

LINN ENERGY

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

H.E. West B #83 (2RP-2032)

Updated Corrective Action Plan

API No. 3001528483

Release Date: Unknown

Unit Letter D, Section 4, Township 17S, Range 31E





September 9th, 2014

Mike Bratcher

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

> **RE: Updated Corrective Action Plan** Linn Energy – H.E. West B #83 (2RP-2032) **UL/D sec. 4 T17S R31E** API No. 3001528483

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 northeast of Loco Hills, New Mexico at UL/D sec. 4 T17S R31E. This site is in an area of no known groundwater.

A total of 4,180 square feet of pasture land was affected by a release of 12 barrels of oil. None of this fluid was recovered. An initial C-141 was submitted to NMOCD on October 30th. 2013 and approved on October 31st, 2013 (Appendix A).

Another environmental company had control of the remediation process for this site prior to RECS obtaining it on August 27th, 2013. The previous company sampled the site at the surface and with depth and representative samples were taken to a commercial laboratory for analysis (Figure 1). SP-4 through SP-8 returned laboratory chloride readings near or at non-detectable levels at the surface and with depth (Appendix B). Gasoline Range Organics (GRO) returned readings of non-detect at all points and all depths. Diesel Range Organics (DRO) readings were below regulatory standards at all depth in SP-5. SP-4 and SP-8 returned elevated DRO readings at all depths, and SP-6 and SP-7 returned DRO readings below regulatory standards at 2 ft bgs.

RECS personnel were on site beginning on September 3rd, 2013. The site was GPS mapped and two samples, SP-1 and SP-2, were sampled at the surface and with depth to replace the samples taken by the previous environmental company. The previous company took sample points at such impractical depths that it was impossible to tell at what depths contamination levels dropped below regulatory standards. Representative samples from SP-1 and SP-2 were taken to a commercial laboratory for analysis. SP-1 returned laboratory chloride readings below regulatory standards starting at 1 ft bgs, and SP-2 returned laboratory chloride readings below

regulatory standards starting at 6 inches bgs. GRO values were non-detect in both sample points at all depths, except for SP-2 at 1 ft bgs, where the GRO value was 106 mg/kg. DRO values in SP-1 returned readings at or near non-detectable levels, and SP-2 returned a DRO reading of 3,830 mg/kg at 6 inches bgs and 4,680 mg/kg at 1 ft bgs. BTEX readings in both SP-1 and SP-2 returned readings of non-detect at all depths.

A Corrective Action Plan (CAP) was submitted to NMOCD and BLM on April 4th, 2014. BLM denied the CAP on April 8th, 2014. BLM stated that SP-2, SP-4 and SP-8 had to be delineated further to find the bottom of the DRO contamination.

On May 8th, 2014, RECS personnel were on site to conduct verticals at SP-2, SP-4 and SP-8. SP-4 was advanced to a depth of 3.5 ft bgs, and the 3 ft bgs and 3.5 ft bgs samples were taken to a commercial laboratory for analysis. Both samples returned laboratory chloride, GRO and BTEX readings of non-detect. The 3 ft bgs sample returned a DRO reading of 1,920 mg/kg and the 3.5 ft bgs sample returned a DRO reading of 56.8 mg/kg. SP-8 was advanced to a depth of 7 ft bgs, and the 6.5 ft bgs and 7 ft bgs samples were taken to a commercial laboratory for analysis. The 6.5 ft bgs sample returned a laboratory chloride reading of non-detect, a GRO reading of 180 mg/kg, a DRO reading of 8,360 mg/kg and a BTEX reading of 0.857 mg/kg. The 7 ft bgs sample returned a laboratory chloride reading, a GRO reading and a BTEX reading of non-detect. The 7 ft bgs sample returned a DRO reading of 53 mg/kg.

SP-2 was advanced to a depth of 5 ft bgs, and the sample was taken to a commercial laboratory for analysis. The 5 ft bgs sample returned a laboratory chloride reading of 800 mg/kg, a DRO reading of 6,880 mg/kg and a GRO and BTEX reading of non-detect. Based on this sampling data, a soil bore was installed at this point on July 18th, 2014. SB-1 was installed to a depth of 30 ft bgs, and soil samples were taken every 5 ft. The samples were field tested for chlorides and organic vapors, and representative samples were taken to a commercial laboratory for analysis (Appendix C). The 25 ft bgs and 30 ft bgs samples returned laboratory chloride, GRO, DRO and BTEX readings below regulatory standards.

Photo documentation of the field activities can be found in Appendix D.

Updated Corrective Action Plan

Based on the laboratory sampling data, the areas around SP-1, SP-6 and SP-7 will be scraped down 1 ft, and the area around SP-4 will be scraped down 3.5 ft (Figure 2). Once these excavations have been completed, a bottom composite sample will be taken at each scrape and sent to a commercial laboratory for analysis to confirm that chloride, GRO and DRO readings return values below regulatory standards. SP-2 and SP-8 will be excavated to 4 ft bgs. At the base of both excavations, a 20-mil reinforced poly liner will be installed and properly seated. SP-5 returned sampling data of non-detect for all constituents at the surface and at 2 ft bgs; although, some asphaltine is present on the surface. Therefore, this area will be scraped down 6 inches.

Linn will dispose or remediate the excavated soil in one of two ways. Of the two options, the one implemented will depend on NMOCD and BLM approval and on the ease of implementation of either option once site activities have begun.

Option 1: The excavated soil will be taken to the adjacent H.E. West B #83 lease pad and direct buried (Figure 3). Caliche will be scraped from the pad and piled off to the side. A repository will be excavated to a volume which will encompass the excavated soil from the release, including an additional 4 ft cap of clean top soil. The repository will be lined in entirety with a 20-mil reinforced poly liner. The excavated soil from the release will then be placed in the lined repository, and the top of the repository will be capped with a 20-mil reinforced poly liner. Four feet of clean top soil will be placed over the capped repository, and the scraped caliche will be backfilled over the top soil.

The top soil removed from the lease pad to create the repository will be used to backfill the excavations at the release site and to contour the site to the surrounding area. A sample of the top soil removed from the lease pad will be taken to a commercial laboratory to confirm that chloride, GRO and DRO readings are all below regulatory standards. Clean caliche will be imported to the site to backfill the lease pad. After the site is backfilled, the disturbed area will be seeded with a blend of native vegetation.

Option 2: Excavated soils will be evaluated for use as backfill and any soils that do not meet regulatory standards will be taken to a NMOCD approved facility for disposal. Clean soil will be imported to the site to replace any soils taken for disposal. The clean soil will be blended with the excavated soils to use as backfill. A sample of the blended soil will be taken to a commercial laboratory to confirm that chloride, GRO and DRO readings are all below regulatory standards. The site will be backfilled, and the disturbed area will be seeded with a blend of native vegetation.

Once activities for one of the approved options has been completed, a final report will be submitted to NMOCD and BLM requesting 'remediation termination' and 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

Figure 2 – Proposed Corrective Actions

Figure 3 – Direct Bury Under Lease Pad

Appendix A – Initial C-141

Appendix B – Initial Sampling Labs

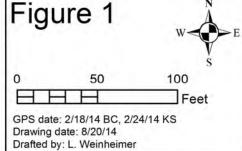
Appendix C – Soil Bore Documentation Appendix D – Photo Documentation

Figures

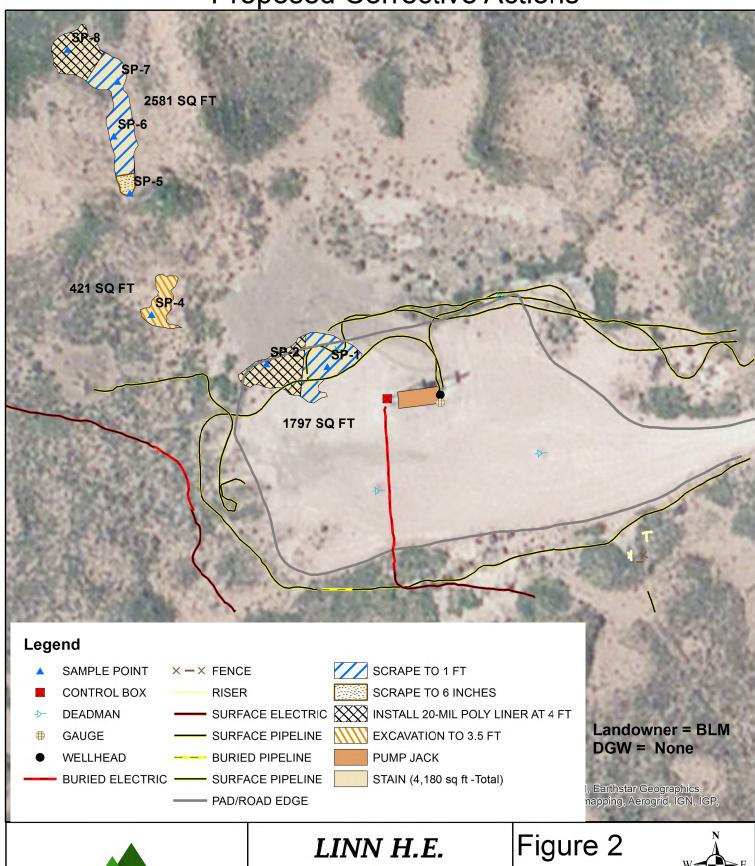
Initial Sampling Data SP-1 PID GRO DRO BTEX SP-3 2580 Surface CI-GRO DRO **BTEX** 6" <1.2 **Surface** <0.05 <0.05 <0.05 <0.15 1' 4 <1.2 <100 2450 1.5 <0.05 <0.05 <0.05 <0.15 SP-2 SP-4 PID GRO DRO **BTEX** PID GRO DRO **BTEX** Surface 1450 Surface < 0.2 <1.2 <100 7210 <0.2 6" 2' 2.5' 194.2 146 1.5' 159.9 823 3' 52.8 <100 1920 <0.05 <0.05 <0.05 <0.15 151.1 <0.05 <0.05 <0.05 18.1 <10 56.8 2.5 1242 187.7 3' 1333 195.2 SP-5 3.5 1561 257 CI-GRO DRO BTEX 4' 1203 165.3 Surface < 0.3 4.5' 741 154.4 2' <10 <0.05 <0.05 <0.05 206.4 <100 6880 <0.05 0.055 <0.05 <0.15 <0.3 SP-8 SP-6 BTEX GRO DRO **SP-7 Surface** <1.2 2581 SQ FT 2' <1.2 SP-6 SP-7 GRO DRO BTEX Surface <1.2 2' <0.2 <1.2 **421 SQ FT** SP-4 SP-25B 1 1797 SQ FT PID GRO DRO 224 <0.05 0.14 0.167 0.319 0.625 Surface 2750 < 0.05 0.11 0.316 0.416 0.84 2' Legend 62 291.2 2.5' SOIL BORE 3' 318.3 3.5 391.3 SAMPLE POINT SB-1 509.8 60 **CONTROL BOX** PID GRO DRO 4.5' 168.2 **DEADMAN** 431 6600 <0.1 0.836 7.96 10' 1650 324 262.3 <100 3970 <0.05 <0.05 0.06 0.478 0.538 15' **GAUGE** 90 166.2 651 20.4 20' WELLHEAD 6' 86 177.9 <10 < 0.05 < 0.05 < 0.05 < 0.15 < 0.3 160 10.1 <10 BURIED ELECTRIC 87.5 180 8360 <0.05 <0.05 0.086 0.77 0.857 6.5 <10 <0.05 <0.05 <0.05 <0.15 <0.3 × - × FENCE 21.2 <10 53 <0.05 <0.05 <0.05 <0.15 <0.3 RISER SURFACE ELECTRIC SURFACE PIPELINE **BURIED PIPELINE** CI- FIELD DATA SURFACE PIPELINE CI- LAB DATA PAD/ROAD EDGE PUMP JACK Landowner = BLM Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community STAIN (4,180 sq ft -Total) DGW = None LINN H.E. Figure 1 **WEST B #83** 2RP-2032 50 100



LEGALS: UL/ D SEC. 4 T17S - R31E EDDY COUNTY, NM



Proposed Corrective Actions

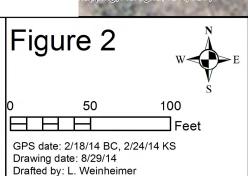




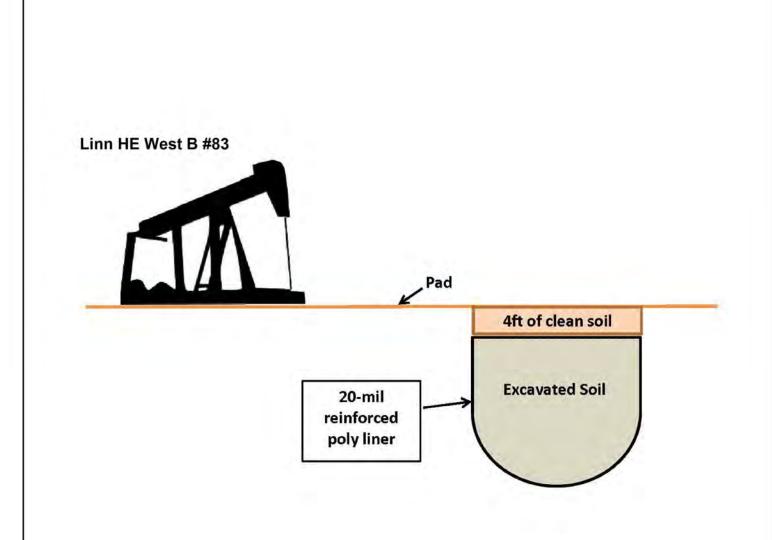
WEST B #83

2RP-2032

LEGALS: UL/ D SEC. 4 T17S - R31E EDDY COUNTY, NM



Direct Bury Under Lease Pad





LINN H.E. WEST B #83

2RP-2032

LEGALS: UL/ D SEC. 4 T17S - R31E EDDY COUNTY, NM

Figure 3



Drawing date: 8/21/14 Drafted by: L. Weinheimer

Appendix A Initial C-141

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

accordance with 19.15.29 NMAC.

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

Submit 1 Copy to appropriate District Office in

Form C-141

Revised August 8, 2011

Release Notification and Corrective Action OPERATOR Initial Report Final Report Contact Brian Wall Name of Company Linn Energy Address 2130 W. Bender Blvd., Hobbs, NM 88240 Telephone No. (806) 367-0645 Facility Name H.E. West B #83 Facility Type Unknown Surface Owner BLM Mineral Owner API No. 3001528483 LOCATION OF RELEASE Unit Letter Feet from the North/South Line Feet from the East/West Line Section Township Range County 31E 1263 17S 1143 FNL FWL. Eddy D 32°52'3.417"N Latitude **Longitude** 103°52'45.861"W NATURE OF RELEASE Type of Release Oil Volume of Release 12 bbls Volume Recovered 0 bbls Source of Release Unknown Date and Hour of Occurrence Date and Hour of Discovery Unknown Unknown Was Immediate Notice Given? If YES, To Whom? ☐ Yes ☐ Not Required By Whom? Date and Hour Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ☒ No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* A total of 4,180 sq ft of lease pad and pasture land was affected by the release of 12 bbls of oil. On August 1st, 2013, personnel were on site to assess the release. Describe Area Affected and Cleanup Action Taken.* The site will be assessed vertically and horizontally and a Corrective Action Plan will be written with recommendations to remediate the site. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. **OIL CONSERVATION DIVISION** Fred B Wall Signature: Approved by Environmental Specialist: Printed Name: Brian Wall Title: Construction Foreman II Approval Date: Expiration Date: E-mail Address: Bwall@linnenergy.com Conditions of Approval: Attached Phone: (806) 367-0645

^{*} Attach Additional Sheets If Necessary

Appendix B Initial Sampling Labs



August 26, 2013

BRIAN WALL

LINN ENERGY

RR1, BOX 24 B

KINGFISHER, OK 73750

RE: H. E. WEST B #83

Enclosed are the results of analyses for samples received by the laboratory on 08/20/13 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accred certif.html.

Cardinal Laboratories is accreditated 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.

Celey D. Keene

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



LINN ENERGY BRIAN WALL RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/20/2013 Sampling Date: 08/16/2013

Reported: 08/26/2013 Sampling Type: Soil
Project Name: H. E. WEST B #83 Sampling Condition: Coo

Project Name:H. E. WEST B #83Sampling Condition:Cool & IntactProject Number:NONE GIVENSample Received By:Jodi HensonProject Location:MALJAMAR, NM

Sample ID: SP 2 @ 13' (H301988-01)

BTEX 8021B	mg/	kg	Analyze	d By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/24/2013	ND	2.22	111	2.00	0.267	
Toluene*	<0.050	0.050	08/24/2013	ND	2.24	112	2.00	0.586	
Ethylbenzene*	<0.050	0.050	08/24/2013	ND	2.31	116	2.00	1.26	
Total Xylenes*	<0.150	0.150	08/24/2013	ND	7.01	117	6.00	1.16	
Total BTEX	<0.300	0.300	08/24/2013	ND					
Surrogate: 4-Bromofluorobenzene (PID	99.2	% 89.4-12	6						
Chloride, SM4500CI-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	720	16.0	08/22/2013	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/23/2013	ND	190	94.8	200	4.64	
DRO >C10-C28	12.4	10.0	08/23/2013	ND	194	97.1	200	5.21	
Surrogate: 1-Chlorooctane	66.0	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	81.9	% 63.6-15	4						

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

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analyses. All claims including service. In no event shall C	ng those for negligence and any othe ardinal be liable for incidental or cons	r cause whatsoever shall be sequental damages, includin	deeme	d waive d limital	d unless m tion, busine	ade in w ess interr	riting and uptions	d receive loss of u	ed by Ca ase, or lo	ardinal v oss of p	within 30 days afte rofits incurred by o	r completion of client, its subsidi	the applica aries,	ible		::: :		1	:	-::::				-::::
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† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



August 12, 2013

GARY WINK

LINN ENERGY

RR1, BOX 24 B

KINGFISHER, OK 73750

RE: H. E. WEST B #83

Enclosed are the results of analyses for samples received by the laboratory on 08/06/13 16:05.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accred certif.html.

Cardinal Laboratories is accreditated 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.

Celey D. Keens

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



LINN ENERGY **GARY WINK** RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/01/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact Project Number: NONE GIVEN Sample Received By: Jodi Henson

A ... - L ... - - - I D. .. MC

Project Location: MALJAMAR, NM

Sample ID: SP 1 @ SURFACE (H301837-01)

BTEX 8260B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/09/2013	ND	2.36	118	2.00	1.28	
Toluene*	<0.050	0.050	08/09/2013	ND	2.18	109	2.00	1.44	
Ethylbenzene*	<0.050	0.050	08/09/2013	ND	2.18	109	2.00	1.12	
Total Xylenes*	<0.150	0.150	08/09/2013	ND	6.44	107	6.00	1.13	
Total BTEX	<0.300	0.300	08/09/2013	ND					
Surrogate: Dibromofluoromethane	101	% 61.3-14	22						
Surrogate: Toluene-d8	95.1	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	99.2	% 65.7-14	1						
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1250	16.0	08/08/2013	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/09/2013	ND	184	92.1	200	8.72	
DRO >C10-C28	125	10.0	08/09/2013	ND	190	95.0	200	11.6	
Surrogate: 1-Chlorooctane	94.1	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	115	% 63.6-15	4						

115 % Surrogate: 1-Chlorooctadecane 63.6-154

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Celey D. Keene, Lab Director/Quality Manager



LINN ENERGY GARY WINK RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/01/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: MALJAMAR, NM

Sample ID: SP 1 @ 4' (H301837-02)

BTEX 8260B	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/09/2013	ND	2.36	118	2.00	1.28	
Toluene*	<0.050	0.050	08/09/2013	ND	2.18	109	2.00	1.44	
Ethylbenzene*	<0.050	0.050	08/09/2013	ND	2.18	109	2.00	1.12	
Total Xylenes*	<0.150	0.150	08/09/2013	ND	6.44	107	6.00	1.13	
Total BTEX	<0.300	0.300	08/09/2013	ND					
Surrogate: Dibromofluoromethane	99.7	% 61.3-14	2						
Surrogate: Toluene-d8	94.5	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	96.0	% 65.7-14	1						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	ed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	08/08/2013	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/09/2013	ND	184	92.1	200	8.72	
DRO >C10-C28	<10.0	10.0	08/09/2013	ND	190	95.0	200	11.6	
Surrogate: 1-Chlorooctane	98.9	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	120	% 63.6-15	4						

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KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/01/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact Project Number: Sample Received By: NONE GIVEN Jodi Henson

Project Location: MALJAMAR, NM

Sample ID: SP 2 @ SURFACE (H301837-03)

BTEX 8260B	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	08/09/2013	ND	2.36	118	2.00	1.28	
Toluene*	0.285	0.200	08/09/2013	ND	2.18	109	2.00	1.44	
Ethylbenzene*	0.408	0.200	08/09/2013	ND	2.18	109	2.00	1.12	
Total Xylenes*	0.834	0.600	08/09/2013	ND	6.44	107	6.00	1.13	
Total BTEX	1.53	1.20	08/09/2013	ND					
Surrogate: Dibromofluoromethane	99.5	% 61.3-14	2						
Surrogate: Toluene-d8	95.3	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	103	% 65.7-14	1						
Chloride, SM4500Cl-B	mg,	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1100	16.0	08/08/2013	ND	416	104	400	0.00	
TPH 8015M	mg,	kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	08/09/2013	ND	184	92.1	200	8.72	
DRO >C10-C28	13500	100	08/09/2013	ND	190	95.0	200	11.6	
Surrogate: 1-Chlorooctane	91.5	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	360	% 63.6-15	4						

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LINN ENERGY GARY WINK RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/02/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Analyzed By: MC

Project Location: MALJAMAR, NM

ma/ka

Sample ID: SP 2 @ 5' (H301837-04)

RTFY 8260R

B1EX 8260B	mg/	кд	Analyze	а ву: м5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	08/09/2013	ND	2.36	118	2.00	1.28	
Toluene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.44	
Ethylbenzene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.12	
Total Xylenes*	<0.600	0.600	08/09/2013	ND	6.44	107	6.00	1.13	
Total BTEX	<1.20	1.20	08/09/2013	ND					
Surrogate: Dibromofluoromethane	98.0	% 61.3-14	22						
Surrogate: Toluene-d8	95.4	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	118	% 65.7-14	1						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	ed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	08/08/2013	ND	416	104	400	0.00	
TPH 8015M	mg,	'kg	Analyze	ed By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<200	200	08/09/2013	ND	184	92.1	200	8.72	
DRO >C10-C28	7600	200	08/09/2013	ND	190	95.0	200	11.6	
Surrogate: 1-Chlorooctane	97.0	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	253	% 63.6-15	4						

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KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/02/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact Sample Received By: Project Number: NONE GIVEN Jodi Henson

Analyzed By: MC

Project Location: MALJAMAR, NM

Sample ID: SP 3 @ SURFACE (H301837-05)

RTFY 8260R

B1EX 8260B	mg	/ Kg	Anaiyze	a By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	08/09/2013	ND	2.36	118	2.00	1.28	
Toluene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.44	
Ethylbenzene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.12	
Total Xylenes*	<0.600	0.600	08/09/2013	ND	6.44	107	6.00	1.13	
Total BTEX	<1.20	1.20	08/09/2013	ND					
Surrogate: Dibromofluoromethane	101	% 61.3-14	22						
Surrogate: Toluene-d8	94.7	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	103	% 65.7-14	1						
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/08/2013	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	08/09/2013	ND	184	92.1	200	8.72	
DRO >C10-C28	5510	100	08/09/2013	ND	190	95.0	200	11.6	
Surrogate: 1-Chlorooctane	92.4	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	227	% 63.6-15	4						

Surrogate: 1-Chlorooctadecane

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Celey D. Keene, Lab Director/Quality Manager



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KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/02/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Analyzed By: MC

Project Location: MALJAMAR, NM

ma/ka

Sample ID: SP 3 @ 2' (H301837-06)

RTFY 8260R

B1EX 8260B	mg,	/ kg	Analyze	а ву: м5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	08/09/2013	ND	2.36	118	2.00	1.28	
Toluene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.44	
Ethylbenzene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.12	
Total Xylenes*	<0.600	0.600	08/09/2013	ND	6.44	107	6.00	1.13	
Total BTEX	<1.20	1.20	08/09/2013	ND					
Surrogate: Dibromofluoromethane	98.2	% 61.3-14	22						
Surrogate: Toluene-d8	96.9	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	106	% 65.7-14	1						
Chloride, SM4500Cl-B	mg	/kg	Analyze	ed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/09/2013	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	ed By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	08/09/2013	ND	184	92.1	200	8.72	
DRO >C10-C28	2450	100	08/09/2013	ND	190	95.0	200	11.6	
Surrogate: 1-Chlorooctane	92.1	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	170	% 63.6-15	4						

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KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/02/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact Project Number: Sample Received By: NONE GIVEN Jodi Henson

Project Location: MALJAMAR, NM

Sample ID: SP 4 @ SURFACE (H301837-07)

BTEX 8260B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	08/09/2013	ND	2.36	118	2.00	1.28	
Toluene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.44	
Ethylbenzene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.12	
Total Xylenes*	<0.600	0.600	08/09/2013	ND	6.44	107	6.00	1.13	
Total BTEX	<1.20	1.20	08/09/2013	ND					
Surrogate: Dibromofluoromethane	97.4	% 61.3-14	2						
Surrogate: Toluene-d8	97.2	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	120	% 65.7-14	1						
Chloride, SM4500CI-B	mg,	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	08/09/2013	ND	416	104	400	0.00	
TPH 8015M	mg,	'kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	08/09/2013	ND	184	92.1	200	8.72	
DRO >C10-C28	7210	100	08/09/2013	ND	190	95.0	200	11.6	
Surrogate: 1-Chlorooctane	109	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	243	% 63.6-15	4						

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LINN ENERGY **GARY WINK** RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/02/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact Sample Received By: Project Number: NONE GIVEN Jodi Henson

Project Location: MALJAMAR, NM

Sample ID: SP 4 @ 2' (H301837-08)

BTEX 8260B	mg	/kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	08/09/2013	ND	2.36	118	2.00	1.28	
Toluene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.44	
Ethylbenzene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.12	
Total Xylenes*	<0.600	0.600	08/09/2013	ND	6.44	107	6.00	1.13	
Total BTEX	<1.20	1.20	08/09/2013	ND					
Surrogate: Dibromofluoromethane	98.3	% 61.3-14	2						
Surrogate: Toluene-d8	95.1	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	142	% 65.7-14	1						
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/09/2013	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	08/09/2013	ND	191	95.5	200	0.596	
DRO >C10-C28	3320	100	08/09/2013	ND	204	102	200	0.0598	
Surrogate: 1-Chlorooctane	107	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	181	% 63.6-15	14						

181 % Surrogate: 1-Chlorooctadecane 63.6-154

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LINN ENERGY GARY WINK RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/02/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Analyzed By: MC

Project Location: MALJAMAR, NM

Sample ID: SP 5 @ SURFACE (H301837-09)

RTFY 8260R

B1EX 8260B	mg,	/ Kg	Analyze	а ву: м5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/09/2013	ND	2.36	118	2.00	1.28	
Toluene*	<0.050	0.050	08/09/2013	ND	2.18	109	2.00	1.44	
Ethylbenzene*	<0.050	0.050	08/09/2013	ND	2.18	109	2.00	1.12	
Total Xylenes*	<0.150	0.150	08/09/2013	ND	6.44	107	6.00	1.13	
Total BTEX	<0.300	0.300	08/09/2013	ND					
Surrogate: Dibromofluoromethane	97.5	% 61.3-14	2						
Surrogate: Toluene-d8	96.0	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	98.5	% 65.7-14	1						
Chloride, SM4500Cl-B	mg	/kg	Analyze	ed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/09/2013	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/10/2013	ND	183	91.3	200	3.63	
DRO >C10-C28	<10.0	10.0	08/10/2013	ND	189	94.4	200	3.98	
Surrogate: 1-Chlorooctane	99.3	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	121	% 63.6-15	4						

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LINN ENERGY GARY WINK RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/02/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Analyzed By: MC

Project Location: MALJAMAR, NM

ma/ka

Sample ID: SP 5 @ 2' (H301837-10)

RTFY 8260R

B1EX 8260B	mg,	/ Kg	Analyze	a By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/09/2013	ND	2.36	118	2.00	1.28	
Toluene*	<0.050	0.050	08/09/2013	ND	2.18	109	2.00	1.44	
Ethylbenzene*	<0.050	0.050	08/09/2013	ND	2.18	109	2.00	1.12	
Total Xylenes*	<0.150	0.150	08/09/2013	ND	6.44	107	6.00	1.13	
Total BTEX	<0.300	0.300	08/09/2013	ND					
Surrogate: Dibromofluoromethane	99.4	% 61.3-14	2						
Surrogate: Toluene-d8	95.5	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	98.1	% 65.7-14	1						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/09/2013	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/10/2013	ND	183	91.3	200	3.63	
DRO >C10-C28	<10.0	10.0	08/10/2013	ND	189	94.4	200	3.98	
Surrogate: 1-Chlorooctane	97.3	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	120	% 63.6-15	4						

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LINN ENERGY **GARY WINK** RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/02/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact Sample Received By: Project Number: NONE GIVEN Jodi Henson

Project Location: MALJAMAR, NM

Sample ID: SP 6 @ SURFACE (H301837-11)

BTEX 8260B	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	08/09/2013	ND	2.36	118	2.00	1.28	
Toluene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.44	
Ethylbenzene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.12	
Total Xylenes*	<0.600	0.600	08/09/2013	ND	6.44	107	6.00	1.13	
Total BTEX	<1.20	1.20	08/09/2013	ND					
Surrogate: Dibromofluoromethane	99.8	% 61.3-14	2						
Surrogate: Toluene-d8	96.0	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	97.8	% 65.7-14	1						
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	08/09/2013	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	08/10/2013	ND	183	91.3	200	3.63	
DRO >C10-C28	2160	100	08/10/2013	ND	189	94.4	200	3.98	
Surrogate: 1-Chlorooctane	91.6	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	213	% 63.6-15	4						

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Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager



LINN ENERGY GARY WINK RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/02/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Analyzed By: MC

Project Location: MALJAMAR, NM

ma/ka

Sample ID: SP 6 @ 2' (H301837-12)

RTFY 8260R

B1EX 8260B	mg,	/ Kg	Analyze	а ву: м5					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	08/09/2013	ND	2.36	118	2.00	1.28	
Toluene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.44	
Ethylbenzene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.12	
Total Xylenes*	<0.600	0.600	08/09/2013	ND	6.44	107	6.00	1.13	
Total BTEX	<1.20	1.20	08/09/2013	ND					
Surrogate: Dibromofluoromethane	98.6	% 61.3-14	12						
Surrogate: Toluene-d8	95.8	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	99.1	% 65.7-14	11						
Chloride, SM4500Cl-B	mg	/kg	Analyze	ed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/09/2013	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	ed By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	08/10/2013	ND	183	91.3	200	3.63	
DRO >C10-C28	681	100	08/10/2013	ND	189	94.4	200	3.98	
Surrogate: 1-Chlorooctane	95.6	% 65.2-14	10						
Surrogate: 1-Chlorooctadecane	180	% 63.6-15	i4						

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LINN ENERGY **GARY WINK** RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/02/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact Sample Received By: Project Number: NONE GIVEN Jodi Henson Project Location: MALJAMAR, NM

Analyzed By: MC

Sample ID: SP 7 @ SURFACE (H301837-13)

RTFY 8260R

B1EX 8260B	mg,	/ Kg	Analyze	a By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	08/09/2013	ND	2.36	118	2.00	1.28	
Toluene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.44	
Ethylbenzene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.12	
Total Xylenes*	<0.600	0.600	08/09/2013	ND	6.44	107	6.00	1.13	
Total BTEX	<1.20	1.20	08/09/2013	ND					
Surrogate: Dibromofluoromethane	97.2	% 61.3-14	2						
Surrogate: Toluene-d8	97.2	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	99.4	% 65.7-14	1						
Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/09/2013	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	08/10/2013	ND	183	91.3	200	3.63	
DRO >C10-C28	5880	100	08/10/2013	ND	189	94.4	200	3.98	
Surrogate: 1-Chlorooctane	87.7	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	282	% 63.6-15	4						

Surrogate: 1-Chlorooctadecane 63.6-154

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MALJAMAR, NM

Analytical Results For:

LINN ENERGY **GARY WINK** RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/02/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact Sample Received By: Project Number: NONE GIVEN Jodi Henson

Sample ID: SP 7 @ 2' (H301837-14)

Project Location:

BTEX 8260B	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	08/09/2013	ND	2.36	118	2.00	1.28	
Toluene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.44	
Ethylbenzene*	<0.200	0.200	08/09/2013	ND	2.18	109	2.00	1.12	
Total Xylenes*	<0.600	0.600	08/09/2013	ND	6.44	107	6.00	1.13	
Total BTEX	<1.20	1.20	08/09/2013	ND					
Surrogate: Dibromofluoromethane	97.9	% 61.3-14	2						
Surrogate: Toluene-d8	96.1	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	99.7	% 65.7-14	1						
Chloride, SM4500Cl-B	mg,	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/09/2013	ND	416	104	400	0.00	
TPH 8015M	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/10/2013	ND	183	91.3	200	3.63	
DRO >C10-C28	405	10.0	08/10/2013	ND	189	94.4	200	3.98	
Surrogate: 1-Chlorooctane	98.3	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	128	% 63.6-15	4						

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LINN ENERGY **GARY WINK** RR1, BOX 24 B

KINGFISHER OK, 73750 Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/02/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact Sample Received By: Project Number: NONE GIVEN Jodi Henson

Project Location: MALJAMAR, NM

Sample ID: SP 8 @ SURFACE (H301837-15)

BTEX 8260B	mg,	'kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/10/2013	ND	2.17	108	2.00	3.04	
Toluene*	0.139	0.050	08/10/2013	ND	1.97	98.7	2.00	2.03	
Ethylbenzene*	0.167	0.050	08/10/2013	ND	1.97	98.5	2.00	2.23	
Total Xylenes*	0.319	0.150	08/10/2013	ND	5.82	97.0	6.00	2.41	
Total BTEX	0.625	0.300	08/10/2013	ND					
Surrogate: Dibromofluoromethane	97.8	% 61.3-14	2						
Surrogate: Toluene-d8	94.1	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	98.7	% 65.7-14	1						
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	08/09/2013	ND	416	104	400	0.00	
TPH 8015M	mg,	'kg	Analyze	ed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	08/10/2013	ND	183	91.3	200	3.63	
DRO >C10-C28	224	50.0	08/10/2013	ND	189	94.4	200	3.98	
Surrogate: 1-Chlorooctane	93.9	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	129	% 63.6-15	4						

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LINN ENERGY GARY WINK RR1, BOX 24 B KINGFISHER OK, 73750

Fax To: (405) 375-6693

Received: 08/06/2013 Sampling Date: 08/02/2013

Reported: 08/12/2013 Sampling Type: Soil

Project Name: H. E. WEST B #83 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Analyzed By: MC

Project Location: MALJAMAR, NM

ma/ka

Sample ID: SP 8 @ 2' (H301837-16)

RTFY 8260R

B1EX 8260B	mg/	кд	Analyze	a By: MS					5-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/10/2013	ND	2.17	108	2.00	3.04	
Toluene*	0.108	0.050	08/10/2013	ND	1.97	98.7	2.00	2.03	
Ethylbenzene*	0.316	0.050	08/10/2013	ND	1.97	98.5	2.00	2.23	
Total Xylenes*	0.416	0.150	08/10/2013	ND	5.82	97.0	6.00	2.41	
Total BTEX	0.840	0.300	08/10/2013	ND					
Surrogate: Dibromofluoromethane	99.6	% 61.3-14	2						
Surrogate: Toluene-d8	95.0	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	162 %	65.7-14	1						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/09/2013	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<50.0	50.0	08/10/2013	ND	183	91.3	200	3.63	
DRO >C10-C28	2750	50.0	08/10/2013	ND	189	94.4	200	3.98	
Surrogate: 1-Chlorooctane	105 %	65.2-14	0						
Surrogate: 1-Chlorooctadecane	168 %	63.6-15	4						

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Celey D. Keene

S-04



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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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240

(575) 393-2326 FAX (575) 393-2476		
Company Name: Linn Energy	314-70	ANALYSIS REQUEST
Project Manager: (Gary Wink)	P.O. #:	
Address:	Company:	
City: State: Zip:	Attn:	
Phone #: Fax #:	Address:	
Project #: Project Owner:	city: S	
Project Name: H.E. West R #83	State: Zip:	
Project Location: Maljamar	Phone #:	
Sampler Name: Idaniel locaha/+	Fax #:	
FOR LAB USE ONLY MATRIX	PRESERV. SAMPLING	
C)OMP		
A (C) A (C) VERS		
Lab I.D. Sample I.D.	R. SOO R	
Tap I.D. Sample I.D. (c) RAB OR (C) OIL WASTEWATER SOIL OIL OIL	OTHER: SACID/BASE: OTHER: ACID/BASE: OTHER: ACID/BASE: ACID/	
1 5810 Surf G1 V	8-1-09:50 2 2	Title 1 State
2 SPIQ 4' GII V	1 8-1-1310:13 2 2 3	
	1 8-1-13 12:56 3 3 3	
3 5P2@ such GI V 4 5P2@ 5 GI V	V 8-2-13 8:04 > 2 3	
5 5P3@suf 51 V	V & 273 9:00 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
	V 8-2-13 9:20 3 3 3	
7 SP\$ @ SU/F GI /	8-2-13 10:00 2 2 2	
\$ 57402' SHV	V 8-2-13 10:06 = = =	
9 5 P 5@ SUG 61	8-2-13 10:48	
PLEASE NOTE: Liability and Damages, Cardinat's liability and client's exclusive remedy for any claim arising whether based in co	act or fort, shall be limited to the amount gaid by the client for the	
PLEASE NOTE: Liability and parages. Catastats liability and clears exclusive remest to any other cases. analyses. All claims including those for negligence and any other cases whatsoever shall be deemed waived unless made in writing the common property of the cases of the common property of the cases. The common property is not unless that the common property is not		

affiliates or successors arising out of or related to the performance of	f services hereunder by C	ardinal, regardless of whether such claim is based upon any of the above stated fea	sons or otherwise.	enter the second	The state of the s
Relinguished By:	Date! 117	Received By:	Phone Result:	Add'l Phone #:	·
	בון שום	100.11	Fax Result: ☐ Yes ☐ No	Add'l Fax #:	
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Delivered By: (Circle One)		Sample Condition CHECKED BY:	Ticula (Aire	mi ind The	4.400
	169	Cool Intact (Initials)	AT WENIGO CHUE	rsi-jed +si,	COTT
Sampler - UPS - Bus - Other:	-12	Yes Yes			
		No No			



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476

	75) 393-2326 FAX (575) 393-2470		<u> </u>								-				 	
Company Name:	Linn Energy				LL TO	200 200		<u> </u>		NAL	YSIS	S RE	QUE	ST	1	
Project Manager:	Chary Wirth			P.O. #:	/	1								·		
Address:	J		·	Company:										:	:	
City:	State:	Zip:		Attn:	2010			ŀ		.					. 1	
Phone #:	Fax #:			Address:	ar.											
Project #:	Project Owner			City:	1,			· · · · ·								
	EWest B#83			State:	Zip:		8		-							
Project Location:	Malgargar			Phone #:	1111				I							
Sampler Name: 🛭	Vaniel Lockhart			Fax #:				i · i			• • •	11111	ŀ			
FOR LAB USE ONLY		0	MATRIX	PRESERV.	SAMPLING	-	0		.:]				1 ::-			:
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		A (C)	NAT	ر انن		٥	1						HH.			. ::::
Lab I.D.	Sample I.D.	B OR	JND)	BAS COO		17	D									
H301837		(G)RAB OR (C)C # CONTAINERS	GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER: ACID/BASE: ICE / COOL OTHER:	DATE TIME	$ \infty $	1		ł							
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affiliates or successors arising out of or related to the performance of	r services hereunder by Cardinal, rep	arciess of whether such claim is based upon any of the above state	u reasons of otherwise.		and the second s	and the second s	
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March 05, 2014

JACOB KAMPLAIN
RICE ENVIRONMENTAL CONSULTING & SAFETY LLC
419 W. CAIN
HOBBS, NM 88240

RE: H. E. WEST B FEDERAL #083

Enclosed are the results of analyses for samples received by the laboratory on 03/04/14 16:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab-accred-certif.html.

Cardinal Laboratories is accreditated 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.

Celes D. Keens

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



RICE ENVIRONMENTAL CONSULTING & SAFETY JACOB KAMPLAIN

419 W. CAIN HOBBS NM, 88240

Fax To: (575) 397-1471

Received: 03/04/2014 Sampling Date: 03/04/2014

Reported: 03/05/2014 Sampling Type: Soil

Project Name: H. E. WEST B FEDERAL #083 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: LINN ENERGY

Sample ID: POINT 1 @ 1' (H400660-01)

BTEX 8260B	mg,	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/05/2014	ND	2.24	112	2.00	0.979	
Toluene*	<0.050	0.050	03/05/2014	ND	2.33	117	2.00	0.332	
Ethylbenzene*	<0.050	0.050	03/05/2014	ND	2.28	114	2.00	2.39	
Total Xylenes*	<0.150	0.150	03/05/2014	ND	6.91	115	6.00	1.92	
Total BTEX	<0.300	0.300	03/05/2014	ND					
Surrogate: Dibromofluoromethane	97.0	% 61.3-14	2						
Surrogate: Toluene-d8	102	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	100	% 65.7-14	1						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	896	16.0	03/05/2014	ND	416	104	400	3.92	
TPH 8015M	mg,	'kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/05/2014	ND	208	104	200	7.01	
DRO >C10-C28	26.4	10.0	03/05/2014	ND	204	102	200	6.86	
Surrogate: 1-Chlorooctane	103	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	108	% 63.6-15	4						

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



RICE ENVIRONMENTAL CONSULTING & SAFETY

JACOB KAMPLAIN 419 W. CAIN

HOBBS NM, 88240

Fax To: (575) 397-1471

Received: 03/04/2014 Sampling Date: 03/04/2014

Reported: 03/05/2014 Sampling Type: Soil

Project Name: H. E. WEST B FEDERAL #083 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Analyzed By: MS

Project Location: LINN ENERGY

Sample ID: POINT 1 @ 1.5' (H400660-02)

BTEX 8260B

BIEX 8200B	Result Reporting Limit	Anaiyze	а ву: мэ						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	03/05/2014	ND	2.24	112	2.00	0.979	
Toluene*	<0.050	0.050	03/05/2014	ND	2.33	117	2.00	0.332	
Ethylbenzene*	<0.050	0.050	03/05/2014	ND	2.28	114	2.00	2.39	
Total Xylenes*	<0.150	0.150	03/05/2014	ND	6.91	115	6.00	1.92	
Total BTEX	<0.300	0.300	03/05/2014	ND					
Surrogate: Dibromofluoromethane	97.1	% 61.3-14	2						
Surrogate: Toluene-d8	103 9	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	102 9	% 65.7-14	1						
Chloride, SM4500CI-B	mg/	/kg	Analyze	ed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	784	16.0	03/05/2014	ND	416	104	400	3.92	
TPH 8015M	mg/	'kg	Analyze	ed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	03/05/2014	ND	208	104	200	7.01	
DRO >C10-C28	<10.0	10.0	03/05/2014	ND	204	102	200	6.86	
Surrogate: 1-Chlorooctane	101 9	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	102 9	% 63.6-15	4						

Cardinal Laboratories *=Accredited Analyte

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RICE ENVIRONMENTAL CONSULTING & SAFETY JACOB KAMPLAIN

419 W. CAIN HOBBS NM, 88240

Fax To: (575) 397-1471

Received: 03/04/2014 Sampling Date: 03/04/2014

Reported: 03/05/2014 Sampling Type: Soil

Project Name: H. E. WEST B FEDERAL #083 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: LINN ENERGY

Sample ID: POINT 2 @ 6" (H400660-03)

BTEX 8260B	mg/	/kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	03/05/2014	ND	2.24	112	2.00	0.979	
Toluene*	<0.100	0.100	03/05/2014	ND	2.33	117	2.00	0.332	
Ethylbenzene*	<0.100	0.100	03/05/2014	ND	2.28	114	2.00	2.39	
Total Xylenes*	<0.300	0.300	03/05/2014	ND	6.91	115	6.00	1.92	
Total BTEX	<0.600	0.600	03/05/2014	ND					
Surrogate: Dibromofluoromethane	99.3	% 61.3-14	12						
Surrogate: Toluene-d8	103 9	% 71.3-12	19						
Surrogate: 4-Bromofluorobenzene	187 5	% 65.7-14	!1						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	639	16.0	03/05/2014	ND	416	104	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: ms					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	03/05/2014	ND	208	104	200	7.01	
DRO >C10-C28	3830	100	03/05/2014	ND	204	102	200	6.86	
Surrogate: 1-Chlorooctane	83.7	% 65.2-14	10						
Surrogate: 1-Chlorooctadecane	192 9	% 63.6-15	14						

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RICE ENVIRONMENTAL CONSULTING & SAFETY JACOB KAMPLAIN

419 W. CAIN HOBBS NM, 88240

Fax To: (575) 397-1471

Received: 03/04/2014 Sampling Date: 03/04/2014

Reported: 03/05/2014 Sampling Type: Soil

Project Name: H. E. WEST B FEDERAL #083 Sampling Condition: Cool & Intact Sample Received By: Project Number: NONE GIVEN Jodi Henson

Project Location: LINN ENERGY

Sample ID: POINT 2 @ 1' (H400660-04)

BTEX 8260B	mg	/kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	03/05/2014	ND	2.24	112	2.00	0.979	
Toluene*	<0.200	0.200	03/05/2014	ND	2.33	117	2.00	0.332	
Ethylbenzene*	<0.200	0.200	03/05/2014	ND	2.28	114	2.00	2.39	
Total Xylenes*	<0.600	0.600	03/05/2014	ND	6.91	115	6.00	1.92	
Total BTEX	<1.20	1.20	03/05/2014	ND					
Surrogate: Dibromofluoromethane	99.0	% 61.3-14	2						
Surrogate: Toluene-d8	99.5	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	171	% 65.7-14	1						
Chloride, SM4500Cl-B	mg	/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	976	16.0	03/05/2014	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: ms					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	106	100	03/05/2014	ND	208	104	200	7.01	
DRO >C10-C28	4680	100	03/05/2014	ND	204	102	200	6.86	
Surrogate: 1-Chlorooctane	135	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	301	% 63.6-15	4						

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keine



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

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.





CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name	RECS						15000	_		ILL TO			·		- 1	ANAL	YSIS	RE	QUE	ST			
Project Manager	Jacob Kamplain						Ρ.	O. #:															
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Phone #:	Fax #:						Ad	ddre	ss:		-					'n					-		
Project #:	Project Owner	r:					Ci	ty:					Σ		_	3/7							
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Sampler Name:	Chris Flores						Fa	x #:				Chlorides	PH 8015	BTEX	Texas TPH	Complete Cations/Anions	I					i	
FOR LAB USE ONLY			_		MAT	RIX		PRE	SER	/ SAMPL	ING	$\ddot{\circ}$	P		(e)	te							
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analyses. All claims includin	g those for negligence and any other cause whatsoever shall be	deemed	l waived	unless n	nade in 1	writing	end rec	eived by	Cardina	l within 30 days afi	er completion of th	ne applica	ble										

service. In no event shall Cordinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries.

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Relinquished By:	Date:	Received By:	Phone Result: ☐ Yes ☑ No Add'l Phone #:
	3-4-2014	/lead M	Fax Result: ☐ Yes ☑ No Add'l Fax #:
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Sampler - UPS - Bus - Other:		Yes Yes	weinheimera
Gamplel - OFG - Dus - Other.			
		No No	

[†] Cardinal cannot accept verbal changes. Please fax written changes to 505-393-241



May 16, 2014

JACOB KAMPLAIN
RICE ENVIRONMENTAL CONSULTING & SAFETY LLC
419 W. CAIN
HOBBS, NM 88240

RE: H. E. WEST B FEDERAL #083

Enclosed are the results of analyses for samples received by the laboratory on 05/09/14 15:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accred certif.html.

Cardinal Laboratories is accreditated 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.

Celes D. Keens

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



RICE ENVIRONMENTAL CONSULTING & SAFETY JACOB KAMPLAIN

419 W. CAIN HOBBS NM, 88240

Fax To: (575) 397-1471

Received: 05/09/2014 Sampling Date: 05/09/2014

Reported: 05/16/2014 Sampling Type: Soil

Project Name: H. E. WEST B FEDERAL #083 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: LINN ENERGY

Sample ID: PT. 2 @ 5' (H401421-01)

BTEX 8260B	mg	/kg	Analyze	d By: ms					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/14/2014	ND	2.57	128	2.00	1.88	
Toluene*	0.055	0.050	05/14/2014	ND	2.46	123	2.00	0.702	
Ethylbenzene*	<0.050	0.050	05/14/2014	ND	2.31	115	2.00	1.10	
Total Xylenes*	<0.150	0.150	05/14/2014	ND	7.02	117	6.00	0.363	
Total BTEX	<0.300	0.300	05/14/2014	ND					
Surrogate: Dibromofluoromethane	96.5	% 61.3-14	2						
Surrogate: Toluene-d8	98.5	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	171	% 65.7-14	1						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	05/14/2014	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	05/14/2014	ND	191	95.3	200	6.37	
DRO >C10-C28	6880	100	05/14/2014	ND	205	102	200	7.53	
Surrogate: 1-Chlorooctane	94.0	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	224	% 63.6-15	4						

Cardinal Laboratories *=Accredited Analyte

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RICE ENVIRONMENTAL CONSULTING & SAFETY

JACOB KAMPLAIN 419 W. CAIN HOBBS NM, 88240

Fax To: (575) 397-1471

Received: 05/09/2014 Sampling Date: 05/09/2014

Reported: 05/16/2014 Sampling Type: Soil

Project Name: H. E. WEST B FEDERAL #083 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: LINN ENERGY

Sample ID: PT. 4 @ 3' (H401421-02)

BTEX 8260B	mg,	kg	Analyze	d By: ms					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/15/2014	ND	2.57	128	2.00	1.88	
Toluene*	<0.050	0.050	05/15/2014	ND	2.46	123	2.00	0.702	
Ethylbenzene*	<0.050	0.050	05/15/2014	ND	2.31	115	2.00	1.10	
Total Xylenes*	<0.150	0.150	05/15/2014	ND	7.02	117	6.00	0.363	
Total BTEX	<0.300	0.300	05/15/2014	ND					
Surrogate: Dibromofluoromethane	97.1	% 61.3-14	2						
Surrogate: Toluene-d8	98.4	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	151	% 65.7-14	1						
Chloride, SM4500Cl-B	mg,	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	05/14/2014	ND	416	104	400	0.00	
TPH 8015M	mg,	'kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	05/14/2014	ND	191	95.3	200	6.37	
DRO >C10-C28	1920	100	05/14/2014	ND	205	102	200	7.53	
Surrogate: 1-Chlorooctane	73.5	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	198	% 63.6-15	4						

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



RICE ENVIRONMENTAL CONSULTING & SAFETY JACOB KAMPLAIN

419 W. CAIN HOBBS NM, 88240

Fax To: (575) 397-1471

Received: 05/09/2014 Sampling Date: 05/09/2014

Reported: 05/16/2014 Sampling Type: Soil

Project Name: H. E. WEST B FEDERAL #083 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Analyzed By: me

Project Location: LINN ENERGY

Sample ID: PT. 4 @ 3.5' (H401421-03)

RTFY 8260R

B1EX 8260B	Result Reporting Limit		Analyze	a By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/15/2014	ND	2.57	128	2.00	1.88	
Toluene*	<0.050	0.050	05/15/2014	ND	2.46	123	2.00	0.702	
Ethylbenzene*	<0.050	0.050	05/15/2014	ND	2.31	115	2.00	1.10	
Total Xylenes*	<0.150	0.150	05/15/2014	ND	7.02	117	6.00	0.363	
Total BTEX	<0.300	0.300	05/15/2014	ND					
Surrogate: Dibromofluoromethane	96.8	% 61.3-14	2						
Surrogate: Toluene-d8	99.7	% 71.3-12	9						
Surrogate: 4-Bromofluorobenzene	104	% 65.7-14	1						
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	05/14/2014	ND	416	104	400	0.00	
TPH 8015M	mg,	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	05/14/2014	ND	194	97.2	200	2.25	
DRO >C10-C28	56.8	10.0	05/14/2014	ND	211	105	200	2.97	
Surrogate: 1-Chlorooctane	116	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	125	% 63.6-15	4						

Cardinal Laboratories *=Accredited Analyte

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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

Cardinal Laboratories *=Accredited Analyte

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

RDINAL 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

(505) 393-2326 FAX (505) 393-2476 (325) 673 Company Name: RECS	BILL	70			ANAL	YSIS REQUEST
2 1 1 1	P.O. #:					
Eddid 1 15.55	Company:				SC	
ddress: State: NM Zip: 88240	Attn:	- /			.0	
ity: Hobbs	Address:				P A	
none #:	City:		₀ Σ	I	Cations/Anions	
Toject #.	State: Zip:	1	Chlorides TPH 8015	BTEX Tevas TPH	- b	
roject Name:	Phone #:	1		BTEX	ati	LDS
roject Location: H. F. West B #83	Fax #:		티프	B		
FOR LAB USE ONLY	MATRIX PRESERV. S	AMPLING (10	1 8	
Tab I.D. Sample I.D. 1	0 0 0 0 4 = 0	1.0	XXX	X X	Complete	
LEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whete nailyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless envice. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, but filliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of Relinquished By: Least School Tiggs: Date: Received E	ess interruptions, loss of use, or loss of pronte in hether such claim is based upon any of the above	Phone Result: REMARKS: email:	hconde	es Ø Ne	swd.co	Ti Phone #: Ti Fax #: om; Iflores@rice-ecs.com; knorman@rice-ecs.com; adwards@rice-ecs.com;
Delivered By: (Circle One)	mple Condition CHECKED not Intact Initials Tes Yes No No	jkampla cursani Enviror	ic@rice	-ecs.co	om; se m	edwards@rice-ecs.com; @rice-ecs.com

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



June 12, 2014

JACOB KAMPLAIN
RICE ENVIRONMENTAL CONSULTING & SAFETY LLC
419 W. CAIN
HOBBS, NM 88240

RE: H. E. WEST B FEDERAL #083

Enclosed are the results of analyses for samples received by the laboratory on 06/11/14 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab-accred-certif.html.

Cardinal Laboratories is accreditated 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.

Celes D. Keens

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



RICE ENVIRONMENTAL CONSULTING & SAFETY JACOB KAMPLAIN

419 W. CAIN HOBBS NM, 88240

Fax To: (575) 397-1471

Received: 06/11/2014 Sampling Date: 06/11/2014

Reported: 06/12/2014 Sampling Type: Soil

Project Name: H. E. WEST B FEDERAL #083 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: LINN ENERGY

Sample ID: POINT 8 @ 5' (H401789-01)

BTEX 8021B	mg/	kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/12/2014	ND	1.96	97.8	2.00	3.08	
Toluene*	<0.050	0.050	06/12/2014	ND	2.09	105	2.00	3.06	
Ethylbenzene*	0.060	0.050	06/12/2014	ND	1.89	94.6	2.00	3.08	
Total Xylenes*	0.478	0.150	06/12/2014	ND	5.94	99.0	6.00	2.18	
Total BTEX	0.538	0.300	06/12/2014	ND					
Surrogate: 4-Bromofluorobenzene (PID	87.8	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/12/2014	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<100	100	06/12/2014	ND	192	96.0	200	4.69	
DRO >C10-C28	3970	100	06/12/2014	ND	187	93.7	200	2.60	
Surrogate: 1-Chlorooctane	65.2	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	153 9	% 63.6-15	4						

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results related only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Notes and Definitions

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.

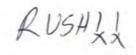
*** Insufficient time to reach temperature.

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

Cardinal Laboratories *=Accredited Analyte

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL 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

	(505) 393-2326 FAX (505) 393-2	476	(32	(5) 67	3-70	01	FAZ	(32	5)0	3-1	470					-	ANAL	YSIS	REQUE	EST	
Company Name							-	.0.#		316	E IV										
Project Manager	Laura Flores , Jacob Kan	pla	ig				-			-							m				
Address:		/					_ C	omp	any			_					E			1 1	
City: Hobbs	State: NM	Zip	: 88	240			A	ttn:	_							. 4	: 2				
Phone #:	Fax #:						A	ddre	ss:					_			Ā				
Project #:	Project Owne	r:					C	ity:				- 1	S	Σ		포	JS/				
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Project I ocation	. DE West BHR3						P	hone	e #:				Chlorides	801	BTEX	Texas TPH	Cations/Anions	TDS			
Sampler Name:	1: A.F. West B#83 Kyla Schnaidt						F	ax#					Ĕ	I	B	X		-			
FOR LAB USE ONLY	The servan	T			MAT	RIX		PR	ESE	RV.	SAMPLI	NG	O	Hd.		Te	ete			1	1
Lab I.D. 41401789	Sample I.D.	(G)RAB OR (C)OMP	# CONTAINE	GROUNDWATER	SOIL	OIL	SLUDGE	ACID/BASE:	X ICE/COOL	OTHER:	DATE	TIME 9:40	×	X	×		Complete				
	and Damages. Cardinal's liability and client's exclusive remedy fi	-																			

Relinquished By: 1/4/e Schwaidt Relinguished By:	Date: Date: Time:	Received By: Received By:		Iweinheime	er@rice	-ecs.c	Add'I	om; Iflores@rice-ecs.com; knorman@rice-ecs.com; edwards@rice-ecs.com;	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition Cool Intact Les Les Ves No No	CHECKED BY:	cursanic@ Environme	rice-ec	s.com		@rice-ecs.	.com

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





June 12, 2014

JACOB KAMPLAIN
RICE ENVIRONMENTAL CONSULTING & SAFETY LLC
419 W. CAIN
HOBBS, NM 88240

RE: H. E. WEST B FEDERAL #083

Enclosed are the results of analyses for samples received by the laboratory on 06/11/14 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab-accred-certif.html.

Cardinal Laboratories is accreditated 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.

Celes D. Keens

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



RICE ENVIRONMENTAL CONSULTING & SAFETY JACOB KAMPLAIN

419 W. CAIN HOBBS NM, 88240

Fax To: (575) 397-1471

Received: 06/11/2014 Sampling Date: 06/11/2014

Reported: 06/12/2014 Sampling Type: Soil

Project Name: H. E. WEST B FEDERAL #083 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: LINN ENERGY

Sample ID: POINT 8 @ 6.5' (H401790-01)

BTEX 8021B	mg/	kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/12/2014	ND	1.96	97.8	2.00	3.08	
Toluene*	<0.050	0.050	06/12/2014	ND	2.09	105	2.00	3.06	
Ethylbenzene*	0.086	0.050	06/12/2014	ND	1.89	94.6	2.00	3.08	
Total Xylenes*	0.770	0.150	06/12/2014	ND	5.94	99.0	6.00	2.18	
Total BTEX	0.857	0.300	06/12/2014	ND					
Surrogate: 4-Bromofluorobenzene (PID	441 9	6 89.4-12	6						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/12/2014	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	180	100	06/12/2014	ND	192	96.0	200	4.69	
DRO >C10-C28	8360	100	06/12/2014	ND	187	93.7	200	2.60	
Surrogate: 1-Chlorooctane	74.3	65.2-14	0						
Surrogate: 1-Chlorooctadecane	258 9	63.6-15	4						

Cardinal Laboratories *=Accredited Analyte

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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.

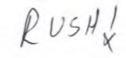
*** Insufficient time to reach temperature.

- 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

Cardinal Laboratories *=Accredited Analyte

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL 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

(505) 393-2326 FAX (505) 393-2476 (325) 673-77 Company Name: RECS	BILL TO	ANALYSIS REQUEST
	P.O. #:	
Project Manager: Laura Flores, Jacob Kanplan	Company:	
Address:	Attn:	
City: Hobbs State: NM Zip: 88240	Address:	j
Phone #: Fax #:		
Project #: Project Owner:	City:	
Project Name:	State: Zip:	STEX as T STEX TDS
Project Location: H.E. West B.#83	Phone #:	Chlorides PH 8015 M BTEX Texas TPH TDS TDS
Sampler Name: Kye Schward	Fax #: RIX PRESERV SAMPLING	
FOR LAB USE ONLY		
Tap I.D. Sample I.D. (G)RAB OR (C)OMP # CONTAINERS GROUNDWATER WASTEWATER SOIL	SLUDGE SLUDGE OTHER: ACID/BASE: OTHER: ACID/BASE: OTHER: ACID/BASE: ACID/BASE	Complete
HUDITAD 9 5 8 6 5 8 6 5 8 8 6 5 8 8 8 8 8 8 8 8 8	X 6-11-14 9:4	45 X X X
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PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether bas	to an experience and shall be fireless to the amount resid by the	e client for the

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deamed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 6 +1-14	Received By:		Phone Result: Fax Result:	☐ Yes	☑ No ☑ No	Add'l Phone #: Add'l Fax #:	
Relinquished By:	Time:	Redelived By:		email: hcc	er@rice	e-ecs.c	vd.com; lflores@ com; knorman@ m; sedwards@ri	rice-ecs.com;
Delivered By: (Circle One)		Sample Condition Cool Intact	CHECKED BY:	cursanic@	rice-ec	cs.com		
Sampler - UPS - Bus - Other:		Cool Intact Ves Ves No No No	4	Environme	ental Te	ech:		@rice-ecs.com

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



June 12, 2014

JACOB KAMPLAIN
RICE ENVIRONMENTAL CONSULTING & SAFETY LLC
419 W. CAIN
HOBBS, NM 88240

RE: H. E. WEST B FEDERAL #083

Enclosed are the results of analyses for samples received by the laboratory on 06/11/14 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab-accred-certif.html.

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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.

Celes D. Keens

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



RICE ENVIRONMENTAL CONSULTING & SAFETY JACOB KAMPLAIN

419 W. CAIN HOBBS NM, 88240

Fax To: (575) 397-1471

Received: 06/11/2014 Sampling Date: 06/11/2014

Reported: 06/12/2014 Sampling Type: Soil

Project Name: H. E. WEST B FEDERAL #083 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: LINN ENERGY

Sample ID: POINT 8 @ 7' (H401791-01)

BTEX 8021B	mg/	kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/12/2014	ND	1.96	97.8	2.00	3.08	
Toluene*	<0.050	0.050	06/12/2014	ND	2.09	105	2.00	3.06	
Ethylbenzene*	<0.050	0.050	06/12/2014	ND	1.89	94.6	2.00	3.08	
Total Xylenes*	<0.150	0.150	06/12/2014	ND	5.94	99.0	6.00	2.18	
Total BTEX	<0.300	0.300	06/12/2014	ND					
Surrogate: 4-Bromofluorobenzene (PID	117 %	6 89.4-12	6						
Chloride, SM4500Cl-B	mg/	kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/12/2014	ND	416	104	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/12/2014	ND	192	96.0	200	4.69	
DRO >C10-C28	53.0	10.0	06/12/2014	ND	187	93.7	200	2.60	
Surrogate: 1-Chlorooctane	72.0	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	83.5	% 63.6-15	4						

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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RUSH CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

RDINAL 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

Nome	(505) 393-2326 FAX (505) 393-24		,						BI	ILL	10					Α	NAL	Y 515	REQUEST			_
company Name:	RECS	-	1.	,			P.	0. #:														
roject Manager	Laura Flores , Jacob Ka	mp	62.6	1													S					
ddress:								ompa	ily.								6					
ity: Hobbs	State: NM	Zip:	882	240				ttn:									. <u></u>			1 1	- 1	
hone #:	Fax #:						A	ddres	ss:					5		-	A					
roject #:	Project Owne	r:					С	ity:					S	TPH 8015 M		Texas TPH	Cations/Anions					
							s	tate:		Z	ip:		Chloride	7	×	F	.0	S				
roject Name:	: H.E. West B #83	3					P	hone	#:				-E	80	BTEX	S	at	TDS				
roject Location							F	ax #:] ≥	T	B	×						
Sampler Name:	Kyle Schnaidt		П		MA	TRIX		PRE	SER	V.	SAMPLI	NG	O	교		Te	ete					
FOR LAB USE ONLY		ĕ.		~						1				-			ple	- 1				
- 1		(C)OMP	RS	GROUNDWATER	2					1			1				Complete					
Lab I.D.	Sample I.D.	OR (# CONTAINERS	AWC	WASTEWATER			ACID/BASE:	ಠ.				1				8					
Lab I.D.	oumpie iii	AB	TN.	20 1	<u></u>		DGE	NB/0	0 5	OTHER							0					
H401791		(G)RAB	00	SRC	SOIL	OIL	SLUDGE	A C	ICE / COOL	5	DATE	TIME	L			_				-	1	_
750171	Point 8@7'	6			X	-			X	1	6-11-14	9:50	X	X	X	-	-			_	+	_
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	and Damages. Cardinal's liability and client's exclusive remedy!				0	od in a	ontract :	or tort, sh	all be lin	nited to	o the amount pa	id by the client	for the									

analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without imitation, business interruptions, loss of use, or loss of profits incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incidental or consequental damages, including without limitation, business after under the profit of the profit

service. In no event shall Cardinal be label of the performa	ance of services hereunder t	by Cardinal, regardles	s of whether such claim is based	upon any of the above stated to	Phone Result: Yes	☑ No Add'l Phone #:	19
Relinquished By:	Date:	Received		11 NOU	Fax Result: Yes	☑ No Add'l Fax #:	
Relinquished By:	Date:	Receive	U HU By:		email: hconder@ri lweinheimer@rice- jkamplain@rice-ec	ecs.com: knorman	@rice-ecs.com;
Delivered By: (Circle One) Sampler - UPS - Bus - Other:			Sample Condition Cool Intact Yes Yes No No	CHECKED BY:	cursanic@rice-ecs Environmental Tec	.com	@rice-ecs.com
			☐ 140 ☐ 140	/			

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

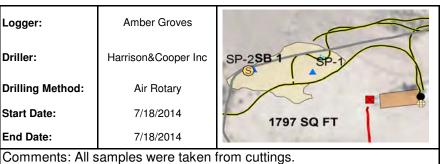


Appendix C Soil Bore Documentation

Logger: Amber Groves

Driller: Harrison&Cooper Inc

Drilling Method: Air Rotary Start Date: 7/18/2014 End Date: 7/18/2014



DRAFTED BY: C. Uršanić



Project Name: Well ID:

Linn H.E. West B #83 SB-1

Project Consultant: RECS

UL/D Sec. 4 Location:

T-17-S R-31-E

Lat: 32°52'3.383"N County:Lea

	TD = 30	ft		GW = None	Lo	ng: 103°52'4	6.246"W	State:NM
Depth (feet)	Chloride field tests	LAB	PID	Description		Lithology	Well Co	nstruction
SS								
				No Lithology Documented				
- t				No Elinology Boodinemed				
5 ft								
		CI-						
10 ft	1328	1650	324					
	B T <0.1 0.836	GRO 431						
	E X 7.96 13.1	DRO 6600		Brown Sand				
15 ft	423	0000	32					Doube wite
1511	423		32					Bentonite Seal
				Tan Sand				
				Tan Janu				
20 ft	651		20.4		_			
25 ft	167	CI- 160	10.1					
	B T <0.05 <0.05	GRO <10						
	E X	DRO		Red Sand				
	<0.05 <0.15	<10 Cl-						
30 ft	176 B T	176 GRO	4.5					
	<0.05 <0.05	<10						
	E X <0.05 <0.15	DRO <10]



July 24, 2014

JACOB KAMPLAIN
RICE ENVIRONMENTAL CONSULTING & SAFETY LLC
419 W. CAIN
HOBBS, NM 88240

RE: H. E. WEST B FEDERAL #083

Enclosed are the results of analyses for samples received by the laboratory on 07/18/14 12:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab accred certif.html.

Cardinal Laboratories is accreditated 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.

Celes D. Keens

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



RICE ENVIRONMENTAL CONSULTING & SAFETY

JACOB KAMPLAIN 419 W. CAIN HOBBS NM, 88240

Fax To: (575) 397-1471

Received: 07/18/2014 Sampling Date: 07/18/2014

Reported: 07/24/2014 Sampling Type: Soil

Project Name: H. E. WEST B FEDERAL #083 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: LINN ENERGY

Sample ID: SB 1 @ 10' (H402194-01)

BTEX 8021B	mg,	/kg	Analyze	d By: CK					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	07/23/2014	ND	2.41	120	2.00	2.72	
Toluene*	0.836	0.100	07/23/2014	ND	2.20	110	2.00	3.49	
Ethylbenzene*	7.96	0.100	07/23/2014	ND	2.45	122	2.00	4.14	
Total Xylenes*	13.1	0.300	07/23/2014	ND	7.86	131	6.00	4.44	
Total BTEX	21.9	0.600	07/23/2014	ND					
Surrogate: 4-Bromofluorobenzene (PID	109	% 89.4-12	6						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1650	16.0	07/22/2014	ND	416	104	400	3.77	
TPH 8015M	mg,	/kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	431	100	07/19/2014	ND	174	86.9	200	5.90	
DRO >C10-C28	6600	100	07/19/2014	ND	187	93.5	200	6.11	
Surrogate: 1-Chlorooctane	138	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	238	% 63.6-15	4						

Cardinal Laboratories *=Accredited Analyte

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RICE ENVIRONMENTAL CONSULTING & SAFETY

JACOB KAMPLAIN 419 W. CAIN HOBBS NM, 88240

Fax To: (575) 397-1471

Received: 07/18/2014 Sampling Date: 07/18/2014

Reported: 07/24/2014 Sampling Type: Soil

Project Name: H. E. WEST B FEDERAL #083 Sampling Condition: Cool & Intact Sample Received By: Project Number: NONE GIVEN Jodi Henson

Project Location: LINN ENERGY

Sample ID: SB 1 @ 25' (H402194-02)

BTEX 8021B	mg/	kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/23/2014	ND	1.80	90.2	2.00	2.23	
Toluene*	<0.050	0.050	07/23/2014	ND	1.86	93.1	2.00	2.92	
Ethylbenzene*	<0.050	0.050	07/23/2014	ND	1.88	94.2	2.00	2.95	
Total Xylenes*	<0.150	0.150	07/23/2014	ND	5.68	94.7	6.00	3.26	
Total BTEX	<0.300	0.300	07/23/2014	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 9	% 89.4-12	6						
Chloride, SM4500CI-B	mg/	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	07/22/2014	ND	416	104	400	3.77	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/19/2014	ND	174	86.9	200	5.90	
DRO >C10-C28	<10.0	10.0	07/19/2014	ND	187	93.5	200	6.11	
Surrogate: 1-Chlorooctane	96.7	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	103 9	% 63.6-15	4						

Surrogate: 1-Chlorooctadecane 103 % 63.6-154

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RICE ENVIRONMENTAL CONSULTING & SAFETY

JACOB KAMPLAIN 419 W. CAIN HOBBS NM, 88240

Fax To: (575) 397-1471

Received: 07/18/2014 Sampling Date: 07/18/2014

Reported: 07/24/2014 Sampling Type: Soil

Project Name: H. E. WEST B FEDERAL #083 Sampling Condition: Cool & Intact
Project Number: NONE GIVEN Sample Received By: Jodi Henson

Project Location: LINN ENERGY

Sample ID: SB 1 @ 30' (H402194-03)

BTEX 8021B	mg/	kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	07/23/2014	ND	1.80	90.2	2.00	2.23	
Toluene*	<0.050	0.050	07/23/2014	ND	1.86	93.1	2.00	2.92	
Ethylbenzene*	<0.050	0.050	07/23/2014	ND	1.88	94.2	2.00	2.95	
Total Xylenes*	<0.150	0.150	07/23/2014	ND	5.68	94.7	6.00	3.26	
Total BTEX	<0.300	0.300	07/23/2014	ND					
Surrogate: 4-Bromofluorobenzene (PID	102 9	% 89.4-12	6						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	07/22/2014	ND	416	104	400	3.77	
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	07/19/2014	ND	174	86.9	200	5.90	
DRO >C10-C28	<10.0	10.0	07/19/2014	ND	187	93.5	200	6.11	
Surrogate: 1-Chlorooctane	107 9	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	112 9	63.6-15	4						

Cardinal Laboratories *=Accredited Analyte

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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

*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples not received at proper temperature of 6°C or below.

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

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ARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603 (505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)672 7020

Company Nam	ie: KECS									6	ILL TO		1				ΔΝΔ	I VSIS E	REQUEST	
Project Manag	er: Jacobkamplain							P	.0. #				T	T			-	1313	EQUEST	_
Address:								C	omp	any:			1							
City: Hobbs	State: NN	1 Z	ip: {	8824	10				ttn:	,			1		1		l S			
Phone #:	Fax #:								ddre	cc.							1.9			
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Project Name:	H.E. West B#83								ate:		71-		S	5 N		프	St.		1 1 1	
Project Location										и.	Zip:		Chlorides	1 2	X	Texas TPH	Cations/Anions	co	1 1 1	
Sampler Name:	Amber Groves						-		none	#:			- 5	801	BTEX	S	at	TDS	1 1 1	
FOR LAB USE ONLY		T	Т	T		MATE	XIX	I r	PRE	SERV	/ SAMPL	ING	구도	TPH	B	X		-	1 1 1	
Lab I.D.	Sample I.D.	COMP (G)RAB OR (C)OMP	TAINER	GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	DATE	TIME		F		_	Complete			
7	CD (6) 014	19	1			1	1			v	7-18-14	10:00	V	V	~					
2	SB1@10A SB1@25A SB1@30A	10	1			1	1		\vdash	/	7-1814	IN:ID	V	1	~					
	361 @ 3044	6	1			/	1			/	7-17-14	(0.30	~	/	~					
			F			1	F	H												
		-			1															
LEASE NOTE: Liability an	d Damages Cardinal's liability and client's exclusive remedy to g those for negligence and any other cause whatsoever shall be ridinal be liable for incidental or consequental damages.	r any dair	m aris	ino what	ther ha	sed in a	T notice		aball :											

affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such of

Relinquished By:	Tine: 30	Time: 30 Pate: Received By:			Phone Result:		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition CHECKED BY: Cool Intact (Pritials) Yes Yes No No		hconder@rice-ecs.com; Lweinheimer@rice-ecs.com; sedwards@rice-ecs.com; lflores@rice-ecs.com; agroves@rice-ecs.com			

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



Appendix D Photo Documentation

Linn H.E. West B #83

Unit Letter D, Section 4, T17S, R31E



Initial site photo, facing east

9/3/13



Initial site photo, facing northwest





Initial site photo, facing south

9/3/13



Initial site photo, facing south

9/3/13



Hand auguring for depth, facing northeast

3/4/14



Drilling SB-1, facing east

7/18/14



Installing verticals per BLM stipulations, facing southeast 5/8/14



Plugging SB-1 in total with bentonite, facing west 7/18/14