

LINN ENERGY

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

HE West B #2 Battery/West B #88
2RP-1189

Corrective Action Plan

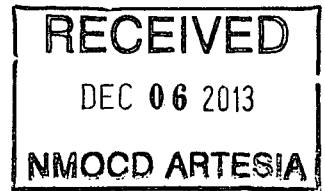
API No. 3001528537

Release Date: June 7th, 2012

Unit Letter D, Section 9, Township 17S, Range 31E

Rice Environmental Consulting & Safety

P.O. Box 2948, Hobbs, NM 88241
Phone 575.393.2967



December 5th, 2013

Mike Bratcher

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

**RE: Corrective Action Plan (CAP)
Linn Energy – HE West B #2 Battery/West B #88 (2RP-1189)
UL/D sec. 9 T17S R31E
API No. 3001528537
NU12136TG**

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 6.8 miles west of Maljamar, New Mexico at UL/D sec. 9 T17S R31E. This site is in an area of no known groundwater.

On June 7th, 2012, a valve failed in the battery releasing 8 barrels of oil and 2 barrels of produced water over 17,545 sq ft of battery and pasture land. None of this material was recovered. On June 13th, 2012, NMOCD and BLM were notified of the release. An initial C-141 was submitted to both agencies and NMOCD approved the C-141 on June 21st, 2012 (Appendix A).

Two other environmental companies worked this site previously to RECS taking over remediation activities. When RECS obtained the site, the battery had already been excavated to 1.5 – 3 ft bgs and a request to backfill the site had been approved by BLM on July 26th, 2013. As part of permission to backfill, BLM had a stipulation that Sample Point 1 needed to be delineated to find closure levels. The site was backfilled and contoured to the surrounding location.

RECS took over the project on August 27th, 2013. A vertical was attempted at Point 1 on September 17th, 2013; however installation was aborted when a fiberglass line was found below Point 1. On September 20th, 2013, RECS met with NMOCD and NMOCD stated that RECS needed to assess the release outside the bermed battery area. On September 25th, 2013, RECS met with BLM and BLM stated that the work was completed inside the battery and RECS needed to assess the release outside the battery. Both agencies required RECS to submit a CAP to remediate this area.

RECS sampled that area outside the battery on beginning on October 8th, 2013. Samples were taken from the surface at seven points within the release area outside the bermed battery and one sample, Point 7, was taken as background sample (Figure 1). The samples were field tested for chlorides and organic vapors and the samples were taken to a commercial laboratory for analysis (Appendix B). All the samples returned chloride values below 1,000 mg/kg, GRO values of non-detect and DRO values below regulatory standards, except for the background sample at Point 7, which returned a DRO value of 5,890 mg/kg.

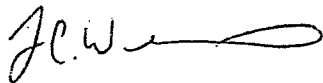
Corrective Action Plan

Based on the laboratory analysis, all sampling outside the bermed battery is below regulatory standards. Therefore, this area will have soil amendments added as necessary and then the area will 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 to groundwater.

Once the CAP activities are completed, ROC will submit a report detailing the CAP activities and a request for 'remediation termination' or site closure.

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,



Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

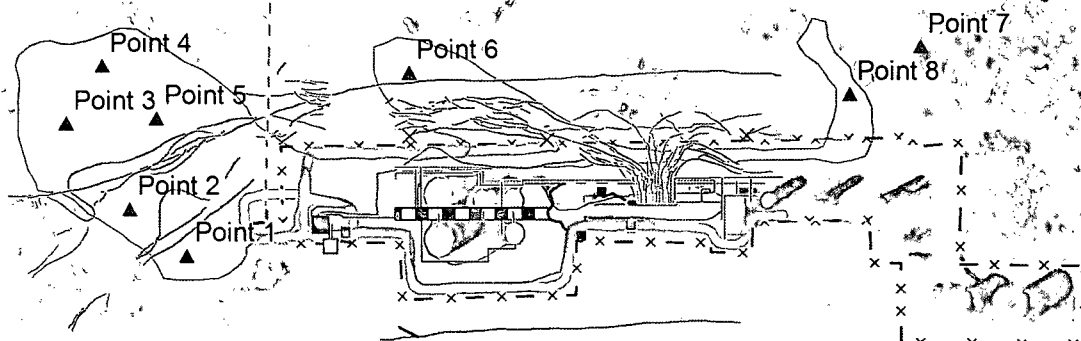
Figure 1 – Initial Sampling Data
Appendix A – Initial C-141
Appendix B – Laboratory Analyses

Figures

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

Initial Sampling Data

	Sampling in Pasture Area								
	CI-	PID	GRO	DRO	B	T	E	X	BTEX
Point 1 Surface	<16	0.4	<10	1110	<0.05	<0.05	<0.05	<0.15	<0.3
Point 2 Surface	80	0.2	<10	2000	<0.05	<0.05	<0.05	<0.15	<0.3
Point 3 Surface	48	0.3	<10	2550	<0.05	<0.05	<0.05	<0.15	<0.3
Point 4 Surface	<16	0.5	<10	2440	<0.05	<0.05	<0.05	<0.15	<0.3
Point 5 Surface	448	3.5	<10	2470	<0.05	<0.05	<0.05	<0.15	<0.3
Point 6 Surface	16	0.2	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
Point 7 Surface	96	1.5	<200	5890	<0.05	<0.05	<0.05	<0.15	<0.3
Point 8 Surface	<16	1.9	<10	56.7	<0.05	<0.05	<0.05	<0.15	<0.3



Legend

▲ SAMPLE POINTS	— ELECTRICAL PANEL	□ CHEMICAL TANK
□ CONTAINMENT	x - x FENCE	□ PUMP
□ CONTROL BOX	— PAD/ROAD EDGE	□ SEPARATOR
□ ELECTRICAL BOX	— PRODUCTION HEADER	□ STAIN (17,545 sq ft)
x PIPE END	— RISER	□ STORAGE TANK
— UNDERGROUND FIBERGLASS LINE	— STAIRS AND CATWALK	□ TREATER
— BERM	— SURFACE ELECTRIC	□ VALVE BOX
- - - BURIED PIPELINE	— SURFACE PIPELINE	
□ CROSSOVER		

CI- FIELD DATA
CI- LAB DATA

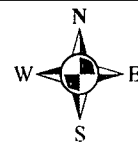
Landowner = BLM DGW = None



LINN H. E. WEST
B #2 BATTERY
(2RP-1189)

UL D SECTION 9
T-17-S R-31-E
EDDY COUNTY, NM

Figure 1



0 50 100
Feet

GPS date: 10/8/13 KS
Drawing date: 11/1/13
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
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Grande Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED

JUN 21 2012

NMOCD ARTESIA

Form C-141
Revised October 10, 2003

Submit to the appropriate District Office in accordance with 19.15.29 NMAC

Release Notification and Corrective Action

nJMW 1217356345		OPERATOR		<input checked="" type="checkbox"/> Initial Report	<input type="checkbox"/> Final Report
Name of Company: Linn Operating 269324		Contact: Joe Hernandez			
Address: 2130 W. Bender, Hobbs, NM 88240		Telephone No.: 575-738-1739			
Facility Name: HE West B/H 2-Battery/West B #88		Facility Type: Battery			
Surface Owner: Federal		Mineral Owner: Federal		API No.: 3001528537	

LOCATION OF RELEASE

Unit/Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	09	17S	31E	1309	North	1310	West	Eddy

Latitude: 32.85273 Longitude: -103.87827

NATURE OF RELEASE

Type of Release: Oil / Produced Water	Volume of Release: 8 / 2	Volume Recovered: 0 / 0
Source of Release: Valve	Date and Hour of Occurrence: 06/07/2012 8:30am	Date and Hour of Discovery: 06/07/2012 9am
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" 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 06/13/2012	
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: 2" T on the production header was buried and

Describe Area Affected and Cleanup Action Taken: From header west toward and around production tanks. Delineation started by Erich OK'd by Terry, BLM to start cleanup.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC 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, NMOC 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: [Signature]	Approved by District Supervisor: Signed By [Signature]	
Printed Name: Joe Hernandez	JUN 21 2012	
Title: Production Foreman	Approval Date:	Expiration Date:
E-mail Address: jhernandez@innenergy.com	Conditions of Approval:	Attached: <input type="checkbox"/>
Date: 06/21/2012	Phone: 575-942-9492	

* Attach Additional Sheets If Necessary

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

7/21/12

2RP-1189

Appendix B

Laboratory Analyses

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

October 11, 2013

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: H. E. WEST B #2 BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 10/09/13 8:25.

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.

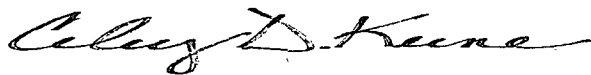
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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: 10/09/2013
Reported: 10/11/2013
Project Name: H. E. WEST B #2 BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/08/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 1 @ SURFACE (H302435-01)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/10/2013	ND	1.97	98.6	2.00	4.07		
Toluene*	<0.050	0.050	10/10/2013	ND	1.99	99.3	2.00	4.73		
Ethylbenzene*	<0.050	0.050	10/10/2013	ND	2.01	100	2.00	4.36		
Total Xylenes*	<0.150	0.150	10/10/2013	ND	5.88	98.1	6.00	4.75		
Total BTX	<0.300	0.300	10/10/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIC) 111 % 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	10/09/2013	ND	432	108	400	3.77		

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	10/10/2013	ND	200	100	200	0.683	
DRO >C10-C28	1110	10.0	10/10/2013	ND	194	97.0	200	2.22	

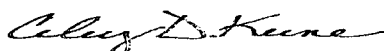
Surrogate: 1-Chlorooctane 95.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 153 % 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: 10/09/2013
Reported: 10/11/2013
Project Name: H. E. WEST B #2 BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/08/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 2 @ SURFACE (H302435-02)

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	10/10/2013	ND	1.97	98.6	2.00	4.07	
Toluene*	<0.050	0.050	10/10/2013	ND	1.99	99.3	2.00	4.73	
Ethylbenzene*	<0.050	0.050	10/10/2013	ND	2.01	100	2.00	4.36	
Total Xylenes*	<0.150	0.150	10/10/2013	ND	5.88	98.1	6.00	4.75	
Total BTEX	<0.300	0.300	10/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.7 % 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	80.0	16.0	10/09/2013	ND	432	108	400	3.77	

TPH 8015M		mg/kg	Analyzed By: MS							S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/10/2013	ND	200	100	200	0.683		
DRO >C10-C28	2000	10.0	10/10/2013	ND	194	97.0	200	2.22		

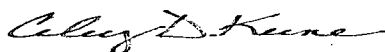
Surrogate: 1-Chlorooctane 114 % 65.2-140

Surrogate: 1-Chlorooctadecane 180 % 63.6-154

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Received: 10/09/2013
Reported: 10/11/2013
Project Name: H. E. WEST B #2 BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/08/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 3 @ SURFACE (H302435-03)

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	10/10/2013	ND	1.97	98.6	2.00	4.07	
Toluene*	<0.050	0.050	10/10/2013	ND	1.99	99.3	2.00	4.73	
Ethylbenzene*	<0.050	0.050	10/10/2013	ND	2.01	100	2.00	4.36	
Total Xylenes*	<0.150	0.150	10/10/2013	ND	5.88	98.1	6.00	4.75	
Total BTX	<0.300	0.300	10/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 96.1 % 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	10/09/2013	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/10/2013	ND	200	100	200	0.683		
DRO >C10-C28	2550	10.0	10/10/2013	ND	194	97.0	200	2.22		

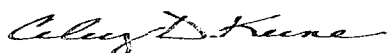
Surrogate: 1-Chlorooctane 103 % 65.2-140

Surrogate: 1-Chlorooctadecane 191 % 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: 10/09/2013
Reported: 10/11/2013
Project Name: H. E. WEST B #2 BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/08/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 4 @ SURFACE (H302435-04)

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	10/10/2013	ND	1.97	98.6	2.00	4.07	
Toluene*	<0.050	0.050	10/10/2013	ND	1.99	99.3	2.00	4.73	
Ethylbenzene*	<0.050	0.050	10/10/2013	ND	2.01	100	2.00	4.36	
Total Xylenes*	<0.150	0.150	10/10/2013	ND	5.88	98.1	6.00	4.75	
Total BTX	<0.300	0.300	10/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 98.2 % 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	10/09/2013	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/10/2013	ND	188	94.1	200	0.921		
DRO >C10-C28	2440	10.0	10/10/2013	ND	187	93.4	200	0.907		

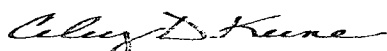
Surrogate: 1-Chlorooctane 98.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 190 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 10/09/2013
Reported: 10/11/2013
Project Name: H. E. WEST B #2 BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/08/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 5 @ SURFACE (H302435-05)

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	10/10/2013	ND	1.97	98.6	2.00	4.07	
Toluene*	<0.050	0.050	10/10/2013	ND	1.99	99.3	2.00	4.73	
Ethylbenzene*	<0.050	0.050	10/10/2013	ND	2.01	100	2.00	4.36	
Total Xylenes*	<0.150	0.150	10/10/2013	ND	5.88	98.1	6.00	4.75	
Total BTX	<0.300	0.300	10/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 99.9 % 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	448	16.0	10/09/2013	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/10/2013	ND	188	94.1	200	0.921		
DRO >C10-C28	2470	10.0	10/10/2013	ND	187	93.4	200	0.907		

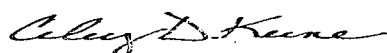
Surrogate: 1-Chlorooctane 102 % 65.2-140

Surrogate: 1-Chlorooctadecane 203 % 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: 10/09/2013
Reported: 10/11/2013
Project Name: H. E. WEST B #2 BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/08/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 6 @ SURFACE (H302435-06)

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	10/10/2013	ND	1.97	98.6	2.00	4.07	
Toluene*	<0.050	0.050	10/10/2013	ND	1.99	99.3	2.00	4.73	
Ethylbenzene*	<0.050	0.050	10/10/2013	ND	2.01	100	2.00	4.36	
Total Xylenes*	<0.150	0.150	10/10/2013	ND	5.88	98.1	6.00	4.75	
Total BTEX	<0.300	0.300	10/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 97.1 % 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	10/09/2013	ND	416	104	400	3.77	

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	10/10/2013	ND	188	94.1	200	0.921	
DRO >C10-C28	<10.0	10.0	10/10/2013	ND	187	93.4	200	0.907	

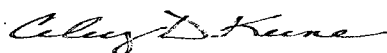
Surrogate: 1-Chlorooctane 69.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 71.4 % 63.6-154

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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:	10/09/2013	Sampling Date:	10/08/2013
Reported:	10/11/2013	Sampling Type:	Soil
Project Name:	H. E. WEST B #2 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: POINT 7 @ SURFACE (H302435-07)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	10/10/2013	ND	1.97	98.6	2.00	4.07	
Toluene*	<0.200	0.200	10/10/2013	ND	1.99	99.3	2.00	4.73	
Ethylbenzene*	<0.200	0.200	10/10/2013	ND	2.01	100	2.00	4.36	
Total Xylenes*	<0.600	0.600	10/10/2013	ND	5.88	98.1	6.00	4.75	
Total BTEX	<1.20	1.20	10/10/2013	ND					

Surrogate: 4-Bromofluorobenzene (PI) 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	96.0	16.0	10/09/2013	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<200	200	10/10/2013	ND	188	94.1	200	0.921		
DRO >C10-C28	5890	200	10/10/2013	ND	187	93.4	200	0.907		

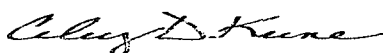
Surrogate: 1-Chlorooctane 77.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 322 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

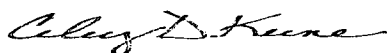
Notes and Definitions

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.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: <u>Linn Energy</u>				BILL TO				ANALYSIS REQUEST																			
Project Manager: <u>Jacob Kamplain</u>				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div> </div>																			
Address:				Company:																							
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u>				Attn:																							
Phone #: Fax #:				Address:																							
Project #: Project Owner:				City:																							
Project Name: <u>H.E. West B#2 Battery</u>				State: Zip:																							
Project Location:				Phone #:																							
Sampler Name: <u>Kyle Schnaidt</u>				Fax #:																							
FOR LAB USE ONLY																											
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX				PRESERV.		SAMPLING													
								GROUNDWATER																			
								WASTEWATER																			
								SOIL																			
								OIL																			
								SLUDGE																			
								OTHER:																			
								ACID/BASE:																			
								ICE / COOL																			
								OTHER:																			
												DATE		TIME													
<u>H302435</u>																											
<u>1 Point 1 @ surface</u>		<u>G</u>		<u>1</u>								<u>10-8-13</u>		<u>9:30</u>		<u>X</u>											
<u>2 Point 2 @ surface</u>		<u>G</u>		<u>1</u>								<u>10-8-13</u>		<u>9:35</u>		<u>X</u>											
<u>3 Point 3 @ surface</u>		<u>G</u>		<u>1</u>										<u>9:40</u>		<u>X</u>											
<u>4 Point 4 @ surface</u>		<u>G</u>		<u>1</u>										<u>9:45</u>		<u>X</u>											
<u>5 Point 5 @ surface</u>		<u>G</u>		<u>1</u>										<u>9:50</u>		<u>X</u>											
<u>6 Point 6 @ surface</u>		<u>G</u>		<u>1</u>										<u>9:55</u>		<u>X</u>											
<u>7 Point 7 @ surface</u>		<u>G</u>		<u>1</u>										<u>10:00</u>		<u>X</u>											

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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		10-8-75	Jodi Henson	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)				Knorman@rice-ecs.com		
Sampler - UPS - Bus - Other:				Kjones@riceswd.com; jkamplain@rice-ecs.com		
				hconder@rice-ecs.com; Lweinheimer@rice-ecs.com		

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

#54

October 31, 2013

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: H. E. WEST B #2 BATTERY

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/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:	10/25/2013	Sampling Date:	10/25/2013
Reported:	10/31/2013	Sampling Type:	Soil
Project Name:	H. E. WEST B #2 BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: POINT 8 @ SURFACE (H302607-01)

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	2.02	101	2.00	0.429	
Toluene*	<0.050	0.050	10/29/2013	ND	2.00	100	2.00	0.174	
Ethylbenzene*	<0.050	0.050	10/29/2013	ND	2.00	99.8	2.00	0.532	
Total Xylenes*	<0.150	0.150	10/29/2013	ND	5.85	97.5	6.00	0.0606	
Total BTEX	<0.300	0.300	10/29/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 103 % 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	56.7	10.0	10/29/2013	ND	202	101	200	1.03	

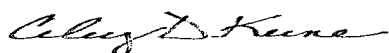
Surrogate: 1-Chlorooctane 99.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 104 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

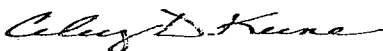
Notes and Definitions

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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Relinquished By: <i>Kyle Schnaidt</i>		Date: 10-26-13 Time: 4:20	Received By: <i>Jodi Henson</i>		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Phone #:
Relinquished By:		Date:	Received By:		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Add'l Fax #:
		Time:			REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition Cool / Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		CHECKED BY: <i>[Signature]</i> (Initials)	kschnaidt@rice-ecs.com Knorman@rice-ecs.com Kjones@riceswd.com; jkamplain@rice-ecs.com hconder@rice-ecs.com; Lweinheimer@rice-ecs.com

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Street, Apt. No., or PO Box No.: 811 S. First St.
City, State, ZIP+4: Artesia NM 88210

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PS Form 3800, August 2006

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1. Article Addressed to: <div>Mike Bratcher NMOCD Environmental Specialist 811 S. First St. Artesia, NM 88210</div>		B. Received by (Printed Name) <u>J. Warren</u> C. Date of Delivery <u>12/6/13</u>	
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