

## **LINN ENERGY**

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

# H.E. West A #028 (2RP-1216)

## **Termination Request**

NU12156TG

API No. 30-015-28318

Release Date: June 21<sup>st</sup>, 2012

Unit Letter H, Section 3, Township 17S, Range 31E

## Rice Environmental Consulting & Safety

P.O. Box 2948, Hobbs, NM 88241

Phone 575.393.2967

**July 19<sup>th</sup>, 2013**

### **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 – H.E. West A #028 AD**

**UL/H sec. 3 T17S R31E**

**API No. 30-015-28318**

**2RP-1216**

**BLM Event No. NU12156TG**

Mr. Bratcher:

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

### **Background and Previous Work**

The site is an accidental discharge of crude oil and produced water associated with the H.E. West A #028. On June 21<sup>st</sup>, 2012, a surface poly line ruptured at a seam and released fluids onto pasture land. The line was repaired and an initial form C-141 was submitted by Linn on July 2<sup>nd</sup>, 2012 (Appendix A). The leak site is located east northeast of Loco Hills, in unit letter 'D' of section 3, T17S, R31E in Eddy County, New Mexico. NM OSE and BLM records indicated that groundwater will be encountered at a depth of 188 ft.

On August 6<sup>th</sup> and 21<sup>st</sup>, 2012, RECS personnel collected samples at depth from 4 points within the release area (Vertical #1 through Vertical #4). The samples were field tested for chloride and headspace measurements were also taken in the field using a Photo Ionization Detector (PID). The samples were submitted to a commercial laboratory for chloride and TPH (GRO/DRO) analyses.

On September 17<sup>th</sup>, 2012, RECS personnel re-excavated Vertical #1 through #4. Samples were collected from the bottoms of each re-excavated trench and field tested for chloride and organic vapors to confirm that all previously excavated soils were removed. The bottom samples for each trench were submitted to a commercial laboratory for chloride, TPH and BTEX analyses. The trenches were backfilled with clean imported soil. A sample of the imported soil was also submitted to a laboratory for chloride and TPH analyses. Excavated soils were removed to a NMOCD approved disposal facility.

During October 4-8<sup>th</sup>, 2012, RECS installed three additional vertical sample trenches (Vertical #5 - #7). Soil samples were collected at every foot. The samples were field tested, and submitted to a laboratory for chloride, TPH, and BTEX analyses. The trenches at Vertical #5 through #7 were also backfilled with clean imported soil. Excavated soils were removed to a NMOCD approved disposal facility.

A Corrective Action Plan (CAP) was submitted on October 24<sup>th</sup>, 2012 to NMOCD and BLM. The plan was again submitted to BLM on May 3<sup>rd</sup>, 2013. The CAP was approved on May 3<sup>rd</sup>, 2013. The plan described the vertical sampling conducted at the site and proposed further actions to remediate the site. RECS proposed to excavate the entire area to 3 ft below ground surface with excavation side wall samples not to exceed 1000 mg/kg chloride. Grab samples taken from the excavation bottom and sidewalls would be submitted to a commercial laboratory for chloride and TPH analysis. Excavated soils will be removed to a NMOCD approved disposal facility. The excavation would be backfilled with clean, imported soil and the top two feet of the excavation would be backfilled with clean soil similar to that of the native terrain. The site would be contoured to the surrounding landscape and then re-seeded with BLM seed mix #2 and #4 in a 50/50 mix.

Beginning on May 20<sup>th</sup>, 2013, RECS personnel were on site to begin excavating. The site was excavated to 34 ft x 138 ft x 3 ft deep (Figure 1). The excavated soil was disposed of at a NMOCD approved facility. Final grab samples were taken from the walls and bottom of the excavation and taken to a commercial laboratory for analysis (Appendix B). The final sampling data was sent to BLM on June 3<sup>rd</sup>, 2013 and BLM approved the site to be backfilled on June 10<sup>th</sup>, 2013.

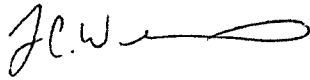
Clean caliche and top soil were imported to the site serve as backfill. The site was backfilled with the caliche to 2 ft bgs and the remainder of the excavation was backfilled with the top soil. The site was contoured to the surrounding location and was seeded with a 50/50 mix of BLM seed mix #2 and #4 on July 16<sup>th</sup>, 2013.

Photo documentation of these activities can be found in Appendix C.

Due to the removal of impacted soils as approved by the Corrective Action Plan and given the depth of groundwater at the site, RECS, on behalf of Linn Energy, submits the final C-141 (Appendix D) and respectfully requests the closure of the regulatory file for this site.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-9174 or me if you have any questions or wish to discuss the site.

Sincerely,

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

Lara Weinheimer  
Project Scientist  
RECS  
(575) 441-0431

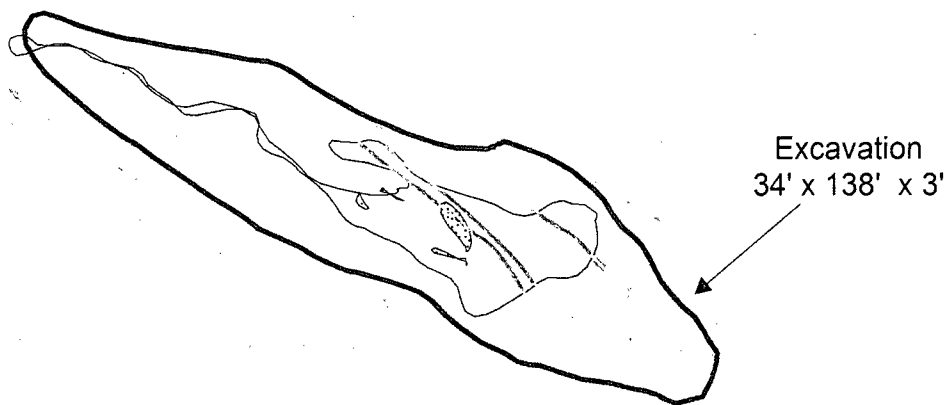
Attachments:

- Figure 1 – Excavation Map
- Appendix A – Initial C-141
- Appendix B – Laboratory Analyses
- Appendix C – Photo Documentation
- Appendix D – Final C-141

# Figures

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

# Excavation



## Excavation Sampling Data

Sample Description	Lab Cl-	GRO	DRO	B	T	E	X
North Wall West End	288	<10	<10	<0.05	<0.05	<0.15	<0.3
North Wall East End	240	<10	<10	<0.05	<0.05	<0.15	<0.3
South Wall East End	<16	<10	<10	<0.05	<0.05	<0.15	<0.3
South Wall West End	32	<50	<50	<0.05	<0.05	<0.15	<0.3
West Wall	432	<50	157	<0.05	<0.05	<0.15	<0.3
East Wall	128	<10	<10	<0.05	<0.05	<0.15	<0.3
Bottom @ 3'	432	<50	396	<0.05	<0.05	<0.15	<0.3

DGW = 188 ft  
Landowner = BLM

## Legend

- EXCAVATION
- ABOVE GROUND POLY
- AD AREA (679 sq ft)
- ▨ NON-AD AREA

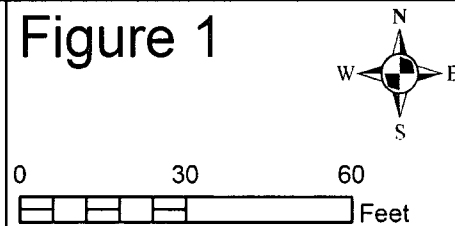
Source: Esri, DigitalGlobe, GeoEye, AeroGRID, IGN, etc.



## LINN ENERGY H.E. WEST A #28

LEGALS: UL/D sec. 3  
T-17-S R-31-E  
EDDY COUNTY, NM

## Figure 1



GPS date: 5/22/13 DH  
Drawing date: 6/3/13  
Drafted by: L. Weinheimer

**RECEIVED**

**JUL 02 2012**

**NMOCN ARTESIA**

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 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC

**Release Notification and Corrective Action**

**nJMW 1219 439 454** **OPERATOR** ☒ Initial Report ☐ Final Report

Name of Company: Linn Operating <b>269324</b>	Contact: Joe Hernandez
Address: 2130 W. Bender Hobbs, NM 88240	Telephone No.: 575-738-1739
Facility Name: HE West A 28	Facility Type: Oil

Surface Owner: Federal	Mineral Owner: Federal	API No.: 3001528318
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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
H	03	17S	31E	1980	North	505	East	Eddy

Latitude: 32.86533 Longitude: -103.84987

**NATURE OF RELEASE**

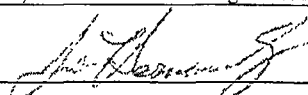
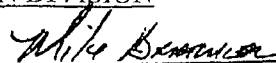
Type of Release: Oil / Produced Water	Volume of Release: 2 / 3	Volume Recovered: 0 / 0
Source of Release: Polyline	Date and Hour of Occurrence: 06/21/2012 2pm	Date and Hour of Discovery: 06/21/2012 2:30pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? M Bratcher -NM OCD / Terry Gregston- BLM	
By Whom? Joe Hernandez	Date and Hour 06/22/2012 4pm	
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.\*: Pumper was checking wells. Spotted a 3" poly leaking out in pasture, put pipe clamp and shut in well.

Describe Area Affected and Cleanup Action Taken.\*: In the pasture, leak on north side of road. Further remedial action pending.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Joe Hernandez	Approved by District Supervisor: <b>Signed By</b> 	
Title: Production Foreman	<b>JUL 12 2012</b> Approval Date:	Expiration Date:
E-mail Address: jhernandez@linenergy.com Date: 07/02/2012 Phone: 575-942-9492	Conditions of Approval:	Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary

Remediation per OCD Rules &  
Guidelines. **SUBMIT REMEDIATION  
PROPOSAL NOT LATER THAN:**

8/12/12

**2RP-1216**

# Appendix B

## Laboratory Analyses

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



June 03, 2013

BRUCE BAKER

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

112 W. TAYLOR

HOBBS, NM 88240

RE: H. E. WEST A #028 EVENT #NU12156TG

Enclosed are the results of analyses for samples received by the laboratory on 05/24/13 9:45.

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](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

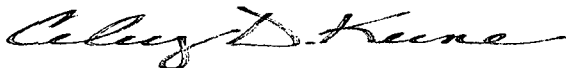
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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,



Caley D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 BRUCE BAKER  
 112 W. TAYLOR  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	05/24/2013	Sampling Date:	05/23/2013
Reported:	06/03/2013	Sampling Type:	Soil
Project Name:	H. E. WEST A #028 EVENT #NU12156TC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: N WALL W END CENTER (H301238-01)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/29/2013	ND	2.23	111	2.00	4.36	
Toluene*	<0.050	0.050	05/29/2013	ND	2.00	100	2.00	4.37	
Ethylbenzene*	<0.050	0.050	05/29/2013	ND	2.21	110	2.00	4.14	
Total Xylenes*	<0.150	0.150	05/29/2013	ND	6.21	104	6.00	5.03	
Total BTEX	<0.300	0.300	05/29/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 105 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	05/24/2013	ND	432	108	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	05/24/2013	ND	208	104	200	4.46	
DRO >C10-C28	<10.0	10.0	05/24/2013	ND	202	101	200	5.94	

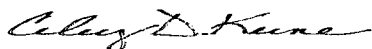
Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 108 % 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  
 BRUCE BAKER  
 112 W. TAYLOR  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	05/24/2013	Sampling Date:	05/23/2013
Reported:	06/03/2013	Sampling Type:	Soil
Project Name:	H. E. WEST A #028 EVENT #NU12156TC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: N WALL E END CENTER (H301238-02)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/29/2013	ND	2.23	111	2.00	4.36	
Toluene*	<0.050	0.050	05/29/2013	ND	2.00	100	2.00	4.37	
Ethylbenzene*	<0.050	0.050	05/29/2013	ND	2.21	110	2.00	4.14	
Total Xylenes*	<0.150	0.150	05/29/2013	ND	6.21	104	6.00	5.03	
Total BTEX	<0.300	0.300	05/29/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 106 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	240	16.0	05/24/2013	ND	432	108	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	05/24/2013	ND	208	104	200	4.46		
DRO >C10-C28	<10.0	10.0	05/24/2013	ND	202	101	200	5.94		

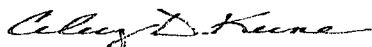
Surrogate: 1-Chlorooctane 110 % 65.2-140

Surrogate: 1-Chlorooctadecane 120 % 63.6-154

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 RICE ENVIRONMENTAL CONSULTING & SAFETY  
 BRUCE BAKER  
 112 W. TAYLOR  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	05/24/2013	Sampling Date:	05/23/2013
Reported:	06/03/2013	Sampling Type:	Soil
Project Name:	H. E. WEST A #028 EVENT #NU12156TC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S WALL E END CENTER (H301238-03)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/29/2013	ND	2.23	111	2.00	4.36	
Toluene*	<0.050	0.050	05/29/2013	ND	2.00	100	2.00	4.37	
Ethylbenzene*	<0.050	0.050	05/29/2013	ND	2.21	110	2.00	4.14	
Total Xylenes*	<0.150	0.150	05/29/2013	ND	6.21	104	6.00	5.03	
Total BTEX	<0.300	0.300	05/29/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 106 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	05/24/2013	ND	432	108	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	05/24/2013	ND	208	104	200	4.46	
DRO >C10-C28	<10.0	10.0	05/24/2013	ND	202	101	200	5.94	

Surrogate: 1-Chlorooctane 106 % 65.2-140

Surrogate: 1-Chlorooctadecane 116 % 63.6-154

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\* = Accredited Analyte

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Fax To: (575) 397-1471

Received:	05/24/2013	Sampling Date:	05/23/2013
Reported:	06/03/2013	Sampling Type:	Soil
Project Name:	H. E. WEST A #028 EVENT #NU12156TC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S WALL W END CENTER (H301238-04)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/31/2013	ND	2.26	113	2.00	0.925	
Toluene*	<0.050	0.050	05/31/2013	ND	2.04	102	2.00	0.931	
Ethylbenzene*	<0.050	0.050	05/31/2013	ND	2.21	111	2.00	1.31	
Total Xylenes*	<0.150	0.150	05/31/2013	ND	6.45	108	6.00	0.622	
Total BTEX	<0.300	0.300	05/31/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 105 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	05/24/2013	ND	432	108	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	<50.0	50.0	05/24/2013	ND	208	104	200	4.46	
DRO >C10-C28	<50.0	50.0	05/24/2013	ND	202	101	200	5.94	

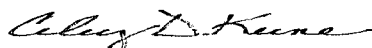
Surrogate: 1-Chlorooctane 103 % 65.2-140

Surrogate: 1-Chlorooctadecane 113 % 63.6-154

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Received:	05/24/2013	Sampling Date:	05/23/2013
Reported:	06/03/2013	Sampling Type:	Soil
Project Name:	H. E. WEST A #028 EVENT #NU12156TC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: W WALL CENTER (H301238-05)**

BTEX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/31/2013	ND	2.26	113	2.00	0.925	
Toluene*	<0.050	0.050	05/31/2013	ND	2.04	102	2.00	0.931	
Ethylbenzene*	<0.050	0.050	05/31/2013	ND	2.21	111	2.00	1.31	
Total Xylenes*	<0.150	0.150	05/31/2013	ND	6.45	108	6.00	0.622	
Total BTEX	<0.300	0.300	05/31/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 108 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	05/24/2013	ND	432	108	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	<50.0	50.0	05/28/2013	ND	213	107	200	4.25	
DRO >C10-C28	157	50.0	05/28/2013	ND	206	103	200	6.51	

Surrogate: 1-Chlorooctane 93.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 116 % 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  
 BRUCE BAKER  
 112 W. TAYLOR  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	05/24/2013	Sampling Date:	05/23/2013
Reported:	06/03/2013	Sampling Type:	Soil
Project Name:	H. E. WEST A #028 EVENT #NU12156TC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: E WALL CENTER (H301238-06)**

BTX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/31/2013	ND	2.26	113	2.00	0.925	
Toluene*	<0.050	0.050	05/31/2013	ND	2.04	102	2.00	0.931	
Ethylbenzene*	<0.050	0.050	05/31/2013	ND	2.21	111	2.00	1.31	
Total Xylenes*	<0.150	0.150	05/31/2013	ND	6.45	108	6.00	0.622	
Total BTX	<0.300	0.300	05/31/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 109 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	05/24/2013	ND	432	108	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	05/28/2013	ND	213	107	200	4.25	
DRO >C10-C28	<10.0	10.0	05/28/2013	ND	206	103	200	6.51	


Surrogate: 1-Chlorooctane 100 % 65.2-140

Surrogate: 1-Chlorooctadecane 107 % 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  
 BRUCE BAKER  
 112 W. TAYLOR  
 HOBBS NM, 88240  
 Fax To: (575) 397-1471

Received:	05/24/2013	Sampling Date:	05/23/2013
Reported:	06/03/2013	Sampling Type:	Soil
Project Name:	H. E. WEST A #028 EVENT #NU12156TC	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: BOTTOM CENTER @ 3' (H301238-07)**

BTX 8021B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/31/2013	ND	2.26	113	2.00	0.925	
Toluene*	<0.050	0.050	05/31/2013	ND	2.04	102	2.00	0.931	
Ethylbenzene*	<0.050	0.050	05/31/2013	ND	2.21	111	2.00	1.31	
Total Xylenes*	<0.150	0.150	05/31/2013	ND	6.45	108	6.00	0.622	
Total BTX	<0.300	0.300	05/31/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 110 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	05/24/2013	ND	432	108	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	<50.0	50.0	05/28/2013	ND	213	107	200	4.25	
DRO >C10-C28	396	50.0	05/28/2013	ND	206	103	200	6.51	

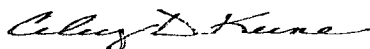
Surrogate: 1-Chlorooctane 105 % 65.2-140

Surrogate: 1-Chlorooctadecane 143 % 63.6-154

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\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Notes and Definitions**

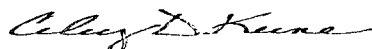
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

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Celey D. Keene, Lab Director/Quality Manager



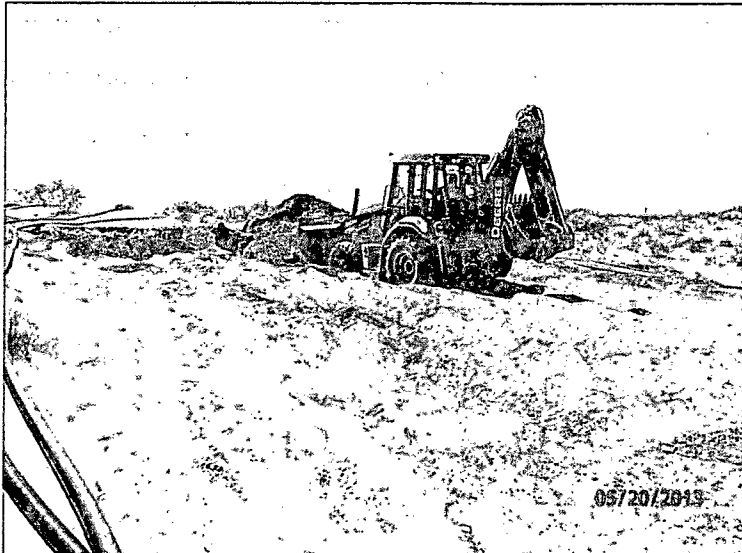
# Appendix C

## Photo Documentation

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

# Linn Energy West A #28

Unit Letter D, Section 3, T17S R31E



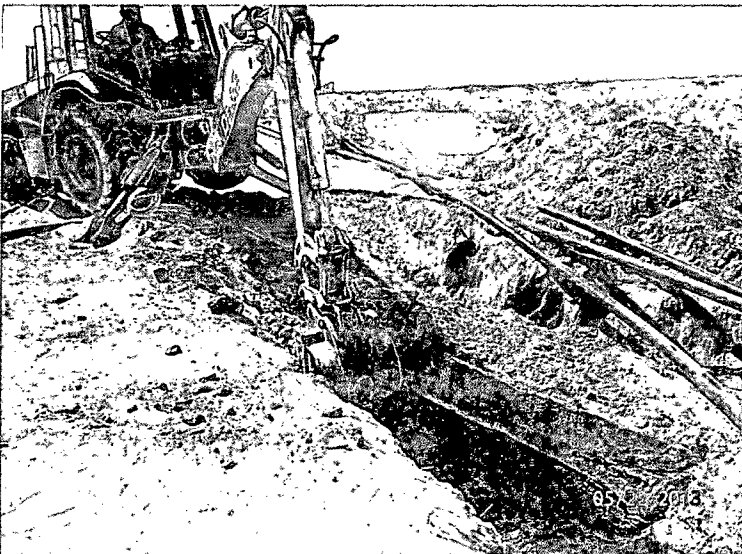
Excavating site to 3 ft bgs, facing east

5/20/13



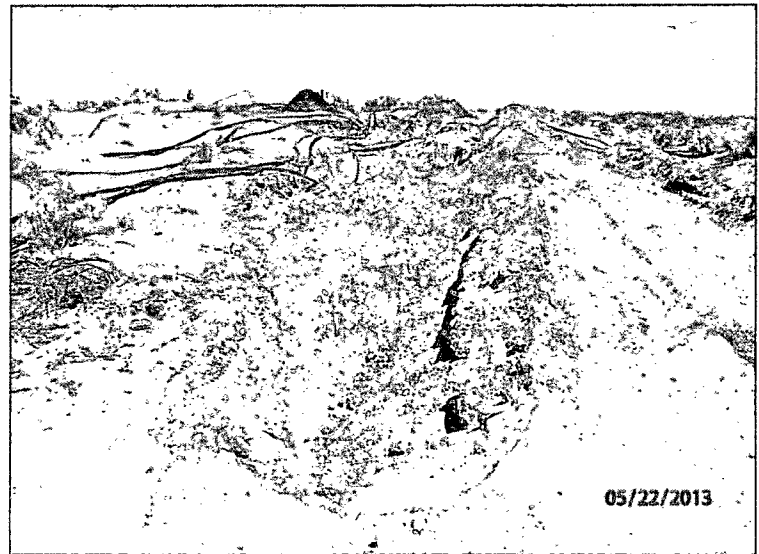
Exporting soil, facing north

5/21/13



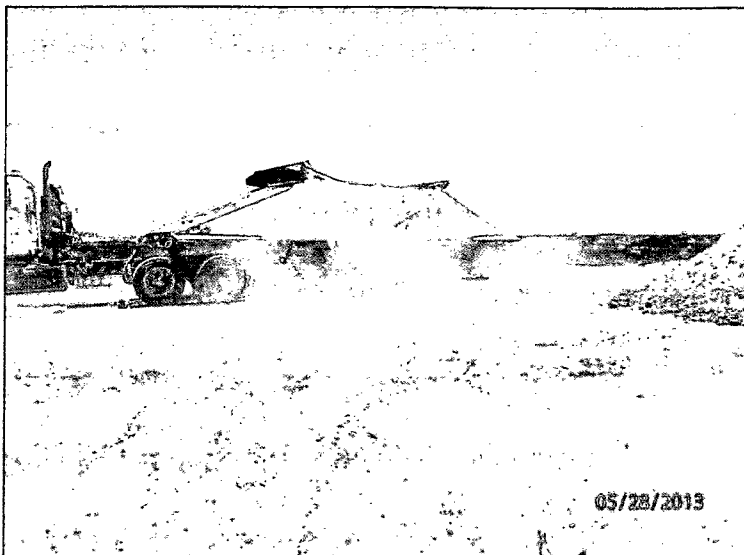
Digging out pump jack base, facing east

5/22/13

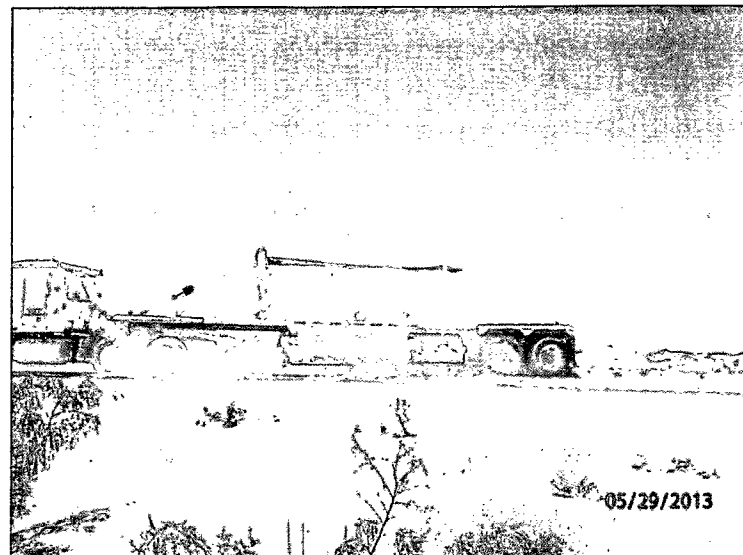


Excavation to 3 ft bgs completed, facing east

5/22/13



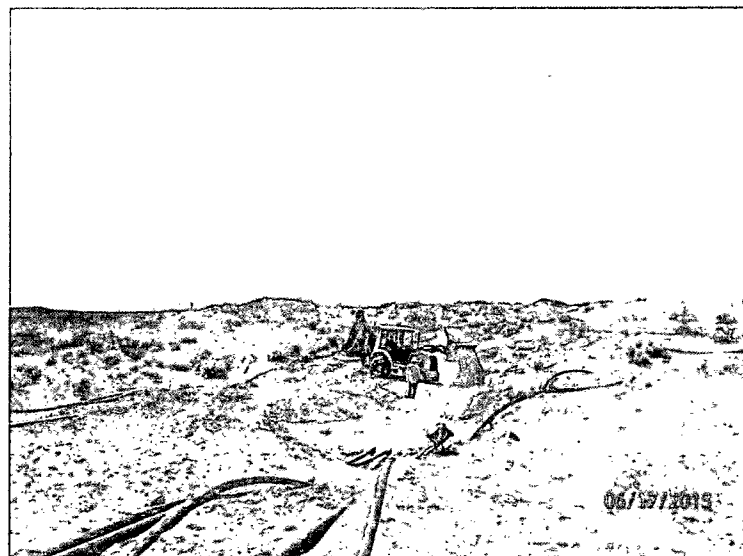
Importing caliche to the site, facing southeast 5/28/13



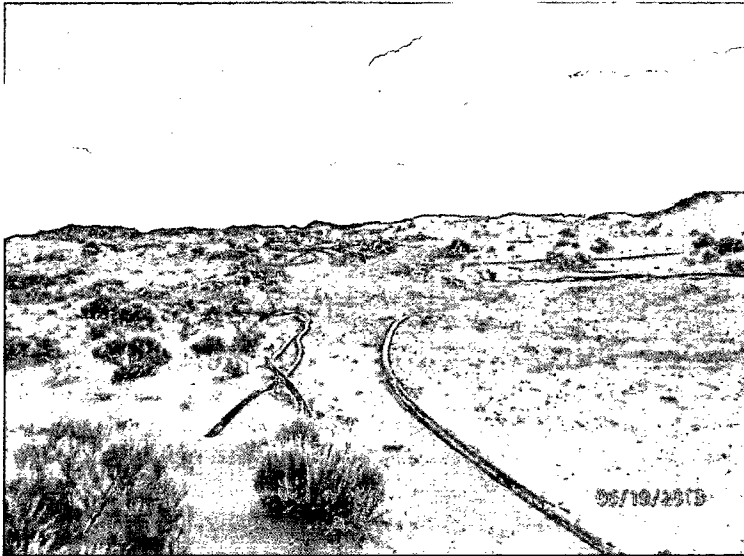
Importing topsoil to the site, facing west 5/29/13



Backfilling the site with clean, imported caliche, facing southwest 6/17/13

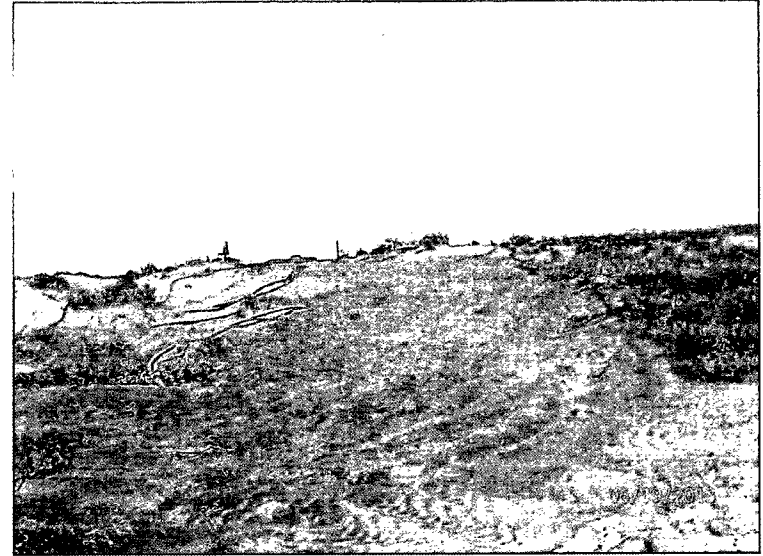


Backfilling the site with clean, imported topsoil, facing northwest 6/17/13



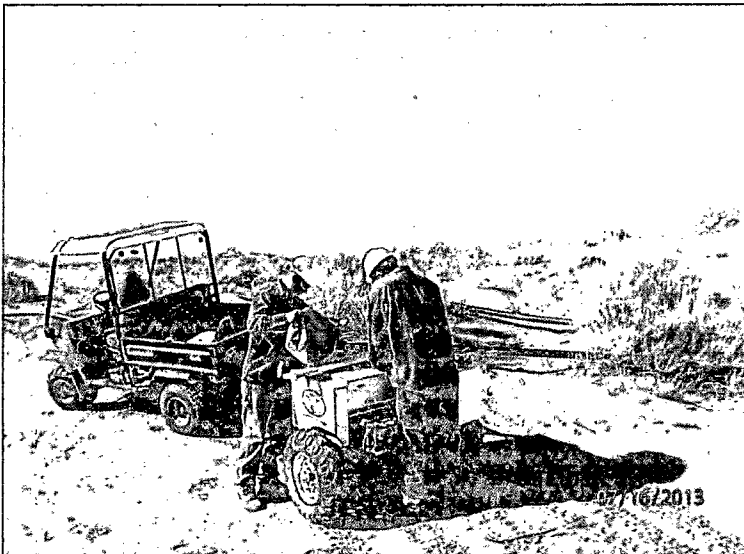
Site backfilled, facing north

6/19/13



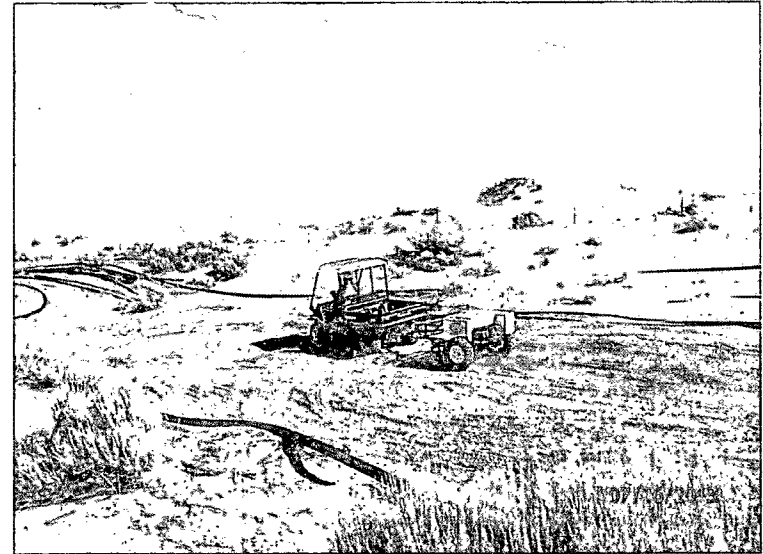
Site backfilled, facing southeast

6/19/13



Seeding site, facing southeast

7/16/13



Seeding site, facing southwest

7/16/13

# Appendix D

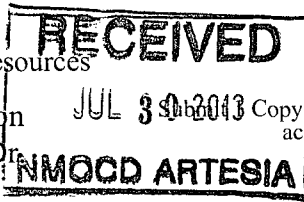
Final C-141

**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

### Release Notification and Corrective Action

#### OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Linn Operating	Contact	Gary Wink
Address	2130 W. Bender, Hobbs, NM 88240	Telephone No.	(575) 738-1739
Facility Name	HE West A 28	Facility Type	Oil
Surface Owner	BLM	Mineral Owner	BLM
		API No.	3001528318

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	3	17S	31E	1980	FNL	505	FEL	Eddy

Latitude 32.86533 Longitude -103.84987

#### NATURE OF RELEASE

Type of Release	Oil/Produced Water	Volume of Release	2/3 bbls	Volume Recovered	0 bbls
Source of Release	Polyline	Date and Hour of Occurrence	6/21/12 2:00 pm	Date and Hour of Discovery	6/21/12 2:30 pm
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	M. Bratcher - NMOCD; T. Gregston - BLM		
By Whom?	Joe Hernandez	Date and Hour	6/22/12		
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.\*

The pumper was checking wells when he spotted a 3" poly leaking out in the pasture. He put a pipe clamp on the line and shut in the well.

Describe Area Affected and Cleanup Action Taken.\*

The release affected 679 sq ft of pasture land. On August 6<sup>th</sup> and 21<sup>st</sup>, 2012, RECS personnel collected samples at depth from 4 points within the leak area. The samples were submitted to a commercial laboratory for chloride and TPH (GRO/DRO) analyses. During October 4-8<sup>th</sup>, 2012, RECS installed three additional vertical sample trenches. Soil samples were collected at every foot. The samples were field tested, and submitted to a laboratory for chloride, TPH, and BTEX analyses. Excavated soils were removed to a NMOCD approved disposal facility. A Corrective Action Plan (CAP) was submitted to NMOCD on October 24<sup>th</sup>, 2012 to NMOCD and BLM. The plan was again submitted to BLM on May 3<sup>rd</sup>, 2013. The CAP was approved on May 3<sup>rd</sup>, 2013. Beginning on May 20<sup>th</sup>, 2013, RECS personnel were on site to begin excavating. The site was excavated to 34 ft x 138 ft x 3 ft deep. The excavated soil was disposed of at a NMOCD approved facility. Final grab samples were taken from the walls and bottom of the excavation and taken to a commercial laboratory for analysis. The final sampling data was sent to BLM on June 3<sup>rd</sup>, 2013 and BLM approved the site to be backfilled on June 10<sup>th</sup>, 2013. Clean caliche and top soil were imported to the site serve as backfill. The site was backfilled with the caliche to 2 ft bgs and the remainder of the excavation was backfilled with the top soil. The site was contoured to the surrounding location and was seeded with a 50/50 mix of BLM seed mix #2 and #4 on July 16<sup>th</sup>, 2013.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <u>Gary W. Wink</u>		OIL CONSERVATION DIVISION	
Printed Name: Gary Wink		Approved by Environmental Specialist:	
Title: Production Foreman		Approval Date:	Expiration Date:
E-mail Address: <u>gawink@linenergy.com</u>		Conditions of Approval:	Attached <input type="checkbox"/>
Date: <u>7/19/13</u>	Phone: (575) 738-1739		

\* Attach Additional Sheets If Necessary