	

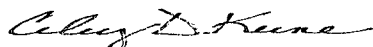
Surrogate: 1-Chlorooctane 89.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 93.9 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

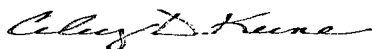
Notes and Definitions

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

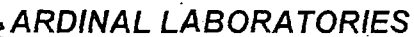
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Celey D. Keene, Lab Director/Quality Manager



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Relinquished By: <i>Kyle Schnaidt</i>	Date: <i>10-28-13</i> Time: <i>4:30</i>	Received By: <i>Jodi Benson</i>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #:
			Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: kschnaidt@rice-ecs.com Knorman@rice-ecs.com Kjones@riceswd.com; jkamplain@rice-ecs.com hconder@rice-ecs.com; Lweinheimer@rice-ecs.com
	Time:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No		CHECKED BY: <i>[Signature]</i>

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#54

Appendix C

Imported Soil Lab

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967



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

February 25, 2014

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: J. L. KEEL A #28

Enclosed are the results of analyses for samples received by the laboratory on 02/19/14 16:20.

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,

Caley D. Keene

Lab Director/Quality Manager

Analytical Results For:

RICE ENVIRONMENTAL CONSULTING & SAFETY
JACOB KAMPLAIN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 02/19/2014
Reported: 02/25/2014
Project Name: J. L. KEEL A #28
Project Number: NONE GIVEN
Project Location: T17S R31E

Sampling Date: 02/19/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson


Sample ID: IMPORTED SOIL (H400504-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/24/2014	ND	448	112	400	0.00	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

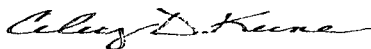
Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 4 of 4

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Relinquished By: <i>Amber Grove</i>		Date: <i>2-19-14</i>	Received By: <i>Jodi Henson</i>		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
		Time: <i>4:20</i>			Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:		Date:	Received By:		REMARKS:	
		Time:			email results	
Delivered By: (Circle One)		Sample Condition		CHECKED BY: <i>[Signature]</i>	Knorman@rice-ecs.com	
Sampler - UPS - Bus - Other:		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>			Kjones@riceswd.com; jkamplain@rice-ecs.com	
		Yes <input type="checkbox"/> No <input type="checkbox"/>			hconder@rice-ecs.com; Lweinheimer@rice-ecs.com;	
		Yes <input type="checkbox"/> No <input type="checkbox"/>			sedwards@rice-ecs.com; lflores@rice-ecs.com; agroves@rice-ecs.com	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#54

Appendix D

Photo Documentation

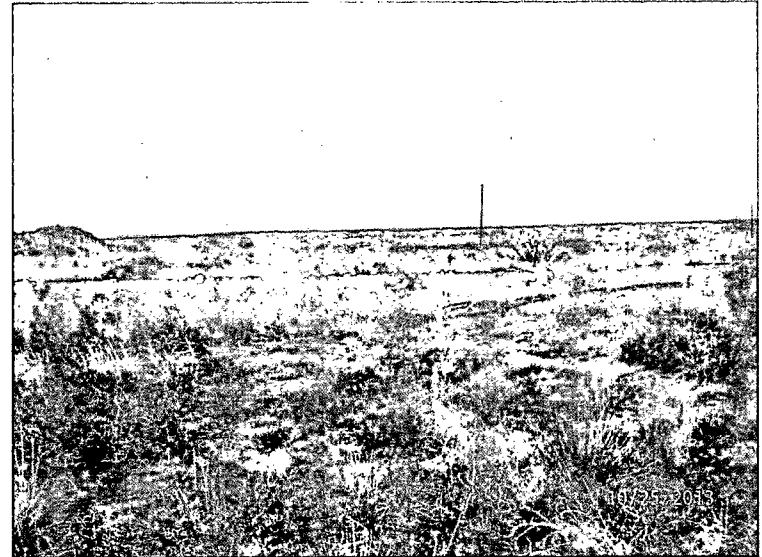
RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

Linn J.L. Keel A #28
Unit Letter J, Section 7, T17S, R31E



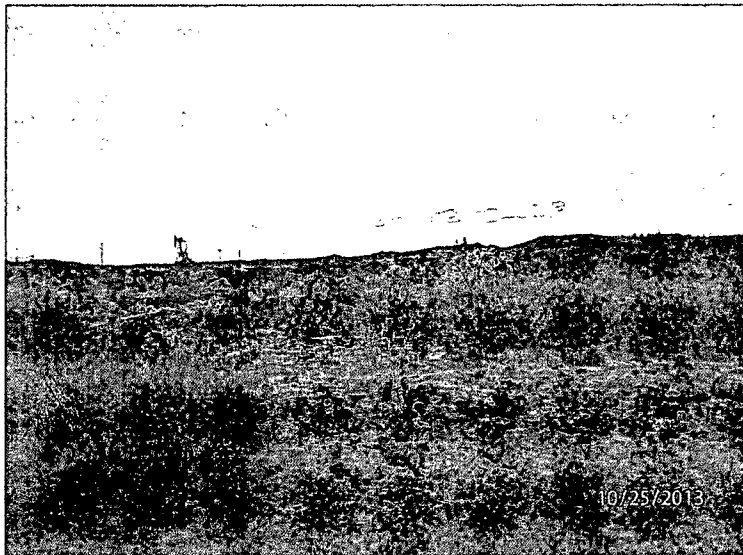
Initial release area, facing south

10/25/13



Initial release area, facing east

10/25/13



Initial release area, facing northwest

10/25/13



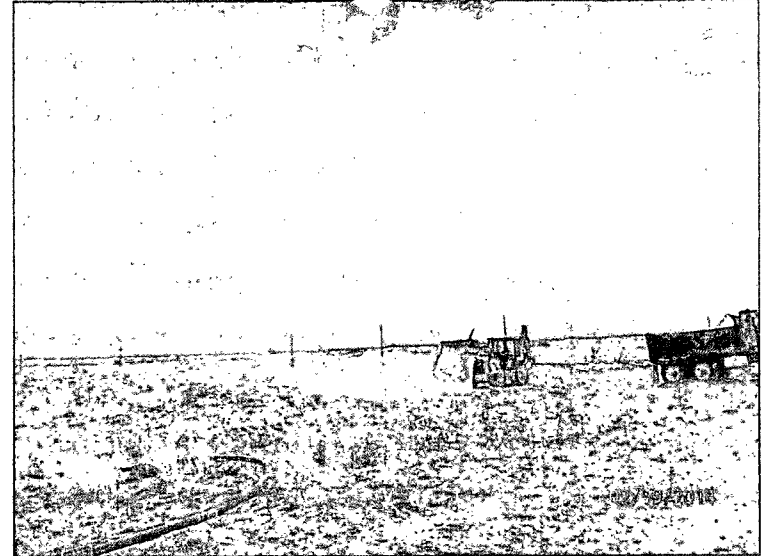
Initial release area, facing southwest

10/25/13



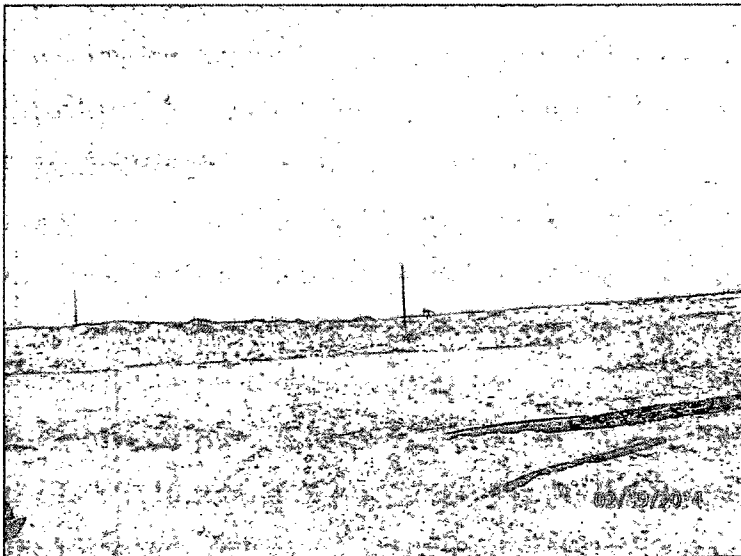
Importing caliche, facing north

2/18/14



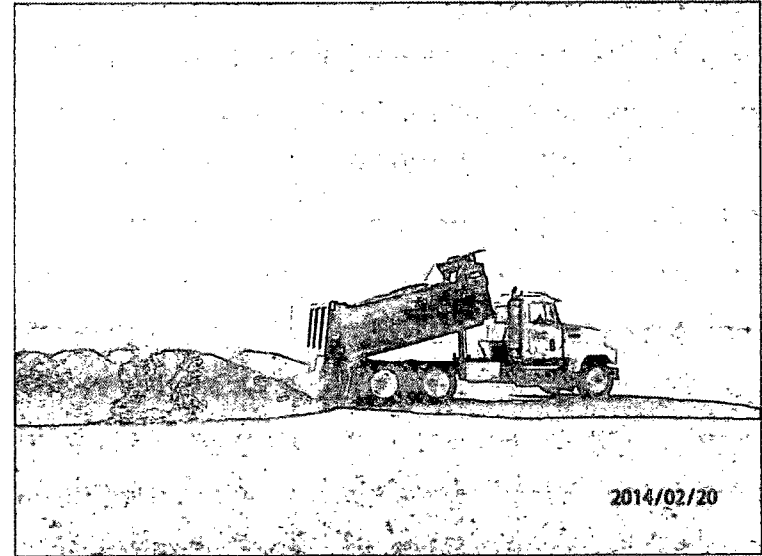
Spreading caliche over east side, facing southeast

2/19/14



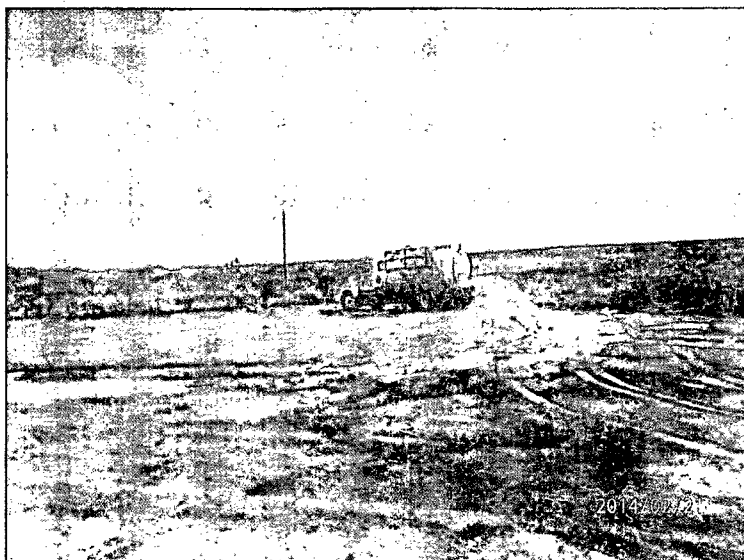
East side capped with caliche, facing northeast

2/19/14

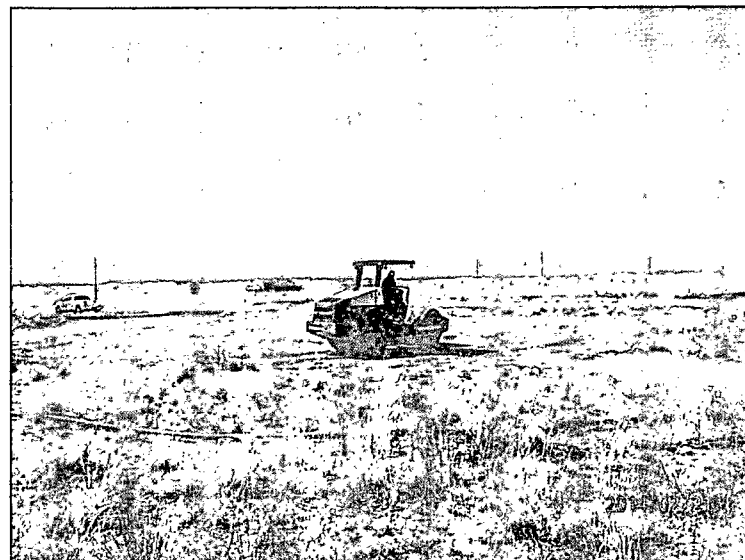


Importing topsoil, facing south

2/20/14



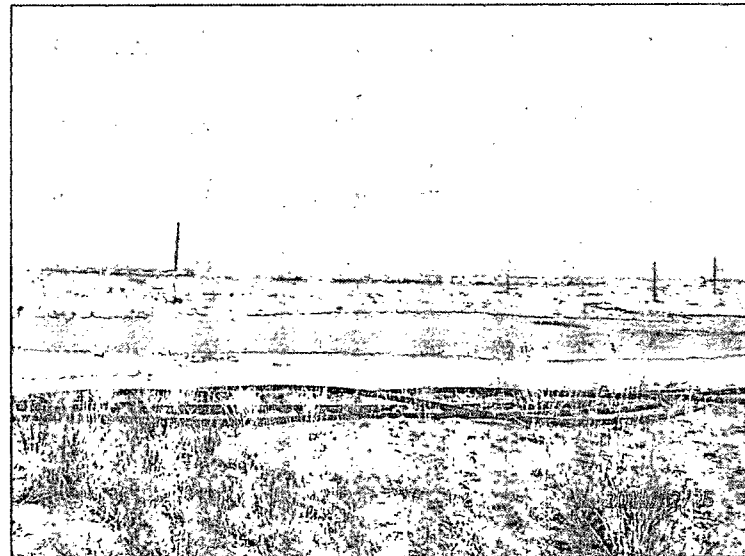
Water soaking caliche, facing southeast 2/21/14



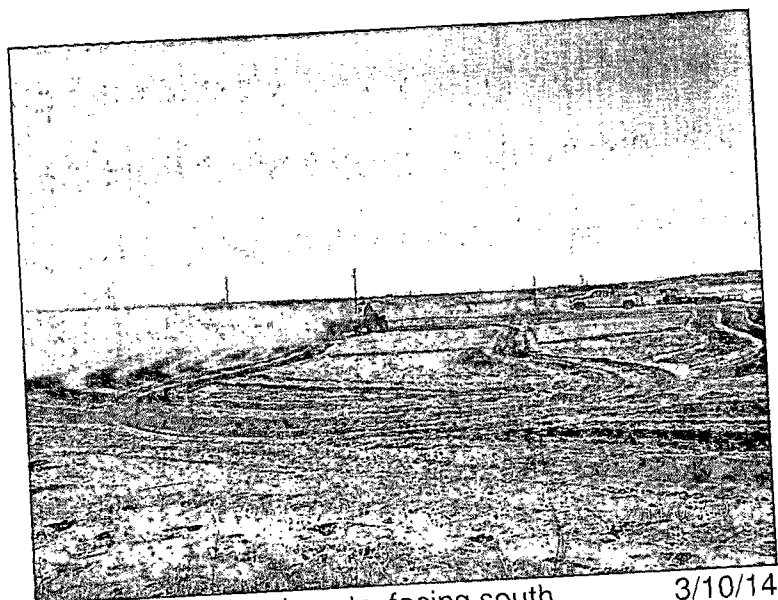
Roller packing caliche, facing southwest 2/21/14



Backfilling site with topsoil, facing northwest 2/24/14

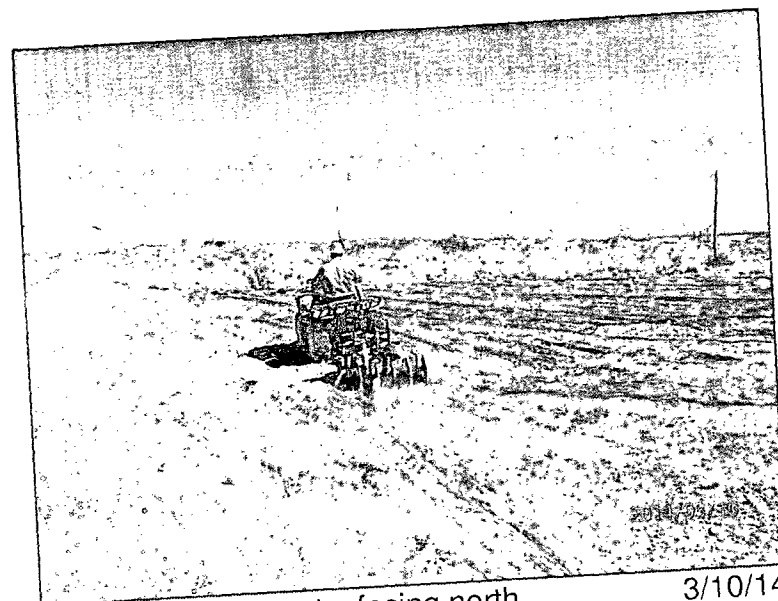


Backfilling with topsoil completed, facing east 2/25/14



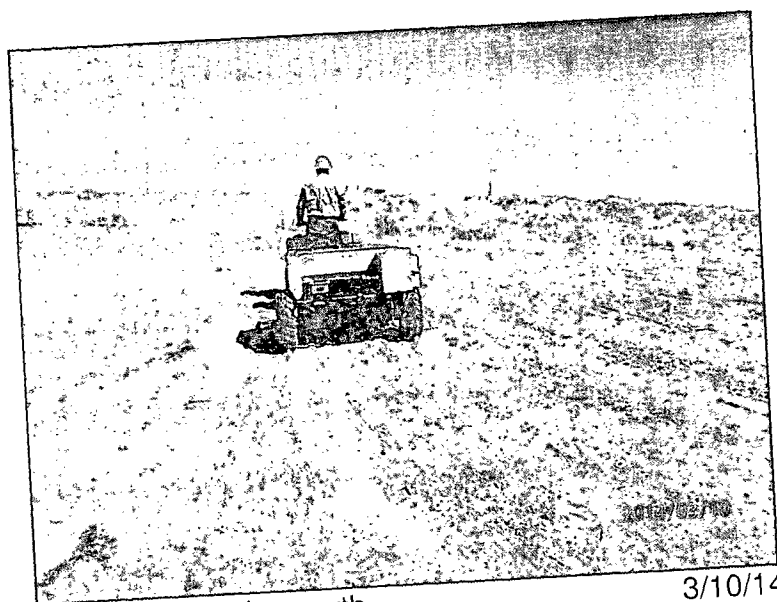
Adding soil amendments, facing south

3/10/14



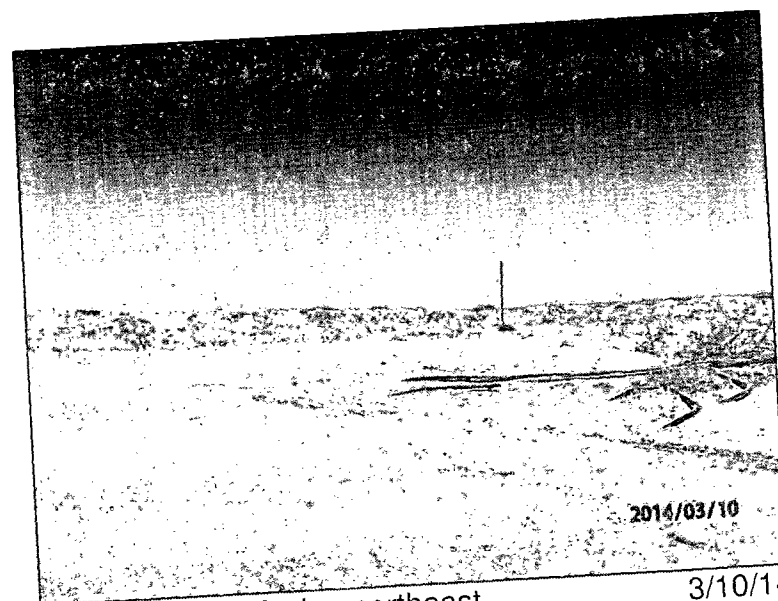
Tilling in amendments, facing north

3/10/14



Seeing site, facing north

3/10/14



Site completed, facing northeast

3/10/14

Appendix E

Final C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

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 Energy	Contact Brian Wall	
Address 2130 W. Bender Blvd., Hobbs, NM 88240	Telephone No. (806) 367-0645	
Facility Name J.L. Keel A #28	Facility Type Flow Line Release	
Surface Owner BLM	Mineral Owner	API No. 3001528231

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	7	17S	31E	2196	FSL	2028	FEL	EDDY

Latitude 32°50'52.24"N Longitude 103°54'26.222"W

NATURE OF RELEASE

Type of Release Produced water/Oil	Volume of Release Unknown	Volume Recovered None
Source of Release Break in flow line	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 6/27/11
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" 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 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.* While BLM was inspecting another site in the area, BLM discovered a flow line release to the J.L. Keel A #28 injection well. A total of 6762 sq ft of pasture land was affected by the release.

Describe Area Affected and Cleanup Action Taken.* RECS personnel were on site beginning on October 25th, 2013 to assess the site. The release was sampled at the surface and at depth at six points throughout the release area. The samples were field tested for chlorides and hydrocarbons and representative samples were taken to a commercial laboratory for analysis. The release on the east side of the road was located over a former pit area. On November 1st, 2013, RECS met with BLM at the site. BLM recommended that the release on the east side of the lease road and the pit area be capped with 6 inches of caliche and then 2 ft of clean, imported topsoil. The site would then be seeded with a blend of native vegetation. The area to the west side of the lease road did not need to be addressed since sampling indicates no ecological detriment occurred to the area. A Corrective Action Plan (CAP) detailing these actions was submitted to NMOCD and BLM on November 14th, 2013. BLM approved the CAP on November 15th, 2013 and NMOCD approved the CAP on February 13th, 2014. CAP activities began at the site on February 18th, 2014. A total of 180 yards of caliche was imported to the site and used to top-cap the east release area and pit. The caliche was watered and roller packed to provide a compact surface. A total of 694 yards of clean topsoil was imported to the site to backfill over the caliche to a depth of 2 ft. A sample of the imported soil was taken to a commercial laboratory for analysis and returned a chloride result of non-detect. On March 10th, 2014, soil amendments were added to the site and the site was seeded with BLM mix #2 and #4.

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.

OIL CONSERVATION DIVISION

Signature: Fred B Wall	Approved by Environmental Specialist:			
Printed Name: Brian Wall	Approval Date:			Expiration Date:
Title: Construction Foreman II	Conditions of Approval:			Attached <input type="checkbox"/>
E-mail Address: Bwall@linenergy.com				
Date: 4/21/14	Phone: (806) 367-0645			

* Attach Additional Sheets If Necessary

Patterson, Heather, EMNRD

From: Lara Weinheimer <lweinheimer@rice-ecs.com>
Sent: Friday, April 11, 2014 12:32 PM
To: Bratcher, Mike, EMNRD; Patterson, Heather, EMNRD
Cc: 'Hack Conder'; 'Jacob Kamplain'
Subject: FW: Linn H.E. West B #2 Battery - West B #88 (2RP-1189) Termination Request Approval from BLM

From: Burton, Michael [<mailto:mburton@blm.gov>]
Sent: Tuesday, April 08, 2014 9:18 PM
To: Lara Weinheimer
Subject: Re: Linn H.E. West B #2 Battery - West B #88 (2RP-1189) Termination Request

Lara,
This Termination request is approved.
Thanks

Mike Burton
BLM-CFO
Environmental Protection Specialist
575-234-2226 office
575-361-3574 cell
mburton@blm.gov

CONFIDENTIALITY NOTICE: The information in this email may be confidential and/or privileged. If you are not the intended recipient or an authorized representative of the intended recipient, you are hereby notified that any review, dissemination or copying of this email and its attachments, if any, or the information contained herein, is prohibited. If you have received this email in error, please immediately notify the sender by return email and delete this email from your system. Thank you.

On Fri, Apr 4, 2014 at 11:27 AM, Lara Weinheimer <lweinheimer@rice-ecs.com> wrote:

NU12136TG

Mike, attached is the Linn H.E. West B #2 Battery/ West B #88 (2RP-1189) Termination Request. If you have any questions, please let us know. Otherwise we await your approval.

Thanks!

Lara Weinheimer

Rice Environmental Consulting & Safety

Project Scientist

419 West Cain

Hobbs, NM 88240

(575) 441-0431

