

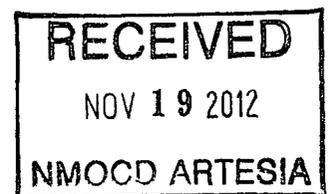
## Rice Environmental Consulting & Safety

P.O. Box 5630 Hobbs, NM 88241  
Phone 575.393.4411 Fax 575.393.0293

**October 16<sup>th</sup>, 2012**

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

**RE: Amended Corrective Action Plan (CAP)  
Linn Energy – H.E. West B #053 AD  
UL/B sec. 9 T17S R31E  
API No. 30-015-27148  
BLM Event No. NU12157TG**



Mr. Bratcher:

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

### **Background and Previous Work**

The site is an accidental discharge of crude oil and produced water associated with the H.E. West B #053. A surface poly line ruptured at a seam and released fluids onto pasture land. The line was repaired and an initial form C-141 was submitted by Linn Energy on July 13<sup>th</sup>, 2012 (Appendix A). The site is located approximately 7 miles east of Loco Hills, in unit letter 'B' of section 9, T17S, R31E in Eddy County, New Mexico. Groundwater in the area is approximately 188 ft. below ground surface (bgs).

On August 3<sup>rd</sup>, 2012, RECS personnel collected samples at depth from a central position within the leak area. The samples were field tested for chloride and hydrocarbons. The samples were submitted to a commercial laboratory for chloride and TPH (GRO/DRO) analyses. On August 27<sup>th</sup>, 2012, a Corrective Action Plan was submitted to NMOCD District 2 and BLM. In the plan, RECS proposed to excavate the impacted area to chloride values less than or equal to 1,000 mg/kg or 3 ft bgs. Final grab samples taken from the excavation bottom and sidewalls would be submitted to a commercial laboratory for chloride and TPH confirmation. Impacted soils would be removed to a NMOCD approved disposal facility. The excavation would then be backfilled with clean, imported soil and the area would be contoured to the surrounding landscape. The site would be re-seeded with the appropriate BLM seed mixture.

On September 11<sup>th</sup>, 2012, BLM responded by email to the Corrective Action Plan with specific stipulations (Appendix B). The stipulations stated that the leak area would need to be excavated to 3 ft bgs, and further vertical delineation would be required. In addition, the previous vertical trench would need to be re-excavated and backfilled with clean soil.

The previous trench, Vertical #1, was re-excavated on October 1<sup>st</sup>, 2012. A soil sample was collected from the bottom of the trench at 9 ft. 6 in. bgs and field tested to confirm that all previously excavated soils were removed. The trench was backfilled with clean, imported soil. The bottom vertical sample and a sample of the imported soil were submitted to a laboratory for analysis of chlorides and TPH (Appendix C).

The leak area was then excavated to 3 ft bgs, and Vertical #2 was advanced to 16 ft bgs (Figure). Samples were taken at every foot and submitted to a commercial laboratory for analysis of chlorides, TPH and BTEX (Appendix D). All excavated soils were removed to a NMOCD approved disposal facility.

### **Amended Corrective Action Plan**

RECS proposes to excavate the leak area to 5 ft bgs with excavation side wall samples not exceeding 1,000 mg/kg chloride. Final grab samples taken from the excavation bottom and sidewalls will be submitted to a commercial laboratory for chloride and TPH confirmation. Excavated soils will be disposed of at a NMOCD approved facility. The excavation will be backfilled with clean, imported soil and the top two feet of the excavation will be backfilled with topsoil similar to the native terrain. The site will be contoured to the surrounding landscape and then re-seeded with BLM seed mix #2 and #4 in a 50/50 mix. Erosion control will be installed to allow the reclaimed area to settle and re-vegetate. These activities will be guided by the stipulations given by BLM in Appendix B.

Once the CAP activities are completed, a written report detailing the CAP activities and a request for 'remediation termination' status of the regulatory file will be submitted.

RECS appreciates the opportunity to work with you on this project. Please call me at the number below if you have any questions or comments.

Sincerely,



Bruce Baker  
Head Foreman  
RECS  
(575) 631-5157

cc: Terry Gregston  
BLM Environmental Protection Specialist  
tgregsto@blm.gov

Attachments:

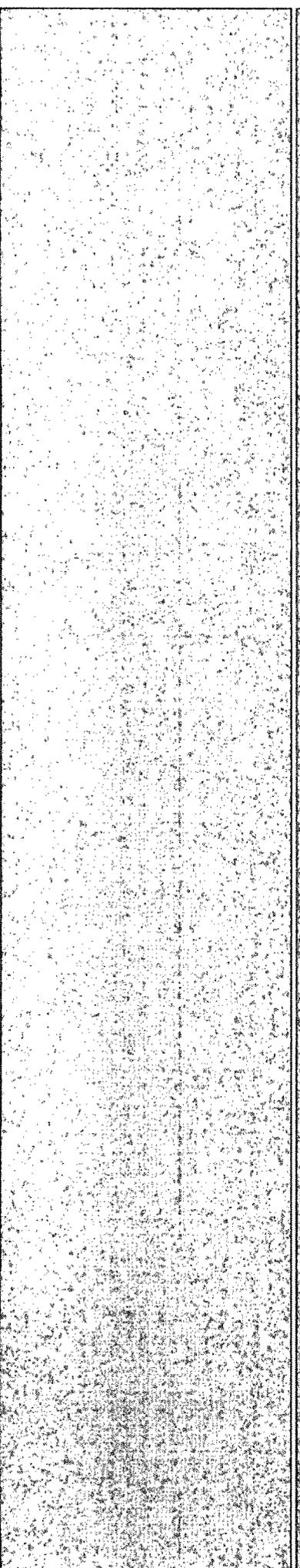
Figure – Site Map

Appendix A – Initial C-141

Appendix B – BLM Stipulations

Appendix C – Laboratory Results for Bottom Sample at Vertical #1 and Imported Soil

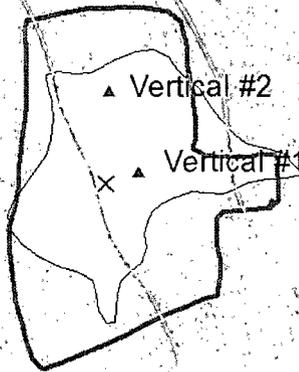
Appendix D – Laboratory Results for Vertical #2



Figure

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 5630 Hobbs, NM 88241  
Phone 575.393.4411 Fax 575.393.0293

# Vertical Samples



Vertical #2 Lab Data							
Sample Description	Lab Cl-	GRO	DRO	B	T	E	X
3'	720	272	4,890	<0.05	<0.05	0.185	1.11
4'	576	322	9,020	<0.2	<0.2	0.452	2.19
5'	512	<10	<10	<0.05	<0.05	<0.05	<0.15
6'	640	<10	<10	<0.05	<0.05	<0.05	<0.15
7'	432	<10	<10	<0.05	<0.05	<0.05	<0.15
8'	720	<10	<10	<0.05	<0.05	<0.05	<0.15
9'	384	<10	13.8	<0.05	<0.05	<0.05	<0.15
10'	976	<10	<10	<0.05	<0.05	<0.05	<0.15
11'	1,720	<10	<10	<0.05	<0.05	<0.05	<0.15
12'	1,380	<10	<10	<0.05	<0.05	<0.05	<0.15
13'	272	<10	<10	<0.05	<0.05	<0.05	<0.15
14'	528	<10	<10	<0.05	<0.05	<0.05	<0.15
15'	432	<10	<10	<0.05	<0.05	<0.05	<0.15
16'	160	<10	<10	<0.05	<0.05	<0.05	<0.15

## Legend

- ▲ VERTICALS
- ABOVE GROUND POLY LINE
- STAIN (647 sq ft)
- SCRAPE AT 3 FT BGS
- × SOURCE

DGW = 188 ft

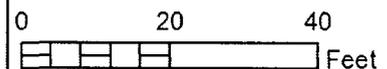
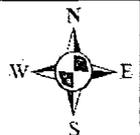
Landowner = BLM



## LINN ENERGY H.E. WEST B #053

LEGALS: UL/B sec. 9  
T-17-S R-31-E  
EDDY COUNTY, NM

## Figure



GPS date: 10/3/12 DH  
Drawing date: 10/12/12  
Drafted by: L. Weinheimer

# Appendix A

Initial C-141

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 5630 Hobbs, NM 88241  
Phone 575.393.4411 Fax 575.393.0293

District I  
1625 N French Dr., Hobbs, NM 88240  
District II  
1301 W Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S St Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

**RECEIVED**  
JUL 13 2012  
NMOCD ARTESIA

Form C-141  
Revised October 10, 2003  
Appropriate District Office in accordance with 19 15.29 NMAC

**Release Notification and Corrective Action**

nJMN1220955726 OPERATOR  Initial Report  Final Report

Name of Company: Linn Operating 269324	Contact: Joe Hernandez
Address: 2130 W. Bender Hobbs, NM 88240	Telephone No.: 575-738-1739
Facility Name: H.E. West B #53	Facility Type: Oil
Surface Owner: Federal	Mineral Owner: Federal
API No.: 3001527148	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	9	17S	31E	1350	North	1250	East	Eddy

Latitude: 32.85266 Longitude: -103.86957

**NATURE OF RELEASE**

Type of Release: Oil / Produced Water	Volume of Release: 7 gals / 3gals	Volume Recovered: 0 / 0
Source of Release: Pipeline	Date and Hour of Occurrence: 07/03/2012 2:30pm	Date and Hour of Discovery: 07/03/2012 3pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? M. Bratcher -NM OCD Terry Gregston-BLM	
By Whom? Joe Hernandez	Date and Hour 07/05/2012 1pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*:		
Describe Cause of Problem and Remedial Action Taken.*: 3" poly flow line at a seam come apart causing the leak.		
Describe Area Affected and Cleanup Action Taken.*: 10' x 10' area 300' North of wellhead. Remedial action pending....		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: <i>Joe Hernandez</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Joe Hernandez	Approved by District Supervisor: JUL 27 2012	Signed By <i>Mike Bratcher</i>
Title: Production Foreman	Approval Date:	Expiration Date:
E-mail Address: jhernandez@linenergy.com Date: 07/13/2012 Phone: 575-942-9492	Conditions of Approval:	Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary

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

8/27/12

2RP-1230

# Appendix B

## BLM Stipulations

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 5630 Hobbs, NM 88241  
Phone 575.393.4411 Fax 575.393.0293

**From:** [Gregston, Terry G](mailto:Gregston.Terry.G)  
**To:** [dfrick@lennenergy.com](mailto:dfrick@lennenergy.com); [rragland@lennenergy.com](mailto:rragland@lennenergy.com); [jhernandez@lennenergy.com](mailto:jhernandez@lennenergy.com); [gawink@lennenergy.com](mailto:gawink@lennenergy.com); [mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)  
**Cc:** [hconder@rice-ecs.com](mailto:hconder@rice-ecs.com); [bbaker@rice-ecs.com](mailto:bbaker@rice-ecs.com)  
**Subject:** Undesirable Event: NU12157TG, H E West B 53: Cleanup plan approval stips  
**Date:** Tuesday, September 11, 2012 2:39:23 PM  
**Attachments:** [H E West B 53-070312 spill map 2-070612.jpg](#)

---

Gentlemen,

This notification is in regard to the following location and undesirable events, which occurred one atop the other (see attached spill map):

Event Number: NU12157TG  
Event Date: 7/3/2012  
Event Name: H E West B 53  
Legals: T17S/R31E, sec. 9, SENE

Event Number: 11NU064TG  
Event Date: 03/28/11  
Event Name: H E West B 53  
Legals: T17S/R31E, sec. 9, SENE

The submitted cleanup plan for the above location is approved with the following conditions of approval:

**Special Stipulations:**

1. Large discrepancies exist between field screen analysis and lab analysis. The submitted plan has insufficient delineation data verified by a third party lab to make a proper assessment of whether or not the submitted cleanup plan appropriately addresses the spill impacts from this undesirable event. Three feet of contaminated soil should be removed from the spill site according to the attached stipulations. When the excavation reaches 3 feet in depth, further vertical delineation of the spill site will be required along with lab analysis that verifies the level of contaminants. The second delineation lab analysis and an amended plan will be submitted for the remainder of the excavation and/or closure of the site.
2. A backhoe was used to vertically define the spill site; however, clean material was not put back in the backhoe excavation after the delineation. The contaminated soils placed into the backhoe excavation will be removed to the depth of the original excavation.
3. The original backhoe delineation site cannot be used for the second delineation of the site.

**Notification Stipulations:**

1. A copy of the cleanup plan and conditions of approval must be given to the contractor or site work personnel and be present on the location during all cleanup operations.
2. The authorized officer must be notified at the following phases of cleanup or conditions:
  - a. Prior to moving equipment on location for cleanup
  - b. When the excavation is nearing completion and a BLM inspection of the excavation or witnessing of sampling is required by the cleanup plan COA's.
  - c. When the cleanup work is nearing completion and to schedule a final onsite prior to removal of equipment.
  - d. Three days before the site is seeded.

- e. Any time that a variance of the approved plan or conditions of approval is required.
  - f. In the event that you encounter excavation difficulties, unexpected void areas, or archeological artifacts the Authorized Officer must be contacted immediately. An onsite may be required to assess the situation.
3. The authorized officer on this undesirable event case is:

**Terry Gregston**  
**(575) 361-2635**  
**tgregsto@blm.gov**

-  
**Archeology Stipulations:**

1. There are no known archeological issues on this location.

In the event that archeological artifacts are discovered during cleanup operations, contact the authorized officer on this case immediately. An onsite will be required to assess the situation.

**Road Cleanup Stipulations:**

1. The BLM requires horizontal cleanup of the spill impacted areas in addition to vertical cleanup/mitigation measures.
2. The BLM may wish to inspect the excavation once it reaches cleanup depth/width. Confirmation samples of excavation bottom, sidewalls and any visibly affected areas outside of the excavation trench will be required; the BLM may witness the sampling. Contact the authorized officer to schedule.
3. Lab analysis of the confirmation sampling must be forwarded to the authorized officer for final approval before backfilling. Based on the sampling results, additional cleanup may be required or the site may be approved for closure.
4. Once final approval of cleanup is given, the excavation can be backfilled with clean soil to the level of the original native contour plus enough loft to accommodate the settling and compaction of unconsolidated fill soils.
5. Road areas should be resurfaced with 6" of clean caliche on top of the backfill material.

**Pasture Impacted Areas:**

1. The BLM requires horizontal cleanup of the spill impacted areas in addition to vertical cleanup/mitigation measures.
2. The BLM may wish to inspect the excavation once it reaches cleanup depth/width. Confirmation samples of excavation bottoms, sidewalls and any visibly affected areas outside of the excavation trench will be required; the BLM may witness the sampling. Contact the authorized officer to schedule.
3. Lab analysis of the confirmation sampling must be forwarded to the authorized officer for final approval before backfilling. Based on the sampling results, additional cleanup may be required or the site may be approved for closure.
4. Once final approval of cleanup is given, the excavation can be backfilled with clean soil to the level of the original native contour plus enough loft to accommodate the settling and compaction of unconsolidated fill soils.
5. The top 2 feet of the backfill material must be topsoil similar to that in the surrounding native terrain.
6. If pastures are not contaminated but are impacted by cleanup operations, the impacts to the pasture areas will be mitigated by recontouring the impacted areas and restoring the surface as listed in items 7 through 9 of this section.
7. Install erosion control measures in the pasture-affected areas to prevent the unconsolidated reclamation materials from washing or blowing away until reclaimed areas settle and begin to revegetate.
8. Rip and seed reclaimed and equipment-impacted pasture areas with BLM seed mix #2 and #4, 50/50 mix.
9. Barricade entrance to reclaimed pasture areas with fencing or an earthen barrier sufficient

to prevent vehicular access.

10. Continue to monitor spill reclamation area to ensure impacted pasture areas revegetate and that erosion issues do not develop.

**Other Stipulations:**

1. At the time of the final onsite for this location, the production facilities, well pad, access road, and the surrounding pasture areas must be in a condition that will pass a routine inspection.

2. All household trash, debris, disconnected pipe and equipment must be removed from the area and the surrounding pasture and hauled to an authorized landfill. Do not bury cleanup trash, equipment debris, or household garbage in the cleanup excavation.

---

**BLM approval of this proposal does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health, or the environment, or if the location fails to reclaim properly. In such an event that location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state, or local laws/regulations.**

Thank you for your attention to this matter,

**Terry Gregston**  
Environmental Protection Specialist  
Bureau of Land Management  
620 E. Greene St.  
Carlsbad, NM 88220  
Office (575) 234-5958  
Cell (575) 361-2635  
Fax (575) 234-5927

**Confidentiality Warning: This message along with any attachments are intended only for use of the individual or entity to which it is addressed and may contain information that is privileged or confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering this message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender immediately.**

# Appendix C

Laboratory Results for Bottom Sample at Vertical #1, and Imported Soil

**RICE Environmental Consulting and Safety (RECS)**

P.O. Box 5630 Hobbs, NM 88241  
Phone 575.393.4411 Fax 575.393.0293

**Analytical Results For:**

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

Received:	10/02/2012	Sampling Date:	10/01/2012
Reported:	10/05/2012	Sampling Type:	Soil
Project Name:	WEST B #053 AD	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: VERTICAL #1 @ 9' 6" (H202402-01)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>80.0</b>	16.0	10/05/2012	ND	416	104	400	3.92		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/04/2012	ND	190	94.9	200	0.855		
<b>DRO &gt;C10-C28</b>	<b>21.4</b>	10.0	10/04/2012	ND	186	93.1	200	1.39		

Surrogate: 1-Chlorooctane	89.4 %	65.2-140
Surrogate: 1-Chlorooctadecane	90.1 %	63.6-154

**Sample ID: IMPORTED SOIL (H202402-02)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>32.0</b>	16.0	10/05/2012	ND	416	104	400	3.92		
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/04/2012	ND	190	94.9	200	0.855		
DRO >C10-C28	<10.0	10.0	10/04/2012	ND	186	93.1	200	1.39		

Surrogate: 1-Chlorooctane	92.1 %	65.2-140
Surrogate: 1-Chlorooctadecane	91.2 %	63.6-154

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.



Celey D. Keene, Lab Director/Quality Manager



# Appendix D

Laboratory Results for Vertical #2

**RICE Environmental Consulting and Safety (RECS)**  
P.O. Box 5630 Hobbs, NM 88241  
Phone 575.393.4411 Fax 575.393.0293

**Analytical Results For:**

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

Received:	10/05/2012	Sampling Date:	10/03/2012
Reported:	10/11/2012	Sampling Type:	Soil
Project Name:	H. E. WEST B #53	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Hope S. Moreno
Project Location:	EVENT NUMBER NU12157TG		

**Sample ID: VERTICAL #2 @ 3' (H202427-01)**

BTEX 8021B		mg/kg		Analyzed By: AP				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2012	ND	2.32	116	2.00	9.62		
Toluene*	<0.050	0.050	10/09/2012	ND	2.07	103	2.00	9.58		
Ethylbenzene*	<b>0.185</b>	0.050	10/09/2012	ND	2.09	105	2.00	9.25		
<b>Total Xylenes*</b>	<b>1.11</b>	0.150	10/09/2012	ND	6.12	102	6.00	9.28		

*Surrogate: 4-Bromofluorobenzene (PIC)*      228 %      89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>720</b>	16.0	10/09/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS				S-06		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>GRO C6-C10</b>	<b>272</b>	50.0	10/06/2012	ND	210	105	200	4.24		
<b>DRO &gt;C10-C28</b>	<b>4890</b>	50.0	10/06/2012	ND	209	105	200	7.91		

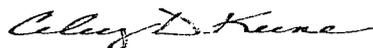
*Surrogate: 1-Chlorooctane*      152 %      65.2-140

*Surrogate: 1-Chlorooctadecane*      159 %      63.6-154

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.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/05/2012	Sampling Date:	10/03/2012
Reported:	10/11/2012	Sampling Type:	Soil
Project Name:	H. E. WEST B #53	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Hope S. Moreno
Project Location:	EVENT NUMBER NU12157TG		

**Sample ID: VERTICAL #2 @ 4' (H202427-02)**

BTEX 8021B		mg/kg		Analyzed By: AP				S-04		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.200	0.200	10/09/2012	ND	2.32	116	2.00	9.62		
Toluene*	<0.200	0.200	10/09/2012	ND	2.07	103	2.00	9.58		
Ethylbenzene*	<b>0.452</b>	0.200	10/09/2012	ND	2.09	105	2.00	9.25		
<b>Total Xylenes*</b>	<b>2.19</b>	0.600	10/09/2012	ND	6.12	102	6.00	9.28		

Surrogate: 4-Bromofluorobenzene (PIE) 179 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP				S-06		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<b>576</b>	16.0	10/09/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS				S-06		
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<b>322</b>	50.0	10/06/2012	ND	210	105	200	4.24		
DRO >C10-C28	<b>9020</b>	50.0	10/06/2012	ND	209	105	200	7.91		

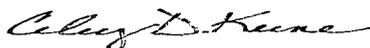
Surrogate: 1-Chlorooctane 182 % 65.2-140

Surrogate: 1-Chlorooctadecane 161 % 63.6-154

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.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/05/2012	Sampling Date:	10/03/2012
Reported:	10/11/2012	Sampling Type:	Soil
Project Name:	H. E. WEST B #53	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Hope S. Moreno
Project Location:	EVENT NUMBER NU12157TG		

**Sample ID: VERTICAL #2 @ 5' (H202427-03)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2012	ND	2.32	116	2.00	9.62		
Toluene*	<0.050	0.050	10/09/2012	ND	2.07	103	2.00	9.58		
Ethylbenzene*	<0.050	0.050	10/09/2012	ND	2.09	105	2.00	9.25		
Total Xylenes*	<0.150	0.150	10/09/2012	ND	6.12	102	6.00	9.28		

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>512</b>	16.0	10/09/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/06/2012	ND	210	105	200	4.24		
DRO >C10-C28	<10.0	10.0	10/06/2012	ND	209	105	200	7.91		

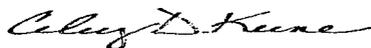
Surrogate: 1-Chlorooctane 88.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 89.4 % 63.6-154

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.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/05/2012	Sampling Date:	10/03/2012
Reported:	10/11/2012	Sampling Type:	Soil
Project Name:	H. E. WEST B #53	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Hope S. Moreno
Project Location:	EVENT NUMBER NU12157TG		

**Sample ID: VERTICAL #2 @ 6' (H202427-04)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2012	ND	2.32	116	2.00	9.62		
Toluene*	<0.050	0.050	10/09/2012	ND	2.07	103	2.00	9.58		
Ethylbenzene*	<0.050	0.050	10/09/2012	ND	2.09	105	2.00	9.25		
Total Xylenes*	<0.150	0.150	10/09/2012	ND	6.12	102	6.00	9.28		

Surrogate: 4-Bromofluorobenzene (PIC) 107 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	640	16.0	10/09/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/06/2012	ND	210	105	200	4.24		
DRO >C10-C28	<10.0	10.0	10/06/2012	ND	209	105	200	7.91		

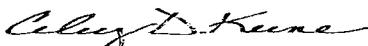
Surrogate: 1-Chlorooctane 89.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 90.8 % 63.6-154

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.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/05/2012	Sampling Date:	10/03/2012
Reported:	10/11/2012	Sampling Type:	Soil
Project Name:	H. E. WEST B #53	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Hope S. Moreno
Project Location:	EVENT NUMBER NU12157TG		

**Sample ID: VERTICAL #2 @ 7' (H202427-05)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2012	ND	2.32	116	2.00	9.62		
Toluene*	<0.050	0.050	10/09/2012	ND	2.07	103	2.00	9.58		
Ethylbenzene*	<0.050	0.050	10/09/2012	ND	2.09	105	2.00	9.25		
Total Xylenes*	<0.150	0.150	10/09/2012	ND	6.12	102	6.00	9.28		

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

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	

Chloride	432	16.0	10/09/2012	ND	400	100	400	3.92	
----------	-----	------	------------	----	-----	-----	-----	------	--

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	

GRO C6-C10	<10.0	10.0	10/08/2012	ND	194	96.9	200	3.67	
DRO >C10-C28	<10.0	10.0	10/08/2012	ND	198	98.9	200	4.31	

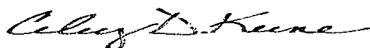
Surrogate: 1-Chlorooctane 80.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 83.0 % 63.6-154

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.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/05/2012	Sampling Date:	10/03/2012
Reported:	10/11/2012	Sampling Type:	Soil
Project Name:	H. E. WEST B #53	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Hope S. Moreno
Project Location:	EVENT NUMBER NU12157TG		

**Sample ID: VERTICAL #2 @ 8' (H202427-06)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2012	ND	2.32	116	2.00	9.62		
Toluene*	<0.050	0.050	10/09/2012	ND	2.07	103	2.00	9.58		
Ethylbenzene*	<0.050	0.050	10/09/2012	ND	2.09	105	2.00	9.25		
Total Xylenes*	<0.150	0.150	10/09/2012	ND	6.12	102	6.00	9.28		

Surrogate: 4-Bromofluorobenzene (PIC) 107 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>720</b>	16.0	10/09/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/08/2012	ND	194	96.9	200	3.67		
DRO >C10-C28	<10.0	10.0	10/08/2012	ND	198	98.9	200	4.31		

Surrogate: 1-Chlorooctane 83.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 88.6 % 63.6-154

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.



Celest D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/05/2012	Sampling Date:	10/03/2012
Reported:	10/11/2012	Sampling Type:	Soil
Project Name:	H. E. WEST B #53	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Hope S. Moreno
Project Location:	EVENT NUMBER NU12157TG		

**Sample ID: VERTICAL #2 @ 9' (H202427-07)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2012	ND	2.32	116	2.00	9.62		
Toluene*	<0.050	0.050	10/09/2012	ND	2.07	103	2.00	9.58		
Ethylbenzene*	<0.050	0.050	10/09/2012	ND	2.09	105	2.00	9.25		
Total Xylenes*	<0.150	0.150	10/09/2012	ND	6.12	102	6.00	9.28		

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	384	16.0	10/09/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/08/2012	ND	194	96.9	200	3.67		
DRO >C10-C28	13.8	10.0	10/08/2012	ND	198	98.9	200	4.31		

Surrogate: 1-Chlorooctane 83.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 89.2 % 63.6-154

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.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/05/2012	Sampling Date:	10/03/2012
Reported:	10/11/2012	Sampling Type:	Soil
Project Name:	H. E. WEST B #53	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Hope S. Moreno
Project Location:	EVENT NUMBER NU12157TG		

**Sample ID: VERTICAL #2 @ 10' (H202427-08)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2012	ND	2.32	116	2.00	9.62		
Toluene*	<0.050	0.050	10/09/2012	ND	2.07	103	2.00	9.58		
Ethylbenzene*	<0.050	0.050	10/09/2012	ND	2.09	105	2.00	9.25		
Total Xylenes*	<0.150	0.150	10/09/2012	ND	6.12	102	6.00	9.28		

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	976	16.0	10/09/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/08/2012	ND	194	96.9	200	3.67		
DRO >C10-C28	<10.0	10.0	10/08/2012	ND	198	98.9	200	4.31		

Surrogate: 1-Chlorooctane 78.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 82.7 % 63.6-154

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.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/05/2012	Sampling Date:	10/03/2012
Reported:	10/11/2012	Sampling Type:	Soil
Project Name:	H. E. WEST B #53	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Hope S. Moreno
Project Location:	EVENT NUMBER NU12157TG		

**Sample ID: VERTICAL #2 @ 11' (H202427-09)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2012	ND	2.32	116	2.00	9.62		
Toluene*	<0.050	0.050	10/09/2012	ND	2.07	103	2.00	9.58		
Ethylbenzene*	<0.050	0.050	10/09/2012	ND	2.09	105	2.00	9.25		
Total Xylenes*	<0.150	0.150	10/09/2012	ND	6.12	102	6.00	9.28		

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1720	16.0	10/09/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/08/2012	ND	194	96.9	200	3.67		
DRO >C10-C28	<10.0	10.0	10/08/2012	ND	198	98.9	200	4.31		

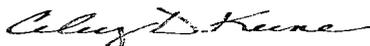
Surrogate: 1-Chlorooctane 77.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 79.1 % 63.6-154

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.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/05/2012	Sampling Date:	10/03/2012
Reported:	10/11/2012	Sampling Type:	Soil
Project Name:	H. E. WEST B #53	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Hope S. Moreno
Project Location:	EVENT NUMBER NU12157TG		

**Sample ID: VERTICAL #2 @ 12' (H202427-10)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2012	ND	2.32	116	2.00	9.62		
Toluene*	<0.050	0.050	10/09/2012	ND	2.07	103	2.00	9.58		
Ethylbenzene*	<0.050	0.050	10/09/2012	ND	2.09	105	2.00	9.25		
Total Xylenes*	<0.150	0.150	10/09/2012	ND	6.12	102	6.00	9.28		

Surrogate: 4-Bromofluorobenzene (PIE) 107 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1380	16.0	10/09/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/08/2012	ND	194	96.9	200	3.67		
DRO >C10-C28	<10.0	10.0	10/08/2012	ND	198	98.9	200	4.31		

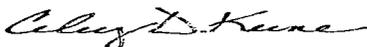
Surrogate: 1-Chlorooctane 81.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 81.8 % 63.6-154

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.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/05/2012	Sampling Date:	10/03/2012
Reported:	10/11/2012	Sampling Type:	Soil
Project Name:	H. E. WEST B #53	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Hope S. Moreno
Project Location:	EVENT NUMBER NU12157TG		

**Sample ID: VERTICAL #2 @ 13' (H202427-11)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2012	ND	2.32	116	2.00	9.62		
Toluene*	<0.050	0.050	10/09/2012	ND	2.07	103	2.00	9.58		
Ethylbenzene*	<0.050	0.050	10/09/2012	ND	2.09	105	2.00	9.25		
Total Xylenes*	<0.150	0.150	10/09/2012	ND	6.12	102	6.00	9.28		

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	272	16.0	10/09/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/08/2012	ND	194	96.9	200	3.67		
DRO >C10-C28	<10.0	10.0	10/08/2012	ND	198	98.9	200	4.31		

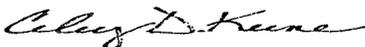
Surrogate: 1-Chlorooctane 75.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 77.0 % 63.6-154

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.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/05/2012	Sampling Date:	10/03/2012
Reported:	10/11/2012	Sampling Type:	Soil
Project Name:	H. E. WEST B #53	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Hope S. Moreno
Project Location:	EVENT NUMBER NU12157TG		

**Sample ID: VERTICAL #2 @ 14' (H202427-12)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2012	ND	2.32	116	2.00	9.62		
Toluene*	<0.050	0.050	10/09/2012	ND	2.07	103	2.00	9.58		
Ethylbenzene*	<0.050	0.050	10/09/2012	ND	2.09	105	2.00	9.25		
Total Xylenes*	<0.150	0.150	10/09/2012	ND	6.12	102	6.00	9.28		

Surrogate: 4-Bromofluorobenzene (PIC) 107 % 89.4-126

Chloride, SM4500CI-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	528	16.0	10/09/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/08/2012	ND	194	96.9	200	3.67		
DRO >C10-C28	<10.0	10.0	10/08/2012	ND	198	98.9	200	4.31		

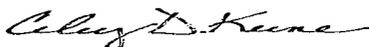
Surrogate: 1-Chlorooctane 76.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 79.3 % 63.6-154

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.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/05/2012	Sampling Date:	10/03/2012
Reported:	10/11/2012	Sampling Type:	Soil
Project Name:	H. E. WEST B #53	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Hope S. Moreno
Project Location:	EVENT NUMBER NU12157TG		

**Sample ID: VERTICAL #2 @ 15' (H202427-13)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2012	ND	2.32	116	2.00	9.62		
Toluene*	<0.050	0.050	10/09/2012	ND	2.07	103	2.00	9.58		
Ethylbenzene*	<0.050	0.050	10/09/2012	ND	2.09	105	2.00	9.25		
Total Xylenes*	<0.150	0.150	10/09/2012	ND	6.12	102	6.00	9.28		

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>432</b>	16.0	10/09/2012	ND	400	100	400	3.92		

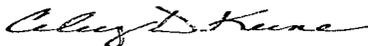
TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/08/2012	ND	194	96.9	200	3.67		
DRO >C10-C28	<10.0	10.0	10/08/2012	ND	198	98.9	200	4.31		

*Surrogate: 1-Chlorooctane 80.5 % 65.2-140*
*Surrogate: 1-Chlorooctadecane 83.0 % 63.6-154*

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.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	10/05/2012	Sampling Date:	10/03/2012
Reported:	10/11/2012	Sampling Type:	Soil
Project Name:	H. E. WEST B #53	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Hope S. Moreno
Project Location:	EVENT NUMBER NU12157TG		

**Sample ID: VERTICAL #2 @ 16' (H202427-14)**

BTEX 8021B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/09/2012	ND	2.32	116	2.00	9.62		
Toluene*	<0.050	0.050	10/09/2012	ND	2.07	103	2.00	9.58		
Ethylbenzene*	<0.050	0.050	10/09/2012	ND	2.09	105	2.00	9.25		
Total Xylenes*	<0.150	0.150	10/09/2012	ND	6.12	102	6.00	9.28		

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	160	16.0	10/09/2012	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/08/2012	ND	194	96.9	200	3.67		
DRO >C10-C28	<10.0	10.0	10/08/2012	ND	198	98.9	200	4.31		

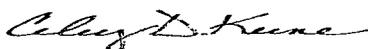
Surrogate: 1-Chlorooctane 72.0 % 65.2-140

Surrogate: 1-Chlorooctadecane 76.6 % 63.6-154

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.



Celey D. Keene, Lab Director/Quality Manager



