

LINN ENERGY

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

H.E. West B #41
2RP-1863

Termination Request

API No. 3001526033

Release Date: August 16th, 2013

Unit Letter N, Section 10, Township 17S, Range 31E

Rice Environmental Consulting & Safety

P.O. Box 2948, Hobbs, NM 88241

Phone 575.393.2967

January 6th, 2014

Mike Bratcher

New Mexico Energy, Minerals, & Natural Resources

Oil Conservation Division, Environmental Bureau – District 2

811 S. First St.

Artesia, NM 88210

RE: Termination Request

Linn Energy – H.E. West B #41 (2RP-1863)

UL/N sec. 10 T17S R31E

API No. 3001526033

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 5.6 miles west of Maljamar, New Mexico at UL/N sec. 10 T17S R31E. This site is located in an area of no known groundwater.

On August 16th, 2013, Linn noticed a hole that developed due to corrosion at a 3 inch junction where the West B #41 flow line ties into the West B #31 flow line. A total of 20 gallons of produced water and 5 gallons of oil were released over 710 square feet of pasture land and lease road. None of the fluid was recovered. Linn informed BLM of the release on August 19th, 2013 and an initial C-141 was approved by NMOCD on August 26th, 2013 (Appendix A).

RECS personnel were on site beginning on August 23rd, 2013 to assess the site. Samples were taken from the surface and with depth at three locations throughout the release (Figure 1). The samples were field tested for chlorides and hydrocarbons and representative samples were taken to a commercial laboratory for analyses (Appendix B). The surface samples at the three points showed elevated laboratory chloride levels, Gasoline Range Organics (GRO) readings of non-detect and elevated Diesel Range Organics (DRO) readings. At Point 2, the laboratory chloride levels dropped to below 250 mg/kg at 2 ft bgs and at Point 3, the laboratory chloride levels dropped to below 250 mg/kg at 3 ft bgs. DRO levels in Point 2 dropped to 10.8 mg/kg at 2 ft bgs and in Point 3 to non-detect at 3 ft bgs.

At Point 1, a vertical was installed on October 4th, 2013, to determine the depth of contamination. The vertical was installed to a depth of 6.5 ft where the laboratory chloride reading returned a result of 944 mg/kg (Appendix C).

A Corrective Action Plan (CAP) was submitted to NMOCD and BLM on October 25th, 2013. BLM approved the CAP on October 29th, 2013 and NMOCD approved the CAP on November 15th, 2013. As part of the CAP, RECS recommended that the site be excavated to a depth where the laboratory readings on a 5 point bottom composite was below 1,000 mg/kg for chlorides and 1,000 mg/kg for GRO and DRO combined or to a depth of 4 ft bgs, whichever occurred first. The site would be excavated horizontally until grab samples from the side walls of the excavation returned laboratory chloride readings below 1,000 mg/kg and combined GRO and DRO readings below 1,000 mg/kg. The excavated soil would be taken to a NMOCD approved facility for disposal. Clean, imported soil would be backfilled into the excavation to ground surface in the pasture, while the lease road would be capped with caliche to provide a stable driving surface.

Once the site was backfilled, the pasture area would be seeded with a blend of native vegetation. Vegetation acts as an infiltration barrier for the site, since plants capture water through their roots thereby reducing the amount of water traveling through the vadose zone to groundwater.

CAP work began on November 20th, 2013 (Figure 2). The site was scraped to 6 inches bgs and a total of 36 yards of soil was taken to a NMOCD approved facility for disposal. A 5 point composite of the bottom of the excavation was taken to a commercial laboratory for analysis (Appendix D). The 5 point bottom composite returned a chloride result of 304 mg/kg, GRO and BTEX results of non-detect and a DRO result of 243 mg/kg. Final wall samples of the scrape could not be taken; the scrape was too shallow and the wall composition too loose to allow adequate sampling. Therefore, the scrape was expanded north and west of the release to remediate areas without vegetation. A total of 36 yards of caliche and 12 yards of top soil were imported to the site. Samples of both the caliche and top soil were taken to a commercial laboratory for analysis. The caliche returned a chloride result of 32 mg/kg and the top soil returned a chloride result of non-detect (Appendix D).

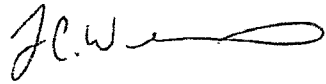
The lease road was backfilled with the imported caliche and the pasture was backfilled with the imported top soil. On December 10th, 2013, soil amendments were added to the pasture area and the area was seeded with LPC mix.

Photo documentation of all activities can be found in Appendix E.

Given that the CAP work was completed as approved by NMOCD and BLM, Linn respectfully requests 'remediation termination' and site closure. The final C-141 for the site can be found in Appendix F.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-2967 or me if you have any questions or wish to discuss the site.

Sincerely,

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

Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

- Figure 1 – Initial Sampling Data
- Figure 2 – Excavation Data
- Appendix A – Initial C-141
- Appendix B – Initial Sampling Lab
- Appendix C – Vertical Sampling Lab
- Appendix D – Corrective Action Plan Labs
- Appendix E – Photo Documentation
- Appendix F – Final C-141

Figures

RICE Environmental Consulting and Safety (RECS)

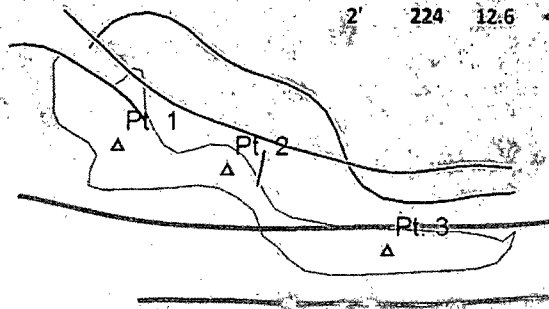
P.O. Box 2948, Hobbs, NM 88241

Phone 575.393.2967

Initial Sampling Data

Point 1	CI-	PID	GRO	DRO	B	T	E	X	BTEX
SS	5520	10.4	<50	13800	<0.05	0.05	0.173	0.384	0.608
6"	856	192.4							
1'	3286	50.8							
1.5'	2034	24							
2'	1446	509.8							
2.5'	1320	33.5							
3'	1762	24.9							
3.5'	1788	22.6							
4'	1985	49.6							
4.5'	1085	10.8							
5'	1192	27.6							
5.5'	1037	7.2							
6'	848	14.6	<10	<10					
6.5'	944	9.2	<10	<10					

Point 2	CI-	PID	GRO	DRO	B	T	E	X	BTEX
SS	23000	192.4	<10	499	<0.05	<0.05	<0.05	<0.15	<0.3
6"	2921	47.5							
1'	969	88.8							
1.5'	378	66.7							
2'	224	12.6	<10	10.8	<0.05	<0.05	<0.05	<0.15	<0.3



Point 3	CI-	PID	GRO	DRO	B	T	E	X	BTEX
SS	13300	50.8	<10	10.1	<0.05	<0.05	<0.05	<0.15	<0.3
6"	688	33.9							
1'	1410	30.9							
1.5'	1457	6.5							
2'	957	2.3							
2.5'	896	11.2	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
3'	48	28.6	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3

Legend

- △ SAMPLE POINTS
- ROADWAY
- SURFACE PIPELINE
- STAIN (710 SQ FT)
- CI- FIELD DATA
- CI- LAB DATA

Landowner = BLM

DGW = None



LINN H.E. WEST B
FEDERAL #041
2RP-1863

LEGALS: UL/N SEC 10
 T17S R31E
 EDDY COUNTY, NM

Figure 1



0 25 50
 Feet

GPS date: 10/4/13 EC
 Drawing date: 10/8/13
 Drafted by: L. Weinheimer

Excavation Data

5 point composite Lab at 6 inches

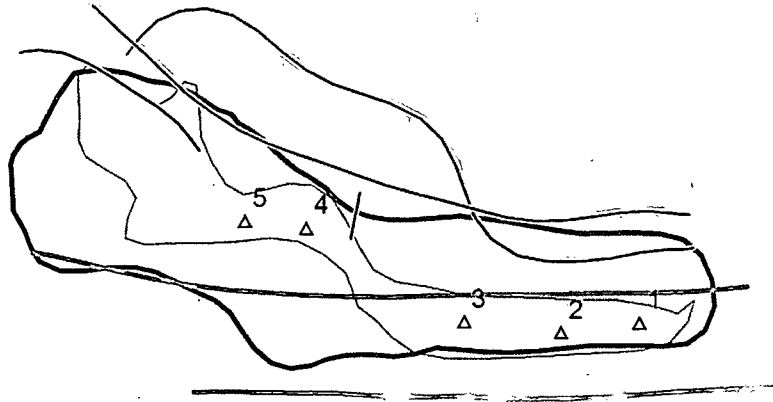
CI-	PID	GRO	DRO	B	T	E	X	BTEX
304	14.6	<50	243	<0.05	<0.05	<0.05	<0.15	<0.3

Backfill Labs

CI-

Caliche 32

Top Soil <16



Legend

△ FINAL SAMPLE POINTS

— ROADWAY

— SURFACE PIPELINE

□ SCRAPE AT 6 INCHES

□ STAIN (710 SQ FT)

CI- FIELD DATA

CI- LAB DATA

Landowner = BLM

DGW = None



LINN H.E. WEST B
FEDERAL #041
2RP-1863

LEGALS: UL/N SEC 10
 T17S R31E
 EDDY COUNTY, NM

Figure 2



0 10 20
 Feet

GPS date: 11/20/13 AG
 Drawing date: 12/3/13
 Drafted by: L. Weinheimer

Appendix A

Initial C-141

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

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
11220 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

AUG 20 2013

NMOC D ARTESIA

Form C-141
Revised October 10, 2003

to appropriate District Office in
accordance with 19.15.29 NMAC

Release Notification and Corrective Action

nJM/W 132-3833294

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Linn Operating 269324	Contact: Brian Wall	
Address: 2130 W. Bender Hobbs, NM 88240	Telephone No.: 575-738-1739	
Facility Name: H.E. West B #41	Facility Type: Oil Producer	
Surface Owner: Federal	Mineral Owner:	API No.: 3001526033

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	10	17S	31E	660	South	2020	West	Eddy

Latitude: 32.8436498 Longitude: -103.859578071309

NATURE OF RELEASE

Type of Release: Produced Water / Oil	Volume of Release: 20 gal / 5 gal	Volume Recovered: 0 / 0
Source of Release: Poly Pipeline	Date and Hour of Occurrence: 08/16/2013 7:00pm	Date and Hour of Discovery: 08/16/2013 7:00pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Burton BLM	
By Whom? Brian Wall	Date and Hour 08/19/2013 2:00pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse:	

If a Watercourse was impacted, Describe Fully: *

Describe Cause of Problem and Remedial Action Taken: * A hole developed at a 3" junction where West B #41 flow lines into West B #31 flow line in route to the West B-4 unit battery. Corrosion appears to have caused the failure.

Describe Area Affected and Cleanup Action Taken: * Area affected was 3' x 2' ft.

I hereby certify that the information given above is true and complete to the best of my knowledge and understanding pursuant to NMOC D rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOC D marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to ground water, surface water, human health or the environment. In addition, NMOC D 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: [Signature]

Printed Name: Brian Wall

Title: Construction Foreman II

E-mail Address: bwall@linnenergy.com

Date: 08/20/2013

Phone: 806-367-0645

* Attach Additional Sheets if Necessary

OIL CONSERVATION DIVISION

Approved by District Supervisor:

Signed By: [Signature]

AUG 26 2013

Approval Date:

Expiration Date:

Conditions of Approval:

Remediation per OCD Rule & Guidelines &
like approval by BLM. SUBMIT REMEDIATION

PROPOSAL NO LATER THAN:

September 26, 2013

Attached: ☐

2RP-1863



Appendix B

Initial Sampling Lab

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

September 16, 2013

HACK CONDER

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: H. E. WEST B FEDERAL #41

Enclosed are the results of analyses for samples received by the laboratory on 09/12/13 8:45.

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

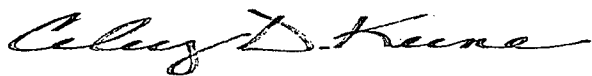
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received: 09/12/2013
Reported: 09/16/2013
Project Name: H. E. WEST B FEDERAL #41
Project Number: NONE GIVEN
Project Location: NOT GIVEN

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

Sample ID: PT. 1 @ SURFACE (H302207-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2013	ND	2.05	103	2.00	0.141	
Toluene*	0.050	0.050	09/13/2013	ND	2.19	110	2.00	1.10	
Ethylbenzene*	0.173	0.050	09/13/2013	ND	2.30	115	2.00	1.19	
Total Xylenes*	0.384	0.150	09/13/2013	ND	6.96	116	6.00	1.34	
Total BTEX	0.608	0.300	09/13/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 123 % 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	5520	16.0	09/16/2013	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<50.0	50.0	09/13/2013	ND	200	100	200	4.71		
DRO >C10-C28	13800	50.0	09/13/2013	ND	192	96.1	200	3.84		

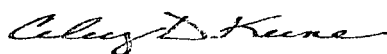
Surrogate: 1-Chlorooctane 89.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 555 % 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
HACK CONDER
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 09/12/2013
Reported: 09/16/2013
Project Name: H. E. WEST B FEDERAL #41
Project Number: NONE GIVEN
Project Location: NOT GIVEN

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

Sample ID: PT. 2 @ SURFACE (H302207-02)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2013	ND	2.05	103	2.00	0.141	
Toluene*	<0.050	0.050	09/13/2013	ND	2.19	110	2.00	1.10	
Ethylbenzene*	<0.050	0.050	09/13/2013	ND	2.30	115	2.00	1.19	
Total Xylenes*	<0.150	0.150	09/13/2013	ND	6.96	116	6.00	1.34	
Total BTEX	<0.300	0.300	09/13/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIC) 111 % 89.4-126

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	23000	16.0	09/16/2013	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/13/2013	ND	200	100	200	4.71	
DRO >C10-C28	499	10.0	09/13/2013	ND	192	96.1	200	3.84	

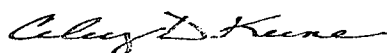
Surrogate: 1-Chlorooctane 85.1 % 65.2-140

Surrogate: 1-Chlorooctadecane 105 % 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
HACK CONDER
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 09/12/2013
Reported: 09/16/2013
Project Name: H. E. WEST B FEDERAL #41
Project Number: NONE GIVEN
Project Location: NOT GIVEN

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

Sample ID: PT. 2 @ 2' (H302207-03)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2013	ND	2.05	103	2.00	0.141	
Toluene*	<0.050	0.050	09/13/2013	ND	2.19	110	2.00	1.10	
Ethylbenzene*	<0.050	0.050	09/13/2013	ND	2.30	115	2.00	1.19	
Total Xylenes*	<0.150	0.150	09/13/2013	ND	6.96	116	6.00	1.34	
Total BTEX	<0.300	0.300	09/13/2013	ND					

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	224	16.0	09/16/2013	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/13/2013	ND	200	100	200	4.71	
DRO >C10-C28	10.8	10.0	09/13/2013	ND	192	96.1	200	3.84	

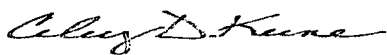
Surrogate: 1-Chlorooctane 70.9 % 65.2-140

Surrogate: 1-Chlorooctadecane 83.9 % 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
 HACK CONDER
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

 Received: 09/12/2013
 Reported: 09/16/2013
 Project Name: H. E. WEST B FEDERAL #41
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

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

Sample ID: PT. 3 @ SURFACE (H302207-04)

BTEX 8021B		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2013	ND	2.05	103	2.00	0.141	
Toluene*	<0.050	0.050	09/13/2013	ND	2.19	110	2.00	1.10	
Ethylbenzene*	<0.050	0.050	09/13/2013	ND	2.30	115	2.00	1.19	
Total Xylenes*	<0.150	0.150	09/13/2013	ND	6.96	116	6.00	1.34	
Total BTEX	<0.300	0.300	09/13/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 109 % 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	13300	16.0	09/16/2013	ND	416	104	400	3.77	

TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/13/2013	ND	200	100	200	4.71	
DRO >C10-C28	10.1	10.0	09/13/2013	ND	192	96.1	200	3.84	

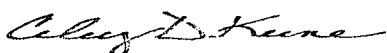
Surrogate: 1-Chlorooctane 84.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 85.9 % 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
HACK CONDER
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 09/12/2013
Reported: 09/16/2013
Project Name: H. E. WEST B FEDERAL #41
Project Number: NONE GIVEN
Project Location: NOT GIVEN

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

Sample ID: PT. 3 @ 2.5' (H302207-05)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2013	ND	2.05	103	2.00	0.141	
Toluene*	<0.050	0.050	09/13/2013	ND	2.19	110	2.00	1.10	
Ethylbenzene*	<0.050	0.050	09/13/2013	ND	2.30	115	2.00	1.19	
Total Xylenes*	<0.150	0.150	09/13/2013	ND	6.96	116	6.00	1.34	
Total BTEX	<0.300	0.300	09/13/2013	ND					

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
Chloride	896	16.0	09/16/2013	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/13/2013	ND	200	100	200	4.71	
DRO >C10-C28	<10.0	10.0	09/13/2013	ND	192	96.1	200	3.84	

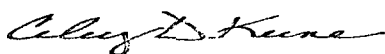
Surrogate: 1-Chlorooctane 78.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 90.3 % 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
 HACK CONDER
 419 W. CAIN
 HOBBS NM, 88240
 Fax To: (575) 397-1471

 Received: 09/12/2013
 Reported: 09/16/2013
 Project Name: H. E. WEST B FEDERAL #41
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

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

Sample ID: PT. 3 @ 3' (H302207-06)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2013	ND	2.05	103	2.00	0.141	
Toluene*	<0.050	0.050	09/13/2013	ND	2.19	110	2.00	1.10	
Ethylbenzene*	<0.050	0.050	09/13/2013	ND	2.30	115	2.00	1.19	
Total Xylenes*	<0.150	0.150	09/13/2013	ND	6.96	116	6.00	1.34	
Total BTEX	<0.300	0.300	09/13/2013	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	09/16/2013	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/13/2013	ND	200	100	200	4.71	
DRO >C10-C28	<10.0	10.0	09/13/2013	ND	192	96.1	200	3.84	

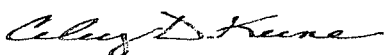
Surrogate: 1-Chlorooctane 80.2 % 65.2-140

Surrogate: 1-Chlorooctadecane 95.2 % 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

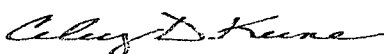
Notes and Definitions

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.
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.



Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>Linn Energy</u>				BILL TO				ANALYSIS REQUEST															
Project Manager: <u>Rick Rickman</u>				P.O. #:																			
Address:				Company:																			
City:		State:		Zip:		Attn:																	
Phone #:		Fax #:		Address:																			
Project #:		Project Owner:		City:																			
Project Name:				State:																Zip:			
Project Location: <u>H.E. West Bv #41</u>				Phone #:																			
Sampler Name: <u>Mrs Flores</u>				Fax #:																			
FOR LAB USE ONLY																							
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX				PRESERV.		SAMPLING									
								GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER:				ACID/BASE: ICE / COOL OTHER:		DATE		TIME							
<u>H302207</u>																							
<u>1 Point 1 @ Surface</u>				<u>G</u>		<u>1</u>								<u>9-9-13</u>		<u>12:00pm</u>							
<u>2 Point 2 @ surface</u>				<u>G</u>		<u>1</u>										<u>12:45pm</u>							
<u>3 Point 2 @ 2'</u>				<u>G</u>		<u>1</u>										<u>1:05pm</u>							
<u>4 Point 3 @ Surface</u>				<u>G</u>		<u>1</u>										<u>1:10pm</u>							
<u>5 Point 3 @ 2.5'</u>				<u>G</u>		<u>1</u>										<u>1:35pm</u>							
<u>6 Point 3 @ 3'</u>				<u>G</u>		<u>1</u>										<u>1:40pm</u>							

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 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 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: <u>[Signature]</u>		Date: <u>9-12-2013</u>		Received By: <u>Jodi Henson</u>		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:	
		Time: <u>8:45</u>				Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:	
Relinquished By:		Date:		Received By:		REMARKS:			
		Time:							
Delivered By: (Circle One)				Sample Condition		CHECKED BY:			
Sampler - UPS - Bus - Other:				Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<u>[Signature]</u>			

Appendix C

Vertical Sampling Lab

RICE Environmental Consulting and Safety (RECS)

P.O. Box 2948 Hobbs, NM 88241

Phone 575.393.2967

October 08, 2013

HACK CONDER

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: H. E. WEST B FEDERAL #41

Enclosed are the results of analyses for samples received by the laboratory on 10/04/13 15:30.

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

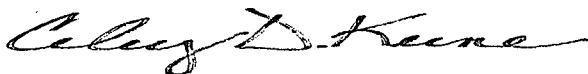
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	10/04/2013	Sampling Date:	10/04/2013
Reported:	10/08/2013	Sampling Type:	Soil
Project Name:	H. E. WEST B FEDERAL #41	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: VERTICAL PT. 1 6' (H302413-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	848	16.0	10/08/2013	ND	400	100	400	7.69	
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	10/07/2013	ND	192	95.8	200	0.902	
DRO >C10-C28	<10.0	10.0	10/07/2013	ND	181	90.4	200	0.0160	
Surrogate: 1-Chlorooctane		96.6 %	65.2-140						
Surrogate: 1-Chlorooctadecane		97.9 %	63.6-154						

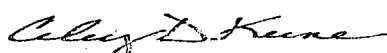
Sample ID: VERTICAL PT. 1 6.5' (H302413-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	944	16.0	10/08/2013	ND	400	100	400	7.69	
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	10/07/2013	ND	192	95.8	200	0.902	
DRO >C10-C28	<10.0	10.0	10/07/2013	ND	181	90.4	200	0.0160	
Surrogate: 1-Chlorooctane		94.3 %	65.2-140						
Surrogate: 1-Chlorooctadecane		97.2 %	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

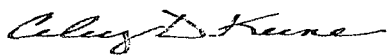
Notes and Definitions

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

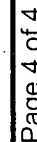
Cardinal Laboratories

*=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.



Celey D. Keene, Lab Director/Quality Manager



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

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 398-2326

Appendix D

Corrective Action Plan Labs

RICE Environmental Consulting and Safety (RECS)

P.O. Box 2948 Hobbs, NM 88241

Phone 575.393.2967

November 21, 2013

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: H. E. WEST B FEDERAL #41

Enclosed are the results of analyses for samples received by the laboratory on 11/20/13 16:25.

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/qa/lab_accred_certif.html.

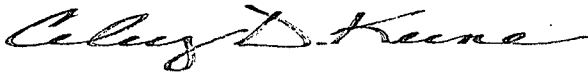
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received:	11/20/2013	Sampling Date:	11/20/2013
Reported:	11/21/2013	Sampling Type:	Soil
Project Name:	H. E. WEST B FEDERAL #41	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	T17S R31		

Sample ID: 5 PT. COMPOSITE (H302839-01)

BTEx 8260B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/21/2013	ND	1.84	92.1	2.00	1.58	
Toluene*	<0.050	0.050	11/21/2013	ND	1.90	94.9	2.00	0.599	
Ethylbenzene*	<0.050	0.050	11/21/2013	ND	1.96	98.1	2.00	1.54	
Total Xylenes*	<0.150	0.150	11/21/2013	ND	5.76	96.0	6.00	0.240	
Total BTEx	<0.300	0.300	11/21/2013	ND					

Surrogate: Dibromofluoromethane 96.1 % 61.3-142

Surrogate: Toluene-d8 98.4 % 71.3-129

Surrogate: 4-Bromofluorobenzene 96.5 % 65.7-141

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	304	16.0	11/21/2013	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<50.0	50.0	11/21/2013	ND	190	95.0	200	13.1		
DRO >C10-C28	243	50.0	11/21/2013	ND	180	89.8	200	4.80		

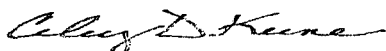
Surrogate: 1-Chlorooctane 70.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 123 % 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

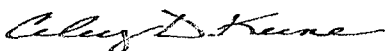
Notes and Definitions

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.



Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 4 of 4

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

54

December 02, 2013

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: H. E. WEST B FEDERAL #41

Enclosed are the results of analyses for samples received by the laboratory on 11/20/13 16:25.

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/qa/lab_accred_certif.html.


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

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received: 11/20/2013
Reported: 12/02/2013
Project Name: H. E. WEST B FEDERAL #41
Project Number: NONE GIVEN
Project Location: T17S R31

Sampling Date: 11/20/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

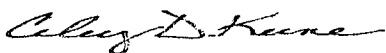
Sample ID: BACKFILL (H302840-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	11/22/2013	ND	416	104	400	0.00		

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

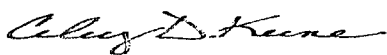
Notes and Definitions

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.



Celey D. Keene, Lab Director/Quality Manager



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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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 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 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: <i>Amber Groves</i>		Date: <i>11-20-13</i>	Received By: <i>Jodi Benson</i>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
		Time: <i>4:26</i>		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:		Date:	Received By:	REMARKS:	
		Time:		email results	
Delivered By: (Circle One)		Sample Condition		CHECKED BY: <i>AG</i>	
Sampler - UPS - Bus - Other:		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>			
		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		knorman@rice-ecs.com hconder@rice-ecs.com;	
		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Lweinheimer@rice-ecs.com; kjones@riceswd.com;	
				Lpena@riceswd.com; sedwards@rice-ecs.com	
				agroves@rice-ecs.com	

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

#54

December 02, 2013

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: H. E. WEST B #41

Enclosed are the results of analyses for samples received by the laboratory on 11/21/13 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/qa/lab_accred_certif.html.

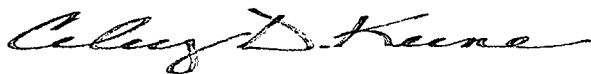
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received: 11/21/2013
Reported: 12/02/2013
Project Name: H. E. WEST B #41
Project Number: NONE GIVEN
Project Location: T17S R31E

Sampling Date: 11/21/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

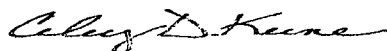
Sample ID: BACKFILL (H302866-01)

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	12/02/2013	ND	416	104	400	3.92		

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

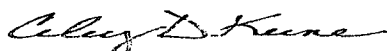
Notes and Definitions

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

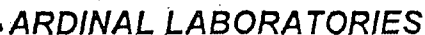
Cardinal Laboratories

*=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.



Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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 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 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 services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: <i>Amber Groves</i>		Date: <i>11-21-13</i>	Received By: <i>Jodi Benson</i>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
		Time: <i>4:30</i>		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:		Date:	Received By:	REMARKS:	
		Time:		email results	
Delivered By: (Circle One)				knorman@rice-ecs.com hconder@rice-ecs.com;	
Sampler - UPS - Bus - Other:		Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No		Lweinheimer@rice-ecs.com; kjones@riceswd.com;	
		CHECKED BY: <i>[Signature]</i>		Lpena@riceswd.com; sedwards@rice-ecs.com	
				agroves@rice-ecs.com	

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

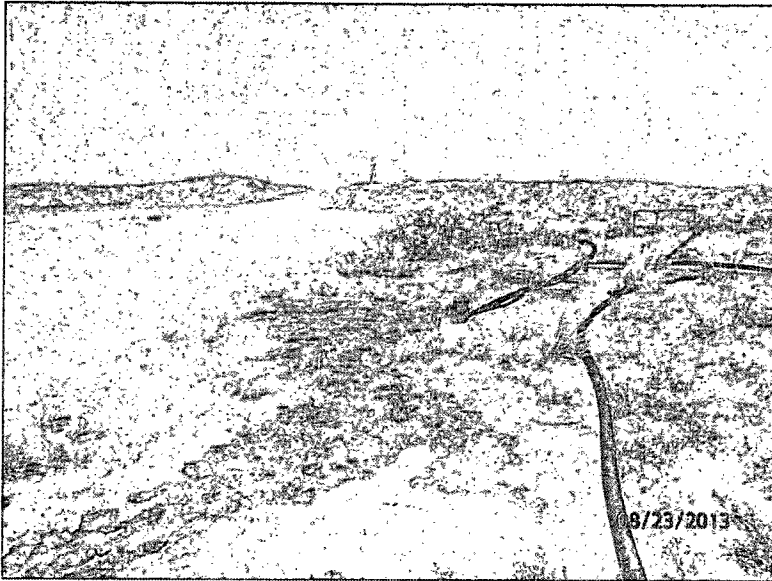
54

Appendix E

Photo Documentation

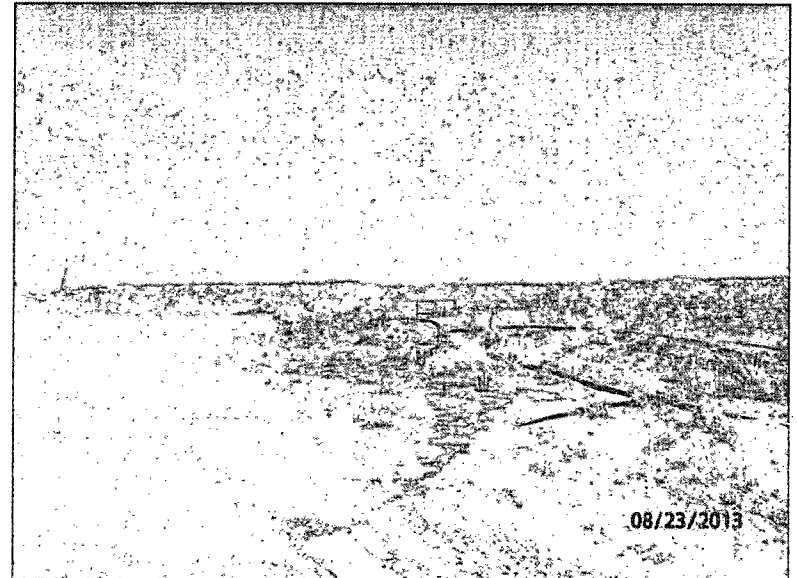
RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

Linn H.E. West B #41
Unit Letter N, Section 10, T17S, R31E



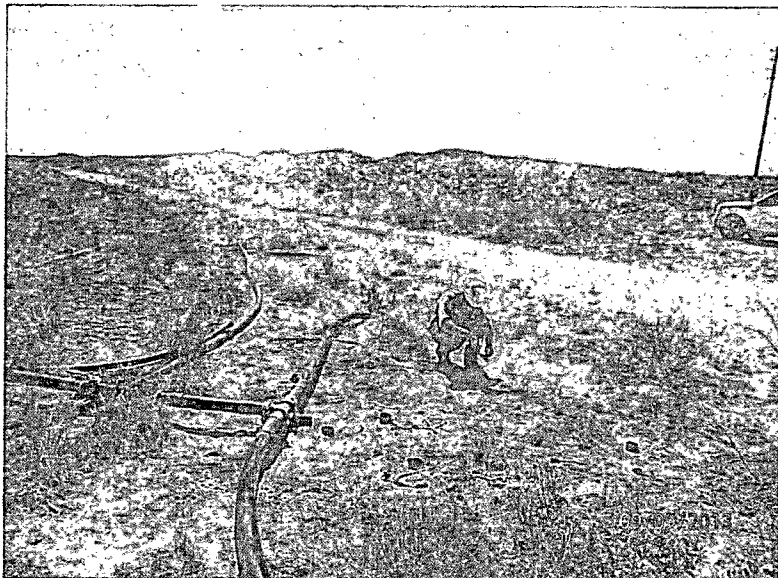
Initial release area, facing west

8/23/13



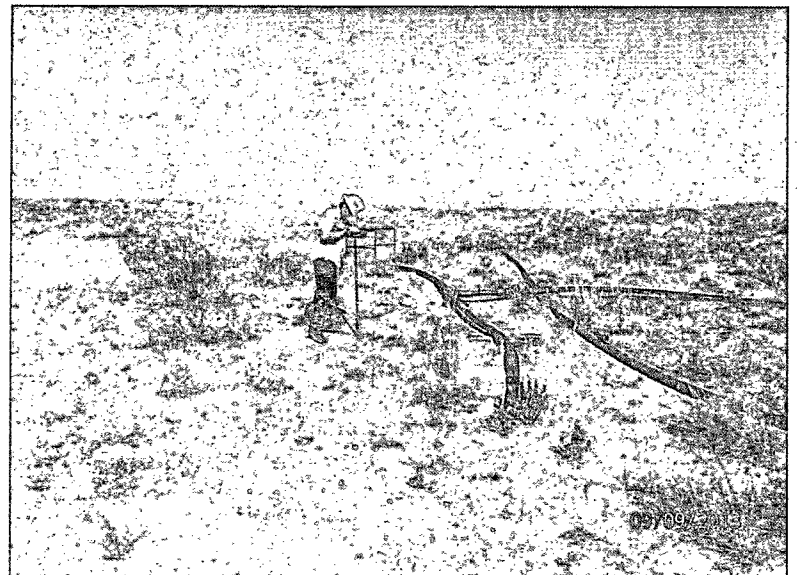
Initial release area, facing northwest

8/23/13



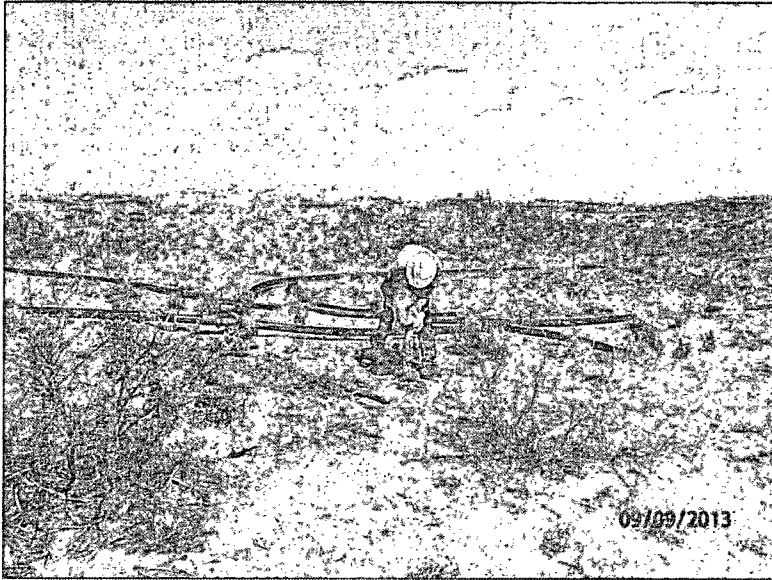
Sampling the surface, facing southeast

9/9/13

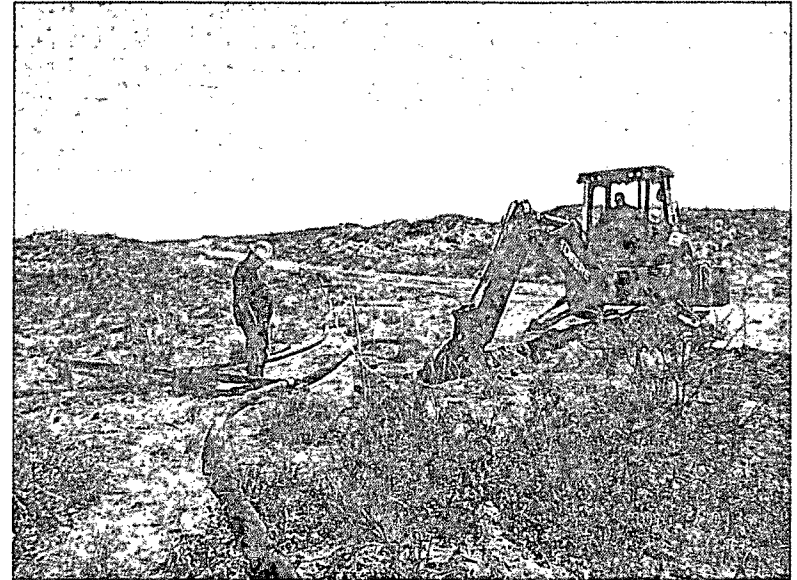


Auguring for depth, facing northwest

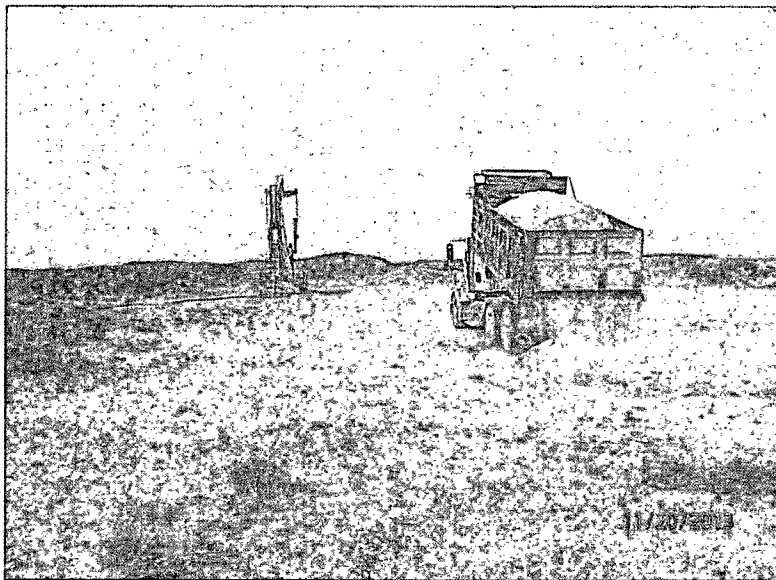
9/9/13



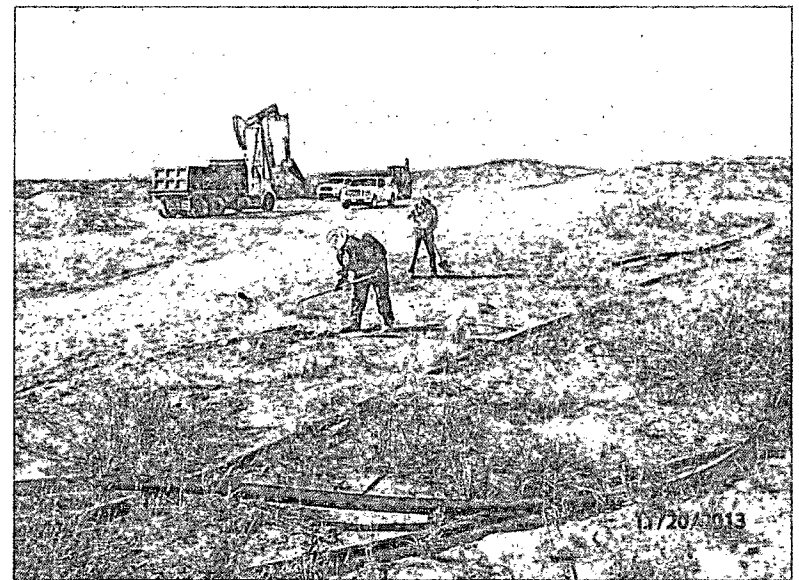
Plugging auger points in total with bentonite, facing
northeast 9/9/13



Installing vertical at Pt. 1, facing east 10/4/13



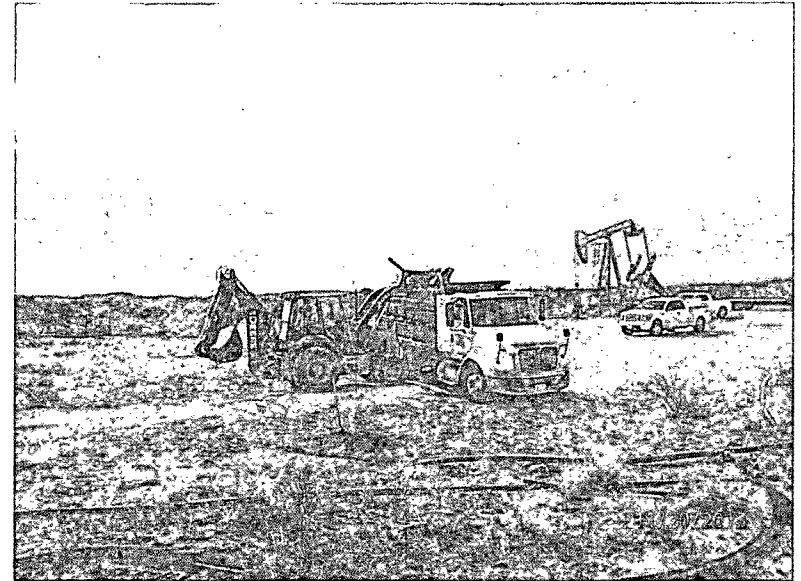
Importing caliche, facing west 11/20/13



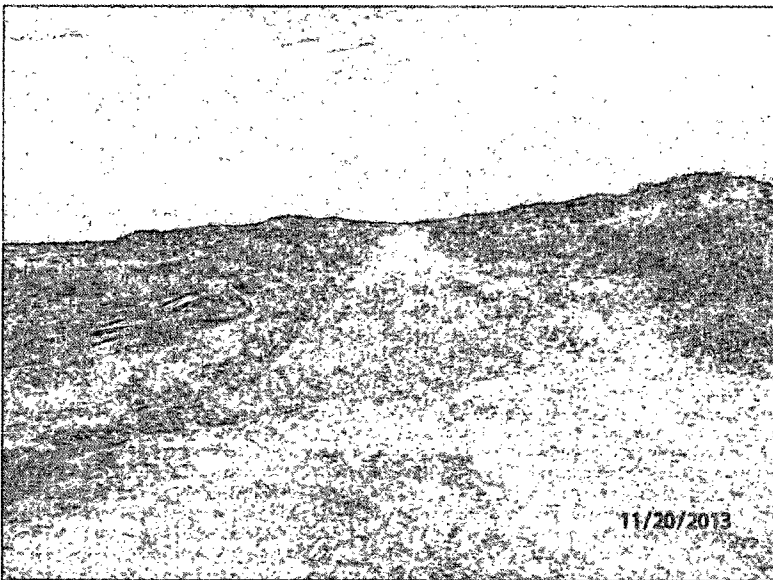
Spotting lines, facing southwest 11/20/13



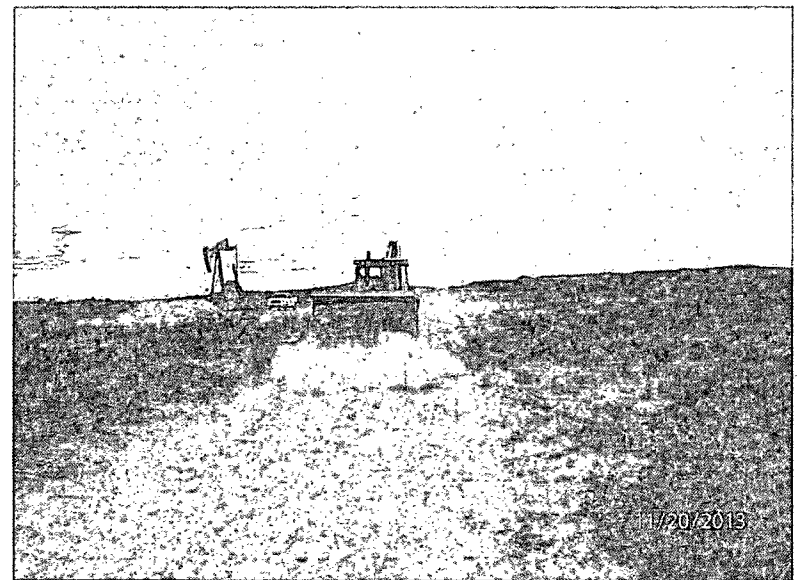
Conducting 6 inch scrape, facing southwest 11/20/13



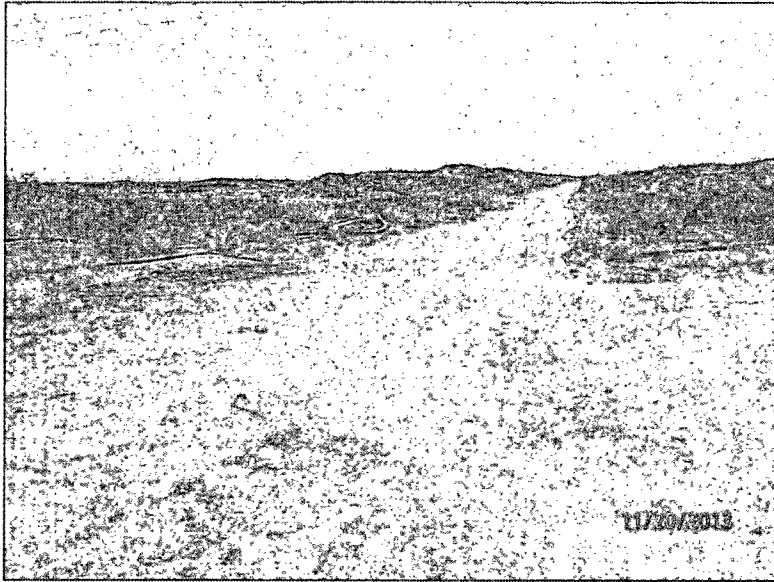
Exporting soil, facing southwest 11/20/13



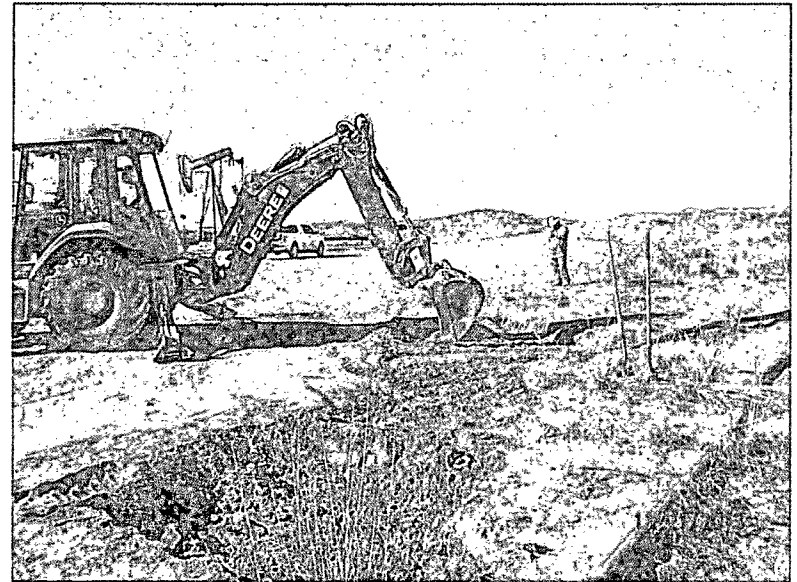
Road scrape completed, facing east 11/20/13



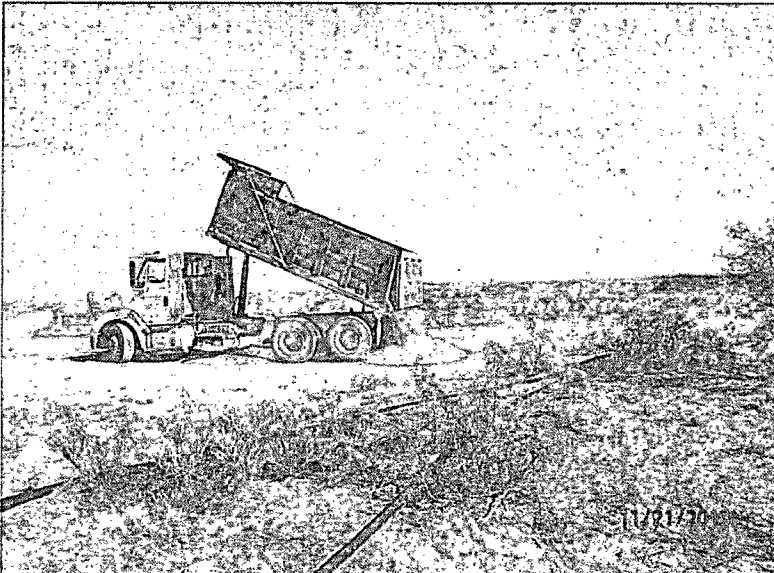
Backfilling road scrape, facing west 11/20/13



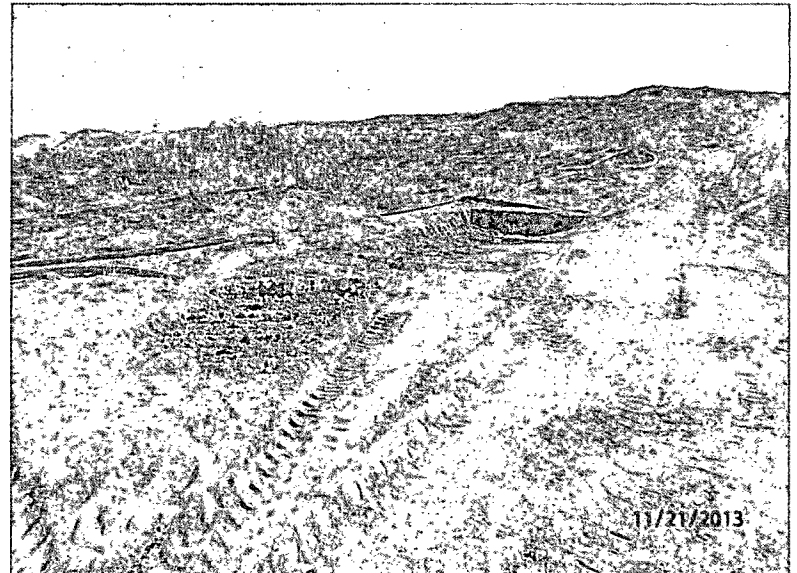
Road scrape completed, facing northeast 11/20/13



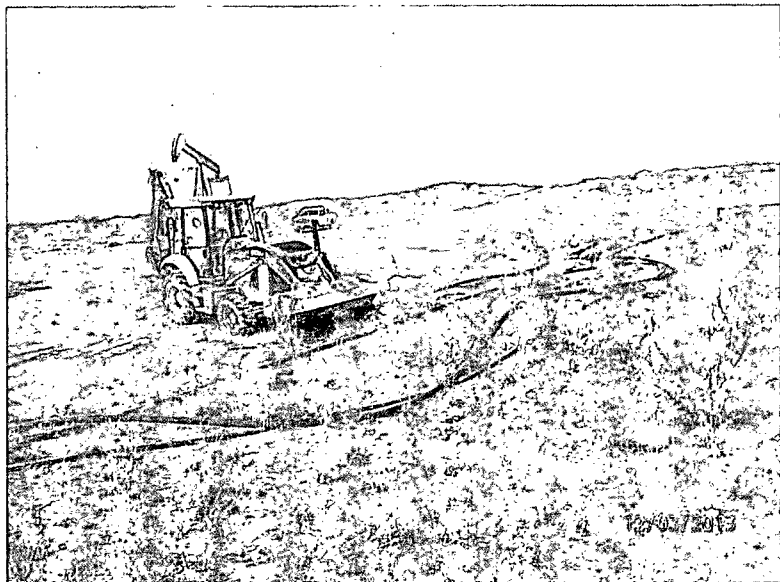
Conducting pasture scrape, facing southwest 11/21/13



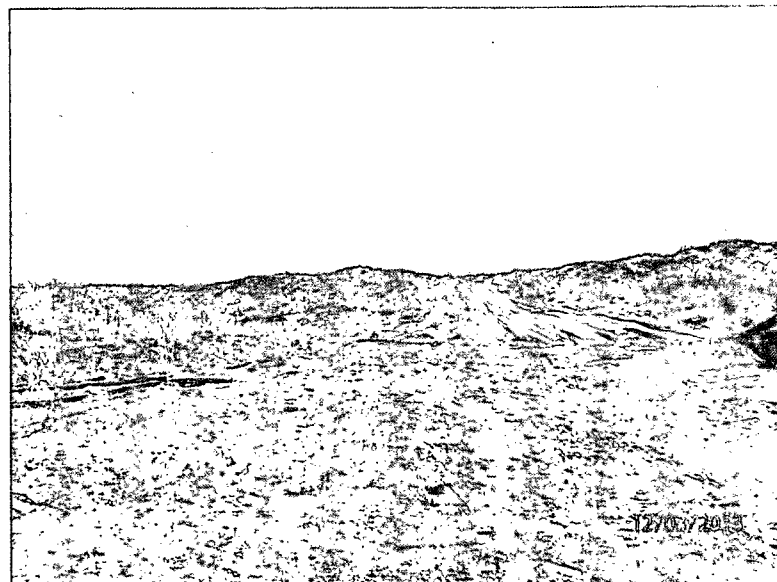
Importing top soil, facing north 11/21/13



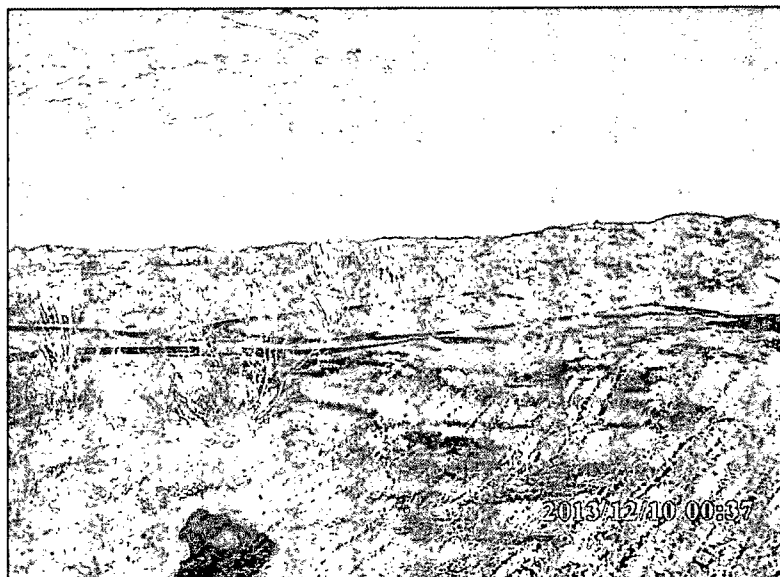
Pasture scrape completed, facing northeast 11/21/13



Backfilling pasture scrape, facing southwest 12/3/13



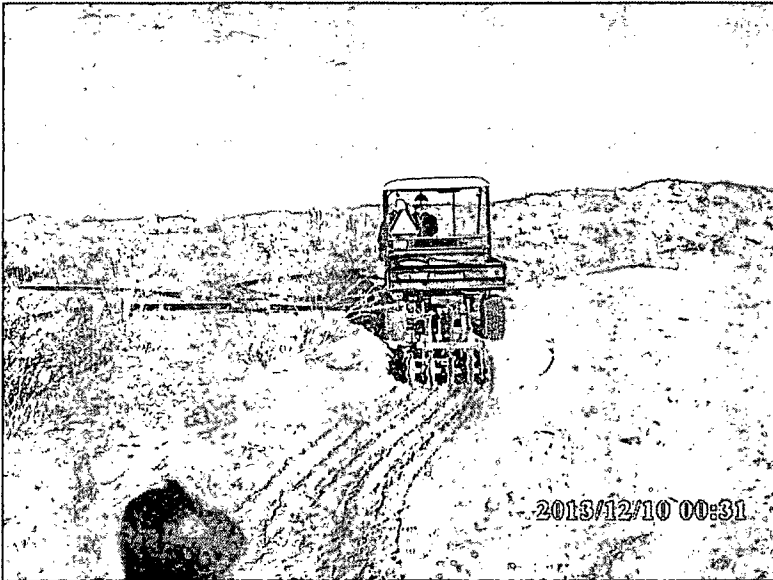
Pasture scrape completed, facing east 12/3/13



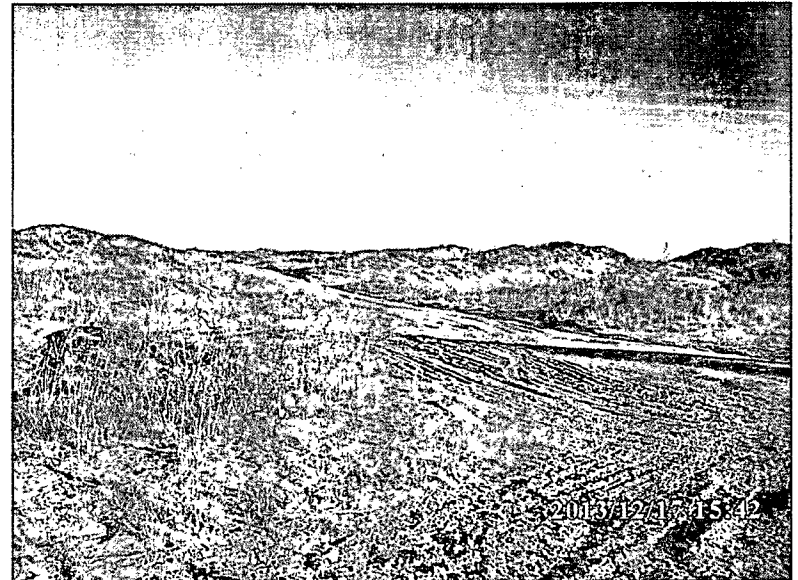
Soil amendments added, facing west 12/10/13



Seeding site facing west 12/10/13



Tilling in amendments and seed, facing north 12/10/13



Site completed, facing southeast

12/17/13

Appendix F

Final C-141

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

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

RECEIVED
State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
JAN 08 2014
NMOCD ARTESIA
South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Linn Operating	Contact Brian Wall	
Address 2130 W. Bender, Hobbs, NM 88240	Telephone No. (806) 367-0645	
Facility Name H.E. West B #41	Facility Type Oil Producer	
Surface Owner Federal	Mineral Owner Federal	API No. 3001526033

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	10	17S	31E	660	South	2020	West	Eddy

Latitude 32.8436498158389 Longitude -103.859578071309

NATURE OF RELEASE

Type of Release Produced Water/ Oil	Volume of Release 20 gals/ 5 gals	Volume Recovered 0/0
Source of Release Poly Pipeline	Date and Hour of Occurrence 8/16/2013 7:00 pm	Date and Hour of Discovery 8/16/2013 7:00 pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Burton - BLM	
By Whom? Brian Wall	Date and Hour 8/19/2013 2:00 pm	
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.* A hole developed at a 3" junction where the West B #41 flow line ties into the West B #31 flow line in route to the West B Tank Battery. Corrosion appears to have caused the failure.

Describe Area Affected and Cleanup Action Taken.* RECS personnel were on site beginning on August 23rd, 2013 to assess the site. Samples were taken from the surface and with depth at three locations throughout the 710 sq ft release. The samples were field tested for chlorides and hydrocarbons and representative samples were taken to a commercial laboratory for analyses. The surface samples at the three points showed elevated laboratory chloride levels, Gasoline Range Organics (GRO) readings of non-detect and elevated Diesel Range Organics (DRO) readings. At Point 2, the laboratory chloride levels dropped to below 250 mg/kg at 2 ft bgs and at Point 3, the laboratory chloride levels dropped to below 250 mg/kg at 3 ft bgs. DRO levels in Point 2 dropped to 10.8 mg/kg at 2 ft bgs and in Point 3 to non-detect at 3 ft bgs. At Point 1, a vertical was installed on October 4th, 2013, to determine the depth of contamination. The vertical was installed to a depth of 6.5 ft where the laboratory chloride reading returned a result of 944 mg/kg. A Corrective Action Plan (CAP) was submitted to NMOCD and BLM on October 25th, 2013. BLM approved the CAP on October 29th, 2013 and NMOCD approved the CAP on November 15th, 2013. CAP work began on November 20th, 2013. The site was scraped to 6 inches bgs and a total of 36 yards of soil was taken to a NMOCD approved facility for disposal. A 5 point composite of the bottom of the excavation was taken to a commercial laboratory for analysis. The 5 point bottom composite returned a chloride result of 304 mg/kg, GRO and BTEX results of non-detect and a DRO result of 243 mg/kg. Final wall samples of the scrape could not be taken; the scrape was too shallow and the wall composition too loose to allow adequate sampling. Therefore, the scrape was expanded north and west of the release to remediate areas without vegetation. A total of 36 yards of caliche and 12 yards of top soil were imported to the site. Samples of both the caliche and top soil were taken to a commercial laboratory for analysis. The caliche returned a chloride result of 32 mg/kg and the top soil returned a chloride result of non-detect. The lease road was backfilled with the imported caliche and the pasture was backfilled with the imported top soil. On December 10th, 2013, soil amendments were added to the pasture area and the area was seeded with LPC mix.

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

Signature: Fred B Wall	Approved by Environmental Specialist:	
Printed Name: Brian Wall	Approval Date:	Expiration Date:
Title: Construction Foreman II	Conditions of Approval:	
E-mail Address: bwall@linenergy.com	Attached <input type="checkbox"/>	
Date: 1-6-14	Phone: (806) 367-0645	

* Attach Additional Sheets If Necessary