

Rice Environmental Consulting & Safety

P.O. Box 2948, Hobbs, NM 88241

Phone 575.393.2967

September 20th, 2013

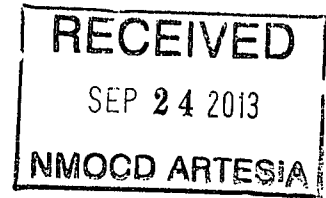
Mr. Michael Burton

Environmental Protection Specialist

BLM

620 E. Greene Street

Carlsbad, NM 88220-6292



RE: Corrective Action Plan

Linn Energy – H.E. West B #85 (2RP-1865)

UL/K sec. 3 T17S R31E

API No. 3001528387

Mr. Burton:

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

An accidental discharge of oil occurred from a pin-hole leak in a poly pipeline on August 18th, 2013. The hole sprayed approximately 5 gallons of oil over 7,402 sq ft of lease road and pasture. The poly line was repaired and an Initial C-141 was submitted to NMOC D and BLM on August 20th, 2013 (Appendix A).

RECS personnel arrived on site on August 23rd, 2013 to assess the site. On August 27th, 2013, BLM Archaeological Department stated that the site was in a previously surveyed area and a MOA was not needed (Appendix B). On September 9th, 2013, BLM gave permission to RECS to conduct sampling at the site. On September 9th, 2013, RECS personnel were on site to conduct initial sampling (Figure). Surface samples and samples at depth were taken at five points within the release and field tested for chlorides and hydrocarbons. Representative samples were taken to a commercial laboratory for analysis (Appendix C). Laboratory chloride readings dropped dramatically from the surface samples to the base of each augur point. GRO, DRO and BTEX readings were non-detect in all points at all depths except for DRO values at the surface that returned results of 594 mg/kg at Pt. 1, 160 mg/kg at Pt. 2 and 257 mg/kg at Pt. 3.

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

Corrective Action Plan


RECS recommends that the site be scraped to a depth of 6 inches and the excavated soil be disposed of at a NMOC D approved facility. A bottom composite will be taken after the scrape to confirm the bottom of the excavation has a chloride value below 1,000 mg/kg. Clean soil will be imported to the site to backfill and contour the site to the surrounding location. The site 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 Corrective Actions are completed, a 'remediation termination' request for site closure will be submitted to BLM and NMOCD along with a Final C-141.

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 'JL.W.' followed by a long, horizontal, wavy line.

Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

cc. Michael Bratcher, NMOCD

Attachments:

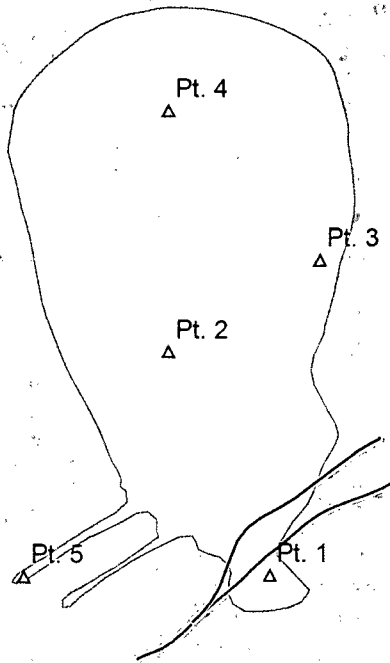
- Figure – Initial Sampling Data
- Appendix A – Initial C-141
- Appendix B – MOA Documentation
- Appendix C – Laboratory Analyses
- Appendix D – Photo Documentation

Figures

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

Initial Sampling Data

Point 1	Cl-	PID	GRO	DRO	B	T	E	X	BTEX
SS	6480	19.1	<10	594	<0.05	<0.05	<0.05	<0.15	<0.3
6"	544	60.2	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
1'	128	16.5	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3



Point 2	Cl-	PID	GRO	DRO	B	T	E	X	BTEX
SS	2240	2.6	<10	160	<0.05	<0.05	<0.05	<0.15	<0.3
6"	160	3.8	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
1'	80	10.3	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3

Point 3	Cl-	PID	GRO	DRO	B	T	E	X	BTEX
SS	1800	1.1	<10	257	<0.05	<0.05	<0.05	<0.15	<0.3
6"	195	2.6							
1'	1071	2.5							
1.5'	48	7.8	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
2'	16	3.6	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3

Point 4	Cl-	PID
SS	339	7.2
6"	144	2.5

Point 5	Cl-	PID
SS	2497	18
6"	328	5.8
1'	168	8.7

Legend

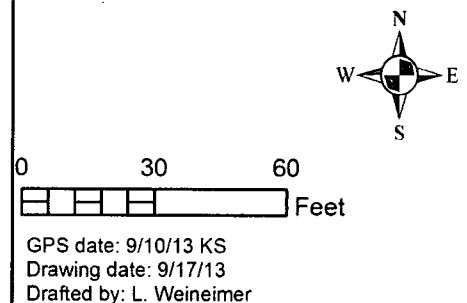
- △ SAMPLE POINTS
- SURFACE PIPELINE
- STAIN (7402 SQ FT)
- CI- FIELD DATA
- CI- LAB DATA

Landowner = BLM

DGW = None



LINN H.E. WEST
B #85
(2RP-1865)
 LEGALS: UL/K SEC. 03
 T17S - R31E
 EDDY COUNTY, NM



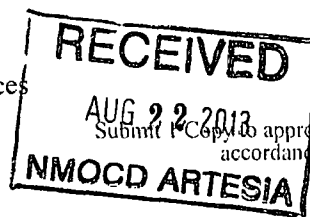
Appendix A

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 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

Release Notification and Corrective Action

JMW 1323840505

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Linn Operating 269324	Contact: Brian Wall
Address: 2130 W. Bender Hobbs, NM 88240	Telephone No.: 575-738-1739
Facility Name: H.E. West B # 85	Facility Type: Oil Producer

Surface Owner: Federal	Mineral Owner:	API No.: 3001528387
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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
K	03	17S	31E	2614	South	2621	West	Eddy

Latitude: 32.86357 Longitude: -103.85696

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 5 gal	Volume Recovered: 0
Source of Release: Poly Pipeline	Date and Hour of Occurrence: 08/18/2013 8:30am	Date and Hour of Discovery: 08/18/2013 8:30am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Burton - BLM	
By Whom? Brian Wall	Date and Hour 08/19/2013 2:00pm	
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.*: 150' from well head on road leading into location a pin hole in the flow line developed. 1 Shut in WB#85 and WB#56 Wells share the same Flow lines until repairs could be made. Possible line fatigue.

Describe Area Affected and Cleanup Action Taken.*: Leak had sprayed fluid and covered an area approximately 25' X 75'

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:

Printed Name: Brian Wall

Title: Construction Foreman II

E-mail Address: bwall@linneenergy.com

Date: 08/20/2013 Phone: 806-367-0645

OIL CONSERVATION DIVISION

Approved by District Supervisor:

Signed By

AUG 26 2013

Approval Date:

Expiration Date:

Conditions of Approval:
Remediation per OCD Rule & Guidelines, &
like approval by BLM. **SUBMIT REMEDIATION**
PROPOSAL NO LATER THAN:

Attached ☐

* Attach Additional Sheets If Necessary

September 26, 2013

2RP-1865

Appendix B

MOA Documentation

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

From: [Galassini, Stacy](#)
To: [Lara Weinheimer](#)
Subject: Re: Linn H.E. West B #85
Date: Tuesday, August 27, 2013 3:29:55 PM

This one is also in a surveyed area.

On Tue, Aug 27, 2013 at 3:27 PM, Lara Weinheimer <lweinheimer@rice-ecs.com> wrote:

Stacy, attached is the shapefile for this release. Could you let me know whether or not we need an MOA, etc. for this site?

Thanks!

Lara Weinheimer

Rice Environmental Consulting & Safety

Project Scientist

419 West Cain

Hobbs, NM 88240

(575) 441-0431

--

Stacy K. Galassini
Archeologist
Bureau of Land Management
Carlsbad Field Office
Carlsbad, NM 88220
575-234-5986

Appendix C

Laboratory Analyses

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

September 16, 2013

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: H. E. WEST B #85

Enclosed are the results of analyses for samples received by the laboratory on 09/11/13 8:35.

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.

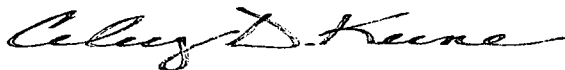
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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: 09/11/2013
 Reported: 09/16/2013
 Project Name: H. E. WEST B #85
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 09/10/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: PT. 1 @ SURFACE (H302194-01)

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	09/12/2013	ND	2.21	110	2.00	3.41	
Toluene*	<0.050	0.050	09/12/2013	ND	2.24	112	2.00	3.30	
Ethylbenzene*	<0.050	0.050	09/12/2013	ND	2.27	114	2.00	3.78	
Total Xylenes*	<0.150	0.150	09/12/2013	ND	6.83	114	6.00	3.82	
Total BTEX	<0.300	0.300	09/12/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 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	6480	16.0	09/12/2013	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	09/12/2013	ND	192	95.9	200	0.724	
DRO >C10-C28	594	10.0	09/12/2013	ND	180	90.0	200	1.81	

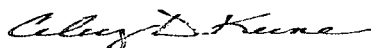
Surrogate: 1-Chlorooctane 86.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 109 % 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: 09/11/2013
Reported: 09/16/2013
Project Name: H. E. WEST B #85
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 09/10/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 1 @ 6" (H302194-02)

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	09/12/2013	ND	2.21	110	2.00	3.41	
Toluene*	<0.050	0.050	09/12/2013	ND	2.24	112	2.00	3.30	
Ethylbenzene*	<0.050	0.050	09/12/2013	ND	2.27	114	2.00	3.78	
Total Xylenes*	<0.150	0.150	09/12/2013	ND	6.83	114	6.00	3.82	
Total BTEX	<0.300	0.300	09/12/2013	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	544	16.0	09/12/2013	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	09/12/2013	ND	192	95.9	200	0.724	
DRO >C10-C28	<10.0	10.0	09/12/2013	ND	180	90.0	200	1.81	


Surrogate: 1-Chlorooctane 72.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 83.4 % 63.6-154

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*=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:	09/11/2013	Sampling Date:	09/10/2013
Reported:	09/16/2013	Sampling Type:	Soil
Project Name:	H. E. WEST B #85	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 1 @ 1' (H302194-03)

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	09/12/2013	ND	2.21	110	2.00	3.41		
Toluene*	<0.050	0.050	09/12/2013	ND	2.24	112	2.00	3.30		
Ethylbenzene*	<0.050	0.050	09/12/2013	ND	2.27	114	2.00	3.78		
Total Xylenes*	<0.150	0.150	09/12/2013	ND	6.83	114	6.00	3.82		
Total BTEX	<0.300	0.300	09/12/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 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	128	16.0	09/12/2013	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	09/12/2013	ND	192	95.9	200	0.724	
DRO >C10-C28	<10.0	10.0	09/12/2013	ND	180	90.0	200	1.81	

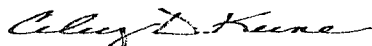
Surrogate: 1-Chlorooctane 83.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 95.2 % 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:	09/11/2013	Sampling Date:	09/10/2013
Reported:	09/16/2013	Sampling Type:	Soil
Project Name:	H. E. WEST B #85	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 2 @ SURFACE (H302194-04)

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	09/12/2013	ND	2.21	110	2.00	3.41	
Toluene*	<0.050	0.050	09/12/2013	ND	2.24	112	2.00	3.30	
Ethylbenzene*	<0.050	0.050	09/12/2013	ND	2.27	114	2.00	3.78	
Total Xylenes*	<0.150	0.150	09/12/2013	ND	6.83	114	6.00	3.82	
Total BTEX	<0.300	0.300	09/12/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 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	2240	16.0	09/12/2013	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	09/12/2013	ND	192	95.9	200	0.724	
DRO >C10-C28	160	10.0	09/12/2013	ND	180	90.0	200	1.81	

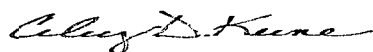
Surrogate: 1-Chlorooctane 96.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 110 % 63.6-154

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* = 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: 09/11/2013
Reported: 09/16/2013
Project Name: H. E. WEST B #85
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 09/10/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: PT. 2 @ 6" (H302194-05)

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	09/12/2013	ND	2.21	110	2.00	3.41	
Toluene*	<0.050	0.050	09/12/2013	ND	2.24	112	2.00	3.30	
Ethylbenzene*	<0.050	0.050	09/12/2013	ND	2.27	114	2.00	3.78	
Total Xylenes*	<0.150	0.150	09/12/2013	ND	6.83	114	6.00	3.82	
Total BTEx	<0.300	0.300	09/12/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 102 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	09/12/2013	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	09/12/2013	ND	192	95.9	200	0.724	
DRO >C10-C28	<10.0	10.0	09/12/2013	ND	180	90.0	200	1.81	


Surrogate: 1-Chlorooctane 77.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 88.1 % 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:	09/11/2013	Sampling Date:	09/10/2013
Reported:	09/16/2013	Sampling Type:	Soil
Project Name:	H. E. WEST B #85	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 2 @ 1' (H302194-06)

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	09/12/2013	ND	2.21	110	2.00	3.41		
Toluene*	<0.050	0.050	09/12/2013	ND	2.24	112	2.00	3.30		
Ethylbenzene*	<0.050	0.050	09/12/2013	ND	2.27	114	2.00	3.78		
Total Xylenes*	<0.150	0.150	09/12/2013	ND	6.83	114	6.00	3.82		
Total BTEX	<0.300	0.300	09/12/2013	ND						

Surrogate: 4-Bromofluorobenzene (PIE) 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	80.0	16.0	09/12/2013	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	09/12/2013	ND	202	101	200	1.28	
DRO >C10-C28	<10.0	10.0	09/12/2013	ND	198	98.9	200	0.838	

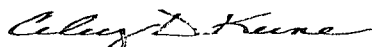
Surrogate: 1-Chlorooctane 74.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 86.4 % 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:	09/11/2013	Sampling Date:	09/10/2013
Reported:	09/16/2013	Sampling Type:	Soil
Project Name:	H. E. WEST B #85	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 3 @ SURFACE (H302194-07)

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	09/12/2013	ND	2.21	110	2.00	3.41	
Toluene*	<0.050	0.050	09/12/2013	ND	2.24	112	2.00	3.30	
Ethylbenzene*	<0.050	0.050	09/12/2013	ND	2.27	114	2.00	3.78	
Total Xylenes*	<0.150	0.150	09/12/2013	ND	6.83	114	6.00	3.82	
Total BTEX	<0.300	0.300	09/12/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 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	1800	16.0	09/12/2013	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	09/12/2013	ND	202	101	200	1.28	
DRO >C10-C28	257	10.0	09/12/2013	ND	198	98.9	200	0.838	

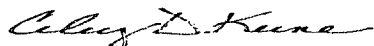
Surrogate: 1-Chlorooctane 65.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 83.4 % 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:	09/11/2013	Sampling Date:	09/10/2013
Reported:	09/16/2013	Sampling Type:	Soil
Project Name:	H. E. WEST B #85	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PT. 3 @ 1.5' (H302194-08)

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	09/12/2013	ND	2.21	110	2.00	3.41	
Toluene*	<0.050	0.050	09/12/2013	ND	2.24	112	2.00	3.30	
Ethylbenzene*	<0.050	0.050	09/12/2013	ND	2.27	114	2.00	3.78	
Total Xylenes*	<0.150	0.150	09/12/2013	ND	6.83	114	6.00	3.82	
Total BTEX	<0.300	0.300	09/12/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 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	48.0	16.0	09/12/2013	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	09/13/2013	ND	202	101	200	1.28	
DRO >C10-C28	<10.0	10.0	09/13/2013	ND	198	98.9	200	0.838	

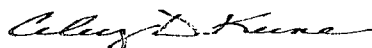
Surrogate: 1-Chlorooctane 77.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 78.3 % 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: 09/11/2013
 Reported: 09/16/2013
 Project Name: H. E. WEST B #85
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 09/10/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: PT. 3 @ 2' (H302194-09)

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	09/12/2013	ND	2.21	110	2.00	3.41	
Toluene*	<0.050	0.050	09/12/2013	ND	2.24	112	2.00	3.30	
Ethylbenzene*	<0.050	0.050	09/12/2013	ND	2.27	114	2.00	3.78	
Total Xylenes*	<0.150	0.150	09/12/2013	ND	6.83	114	6.00	3.82	
Total BTEX	<0.300	0.300	09/12/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 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	09/12/2013	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	09/12/2013	ND	202	101	200	1.28	
DRO >C10-C28	<10.0	10.0	09/12/2013	ND	198	98.9	200	0.838	

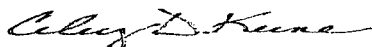
Surrogate: 1-Chlorooctane 70.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 83.0 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

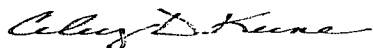
Notes and Definitions

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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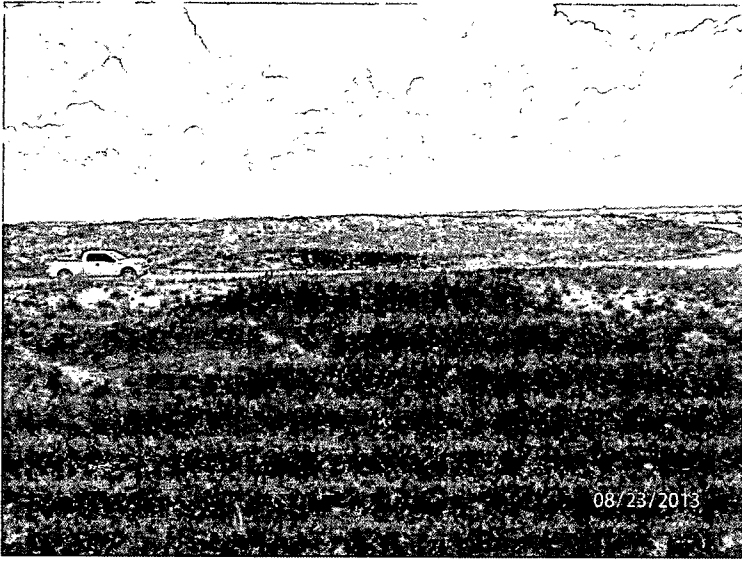
Celey D. Keene, Lab Director/Quality Manager

Appendix D

Photo Documentation

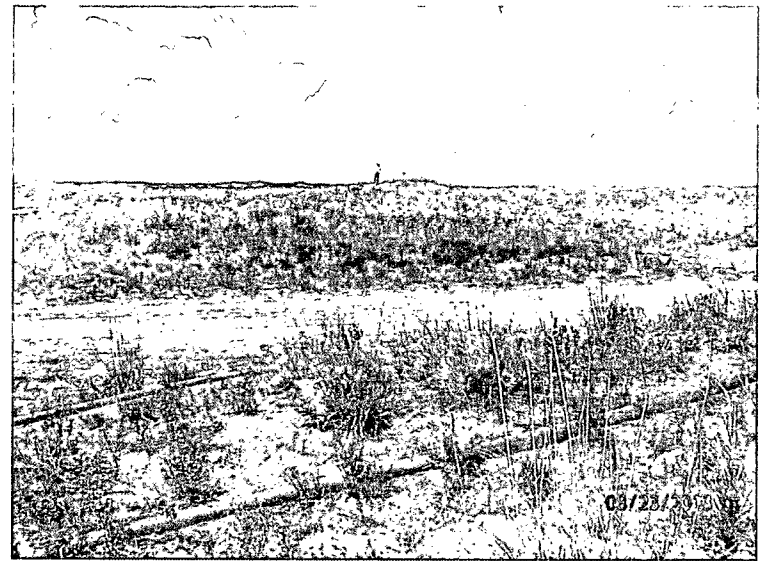
RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

Linn H.E. West B #85
Unit Letter K, Section 3, T17S, R31E



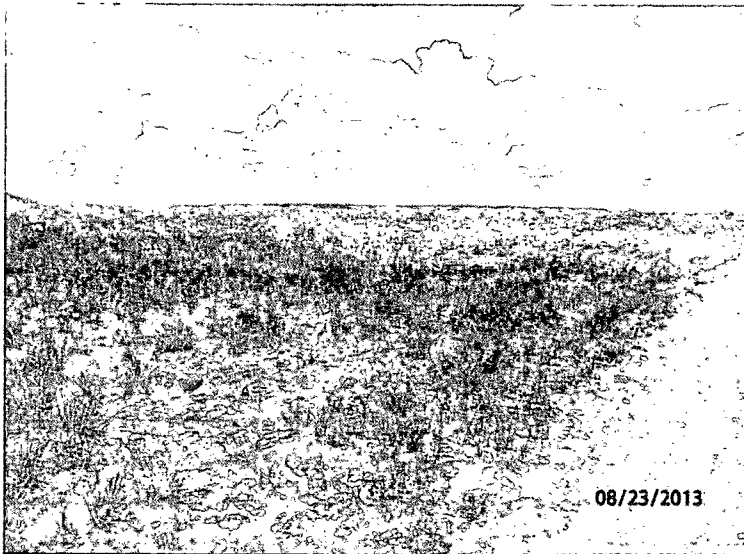
Initial release area, facing south

8/23/13



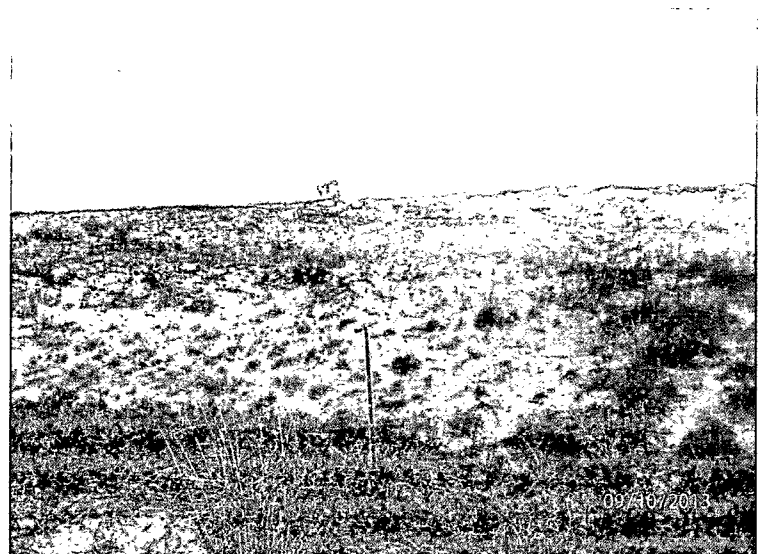
Initial release area, facing north

8/23/13



Initial release area, facing northeast

8/23/13



Auguring for depth, facing southeast

9/10/13



Plugging augur point in total with bentonite, facing east
9/10/13