

RECEIVED

NOV 20 2013
NMOCB

LINN ENERGY

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

HE West B 10

2RP-1995

Corrective Action Plan

API No. 3001505117

Release Date: October 14th, 2013

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

Rice Environmental Consulting & Safety

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

November 18th, 2013

Mike Bratcher

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

RE: Corrective Action Plan (CAP)
Linn Energy – HE West B 10 (2RP-1995)
UL/E sec. 9 T17S R31E
API No. 3001505117

Mr. Bratcher:

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

Background and Previous Work

The site is located approximately 6.2 miles northeast of Loco Hills, New Mexico at UL/E sec. 9 T17S R31E. This site is in an area of no known groundwater.

On October 14th, 2013, Linn used a pump truck with fresh water to discover the location of a release from a fiberglass pipeline. A total of 20 barrels of produced and fresh water was released from the fiberglass line and none of this water was recovered. The release affected 1,841 sq ft of pasture land. Linn notified BLM and NMOCD on October 16th, 2013 and an initial C-141 was submitted to both agencies (Appendix A).

RECS was on site beginning October 17th, 2013 to assess the site. Three points were sampled at the surface and two of the points were sampled with depth. The samples were field tested for chlorides and for organic vapors using a PID meter (Figure 1). Representative samples were taken to a commercial laboratory for analysis (Appendix B). Point 1 returned laboratory chloride readings below 1,000 mg/kg at 2.5 ft bgs and Point 3 returned laboratory chloride readings below 1,000 mg/kg at 4 ft bgs. Point 3 was advanced to 15.5 ft bgs to determine the extent of the vertical contamination. The laboratory chloride readings fell below 250 mg/kg at 15.5 ft bgs.

Photo documentation of these actions can be found in Appendix C.

Corrective Action Plan

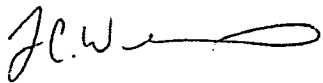
Based on the laboratory data, the area around Point 1 will be excavated to 2.5 ft bgs. The side walls and bottom of the excavation will be sampled to verify that the chloride values are below 1,000 mg/kg (Figure 2). At Point 2, the site will be scraped down six inches to

remove the staining. At Point 3, the area will be excavated to a depth of 4 ft bgs and the side walls of the excavation will be sampled to verify that the chloride values are below 1,000 mg/kg. At 4 ft bgs, a 20-mil poly liner will be installed and properly seated into the base of the excavation.

The excavated soil from all three areas will be taken to a NMOCD approved facility for disposal. Clean soil will be imported to use as backfill for the excavations and scrape and to contour the area to the surrounding location. Soil amendments will be added as needed and the site will be seeded with a blend of native vegetation.

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 stylized flourish.

Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

- Figure 1 – Initial Sampling Data
- Figure 2 – Proposed Corrective Actions
- Appendix A – Initial C-141
- Appendix B – Laboratory Analyses
- Appendix C – Photo Documentation

Figures

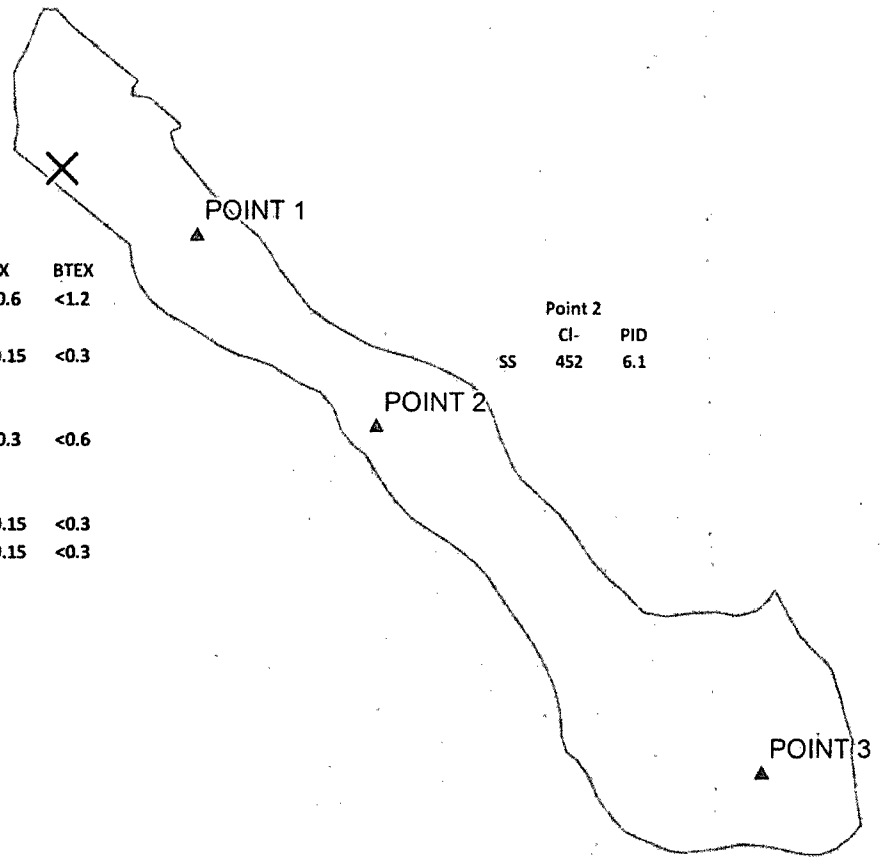
RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948, Hobbs, NM 88241
Phone 575.393.2967

Initial Sampling Data

	CI-	PID	GRO	DRO	B	T	E	X	BTEX
SS	4560	95.6	<50	3150	<0.2	<0.2	<0.2	<0.6	<1.2
6"	2380	325.6							
1'	1782	30.4							
1.5'	2400	376.3	<10	61.5	<0.05	<0.05	<0.05	<0.15	<0.3
2'	1886	355.2							
2.5'	800	128.2	<10	10.3	<0.05	<0.05	<0.05	<0.15	<0.3

	CI-	PID	GRO	DRO	B	T	E	X	BTEX
SS	10300	360.1	<50	7230	<0.2	<0.2	<0.2	<0.6	<1.2
6"	2933	397.6							
1'	2760	385.5	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
1.5'	4469	36.8							
2'	6018	41.9							
2.5'	6000	377.2	<10	15.1	<0.1	<0.1	<0.1	<0.3	<0.6
3'	3313	23.7							
3.5'	3360	43.8							
4'	560	4.1	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
4.5'	512	12.1	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3
5'	538	8.5							
5.5'	1619	10.7							
6'	375	13.3							
6.5'	319	7							
7'	480	4.2							
7.5'	454	6.7							
8'	679	12.8							
8.5'	765	8.3							
9'	823	6							
9.5'	854	7.1							
10'	515	6.7							
10.5'	480	11.1							
11'	446	7.3							
11.5'	480	4.4							
12'	486	0.5							
12.5'	391	0.7							
13'	508	0.4							
13.5	204	0.3							
14'	598	0.3							
14.5'	403	0.2							
15'	361	0.3							
15.5'	80	0.1	<10	<10	<0.05	<0.05	<0.05	<0.15	<0.3

	CI-	PID
SS	452	6.1



LANDOWNER: BLM
GROUNDWATER: NONE

Source: Esri, DigitalGlobe,
Getmapping, Aerogrid, IGN

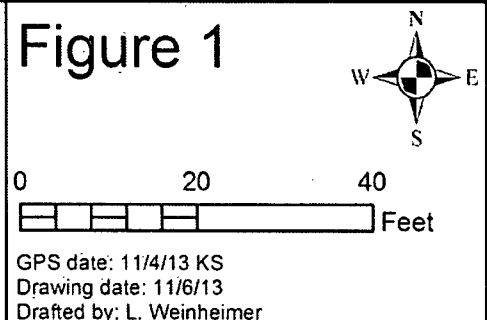
Legend

- ▲ SAMPLE POINTS
- ✕ SOURCE
- STAIN AREA- 1841 SQ FT

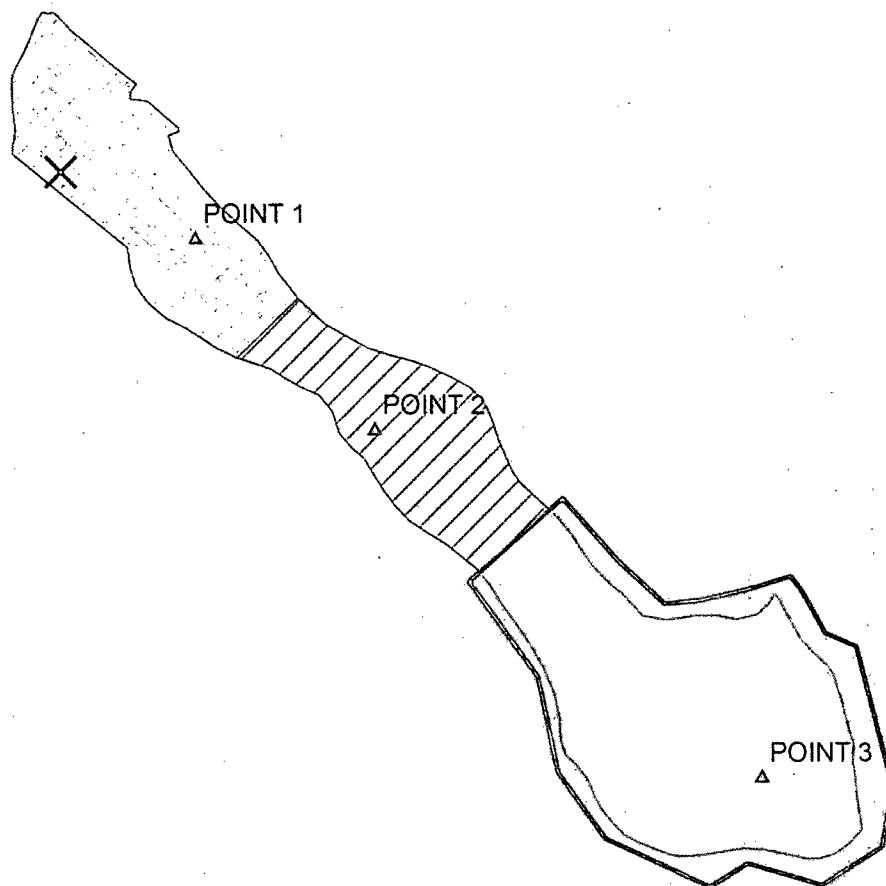


LINN H.E.
WEST B #10
2RP-1995
UL E SECTION 9
T-17-S R-31-E
EDDY COUNTY, NM

Figure 1



Proposed Corrective Actions



LANDOWNER: BLM
GROUNDWATER: NONE

Source: Esri
Getmapping

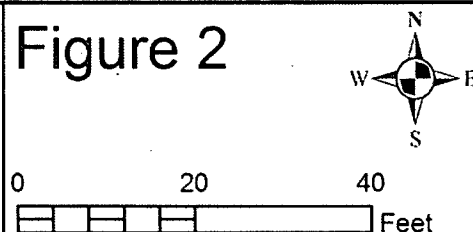
Legend

- ▲ SAMPLE POINTS
- ✕ SOURCE
- [Stippled Box] PROPOSED EXCAVATION TO 2.5 FT
- [Hatched Box] PROPOSED SCRAPE TO 6 IN
- [Thick Outline Box] PROPOSED 20-MIL POLY LINER AT 4 FT BGS
- [Empty Box] STAIN AREA- 1841 SQ FT



LINN H.E.
WEST B #10
2RP-1995
UL E SECTION 9
T-17-S R-31-E
EDDY COUNTY, NM

Figure 2



GPS date: 11/4/13 KS
Drawing date: 11/15/13
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
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-141
Revised October 10, 2003

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.: 575-738-1739	
Facility Name: HE West B 10	Facility Type: Injection	
Surface Owner: Federal	Mineral Owner:	API No.: 3001505117

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	09	17S	31E	1980	North	660	West	Eddy

Latitude: 32.85087 Longitude: -103.88039

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 20 bbls	Volume Recovered: 0
Source of Release: Fiberglass pipeline	Date and Hour of Occurrence: 10/14/2013 12:00pm	Date and Hour of Discovery: 10/14/2013 12:00pm
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 Mike Bratcher-NM OCD	
By Whom? Brian Wall	Date and Hour 10/16/2013 7:15am	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse	

RECEIVED


If a Watercourse was Impacted, Describe Fully.*:

NOV 20 2013
NMOCD

Describe Cause of Problem and Remedial Action Taken.*: Found location of injection line leak which had put injection out of service in area. Spill composed of fresh and produced water. Approx 20 barrels total fluid. Were using pump truck with fresh water at time to find location of leak.

Describe Area Affected and Cleanup Action Taken.*: spill located across road to North East about 200 ft from well next to cattle guard.

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: 	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Brian Wall	Approved by District Supervisor:		
Title: Construction Foreman II	Approval Date:	Expiration Date:	
E-mail Address: bwall@linenergy.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 10/16/2013 Phone: 806-367-0645			

* Attach Additional Sheets If Necessary

Appendix B

Laboratory Analyses

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

October 28, 2013

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: H. E. WEST B #10

Enclosed are the results of analyses for samples received by the laboratory on 10/23/13 15:40.

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.

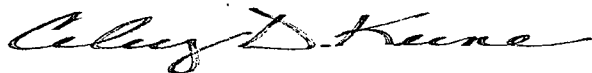
Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

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
JACOB KAMPLAIN
419 W. CAIN
HOBBS NM, 88240
Fax To: (575) 397-1471

Received: 10/23/2013
Reported: 10/28/2013
Project Name: H. E. WEST B #10
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/23/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 1 @ SURFACE (H302572-01)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.200	0.200	10/25/2013	ND	1.89	94.4	2.00	0.364		
Toluene*	<0.200	0.200	10/25/2013	ND	1.94	97.1	2.00	0.484		
Ethylbenzene*	<0.200	0.200	10/25/2013	ND	1.95	97.7	2.00	0.395		
Total Xylenes*	<0.600	0.600	10/25/2013	ND	5.87	97.8	6.00	0.0827		
Total BTEX	<1.20	1.20	10/25/2013	ND						

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	4560	16.0	10/24/2013	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	10/25/2013	ND	185	92.3	200	0.942		
DRO >C10-C28	3150	50.0	10/25/2013	ND	173	86.6	200	1.03		

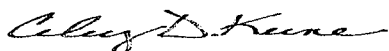
Surrogate: 1-Chlorooctane 91.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 185 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 10/23/2013
Reported: 10/28/2013
Project Name: H. E. WEST B #10
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/23/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 3 @ SURFACE (H302572-02)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	10/25/2013	ND	1.89	94.4	2.00	0.364	
Toluene*	<0.200	0.200	10/25/2013	ND	1.94	97.1	2.00	0.484	
Ethylbenzene*	<0.200	0.200	10/25/2013	ND	1.95	97.7	2.00	0.395	
Total Xylenes*	<0.600	0.600	10/25/2013	ND	5.87	97.8	6.00	0.0827	
Total BTX	<1.20	1.20	10/25/2013	ND					

Surrogate: 4-Bromofluorobenzene (PI) 104 % 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	10300	16.0	10/24/2013	ND	432	108	400	0.00	

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	10/25/2013	ND	185	92.3	200	0.942		
DRO >C10-C28	7230	50.0	10/25/2013	ND	173	86.6	200	1.03		

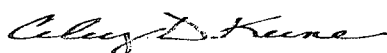
Surrogate: 1-Chlorooctane 104 % 65.2-140

Surrogate: 1-Chlorooctadecane 282 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

Received: 10/23/2013
Reported: 10/28/2013
Project Name: H. E. WEST B #10
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/23/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 1 @ 1.5' (H302572-03)

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	10/25/2013	ND	1.89	94.4	2.00	0.364	
Toluene*	<0.050	0.050	10/25/2013	ND	1.94	97.1	2.00	0.484	
Ethylbenzene*	<0.050	0.050	10/25/2013	ND	1.95	97.7	2.00	0.395	
Total Xylenes*	<0.150	0.150	10/25/2013	ND	5.87	97.8	6.00	0.0827	
Total BTEX	<0.300	0.300	10/25/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 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	2400	16.0	10/24/2013	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	<10.0	10.0	10/25/2013	ND	185	92.3	200	0.942	
DRO >C10-C28	61.5	10.0	10/25/2013	ND	173	86.6	200	1.03	

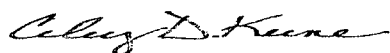
Surrogate: 1-Chlorooctane 94.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 101 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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Reported: 10/28/2013
Project Name: H. E. WEST B #10
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/23/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 1 @ 2.5' (H302572-04)

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	10/25/2013	ND	1.89	94.4	2.00	0.364	
Toluene*	<0.050	0.050	10/25/2013	ND	1.94	97.1	2.00	0.484	
Ethylbenzene*	<0.050	0.050	10/25/2013	ND	1.95	97.7	2.00	0.395	
Total Xylenes*	<0.150	0.150	10/25/2013	ND	5.87	97.8	6.00	0.0827	
Total BTEX	<0.300	0.300	10/25/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 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	800	16.0	10/24/2013	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	<10.0	10.0	10/25/2013	ND	185	92.3	200	0.942	
DRO >C10-C28	10.3	10.0	10/25/2013	ND	173	86.6	200	1.03	

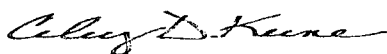
Surrogate: 1-Chlorooctane 94.7 % 65.2-140

Surrogate: 1-Chlorooctadecane 98.6 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 3 @ 1' (H302572-05)

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	10/27/2013	ND	1.89	94.4	2.00	0.364	
Toluene*	<0.050	0.050	10/27/2013	ND	1.94	97.1	2.00	0.484	
Ethylbenzene*	<0.050	0.050	10/27/2013	ND	1.95	97.7	2.00	0.395	
Total Xylenes*	<0.150	0.150	10/27/2013	ND	5.87	97.8	6.00	0.0827	
Total BTEX	<0.300	0.300	10/27/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 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	2760	16.0	10/24/2013	ND	432	108	400	3.77	
TPH 8015M		mg/kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier

GRO C6-C10	<10.0	10.0	10/25/2013	ND	185	92.3	200	0.942	
DRO >C10-C28	<10.0	10.0	10/25/2013	ND	173	86.6	200	1.03	

Surrogate: 1-Chlorooctane 93.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 97.9 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 10/23/2013
Reported: 10/28/2013
Project Name: H. E. WEST B #10
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/23/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 3 @ 2.5' (H302572-06)
BTEX 8021B

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	10/27/2013	ND	1.89	94.4	2.00	0.364	
Toluene*	<0.100	0.100	10/27/2013	ND	1.94	97.1	2.00	0.484	
Ethylbenzene*	<0.100	0.100	10/27/2013	ND	1.95	97.7	2.00	0.395	
Total Xylenes*	<0.300	0.300	10/27/2013	ND	5.87	97.8	6.00	0.0827	
Total BTEX	<0.600	0.600	10/27/2013	ND					

Surrogate: 4-Bromofluorobenzene (PI) 104 % 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	6000	16.0	10/24/2013	ND	432	108	400	3.77	

TPH 8015M

mg/kg

Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/25/2013	ND	185	92.3	200	0.942	
DRO >C10-C28	15.1	10.0	10/25/2013	ND	173	86.6	200	1.03	

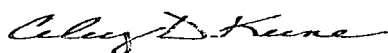
Surrogate: 1-Chlorooctane 93.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 101 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

Received: 10/23/2013
Reported: 10/28/2013
Project Name: H. E. WEST B #10
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 10/23/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 3 @ 4' (H302572-07)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/27/2013	ND	1.89	94.4	2.00	0.364	
Toluene*	<0.050	0.050	10/27/2013	ND	1.94	97.1	2.00	0.484	
Ethylbenzene*	<0.050	0.050	10/27/2013	ND	1.95	97.7	2.00	0.395	
Total Xylenes*	<0.150	0.150	10/27/2013	ND	5.87	97.8	6.00	0.0827	
Total BTEX	<0.300	0.300	10/27/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 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	560	16.0	10/24/2013	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	10/25/2013	ND	185	92.3	200	0.942		
DRO >C10-C28	<10.0	10.0	10/25/2013	ND	173	86.6	200	1.03		

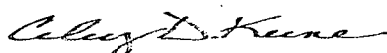
Surrogate: 1-Chlorooctane 94.4 % 65.2-140

Surrogate: 1-Chlorooctadecane 96.1 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

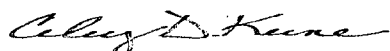
Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: RECS						BILL TO								ANALYSIS REQUEST																											
Project Manager: Jacob Kamplain						P.O. #:						Chlorides TPH 8015 M BTEX Texas TPH Complete Cations/Anions TDS																													
Address:						Company:																																			
City: Hobbs State: NM Zip: 88240						Attn:																																			
Phone #: Fax #:						Address:																																			
Project #: Project Owner:						City:																																			
Project Name:						State: Zip:																																			
Project Location: H.E. West B#10						Phone #:																																			
Sampler Name: Kyle Schnaidt						Fax #:																																			
FOR LAB USE ONLY																																									
Lab I.D.		Sample I.D.				(G)RAB OR (C)OMP.		# CONTAINERS		GROUNDWATER		WASTEWATER		SOIL		OIL		SLUDGE		OTHER :		ACID/BASE:		ICE / COOL		OTHER :		DATE		TIME											
H302572																																									
1 Point 1 @ surface		6 1																										10-23-13		11:00											
2 Point 3 @ surface		6 1																										11:10													
3 Point 3 @ 1.5'		6 1																										11:15													
4 Point 2 @ 2.5'		6 1																										11:20													
5 Point 3 @ 1'		6 1																										11:25													
6 Point 3 @ 2.5'		6 1																										11:30													
7 Point 3 @ 4'		6 1																										11:35													
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: Kyle Schnaidt						Date: 10-23-13		Time: 3:40		Received By: Jodi Benson						Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						Add'l Phone #:																			
Relinquished By:						Date:		Time:		Received By:						Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						Add'l Fax #:																			
Delivered By: (Circle One)						Sample Condition						CHECKED BY:						kschnaidt@rice-ecs.com Knorman@rice-ecs.com Kjones@riceswd.com; jkamplain@rice-ecs.com hconder@rice-ecs.com; Lweinheimer@rice-ecs.com																							
Sampler - UPS - Bus - Other:						Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>						Initials [Signature]																													

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

November 11, 2013

JACOB KAMPLAIN

RICE ENVIRONMENTAL CONSULTING & SAFETY LLC

419 W. CAIN

HOBBS, NM 88240

RE: H. E. WEST B #10

Enclosed are the results of analyses for samples received by the laboratory on 11/05/13 15:55.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,



Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

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

Received: 11/05/2013
Reported: 11/11/2013
Project Name: H. E. WEST B #10
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 11/04/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: POINT 3 @ 4.5' (H302698-01)

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	11/09/2013	ND	1.86	92.9	2.00	2.84	
Toluene*	<0.050	0.050	11/09/2013	ND	1.87	93.4	2.00	2.58	
Ethylbenzene*	<0.050	0.050	11/09/2013	ND	1.89	94.6	2.00	2.28	
Total Xylenes*	<0.150	0.150	11/09/2013	ND	5.57	92.8	6.00	1.69	
Total BTEX	<0.300	0.300	11/09/2013	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	512	16.0	11/07/2013	ND	432	108	400	4.01	

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	11/06/2013	ND	198	98.8	200	1.81	
DRO >C10-C28	<10.0	10.0	11/06/2013	ND	224	112	200	17.8	


Surrogate: 1-Chlorooctane 108 % 65.2-140

Surrogate: 1-Chlorooctadecane 115 % 63.6-154

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 11/05/2013
 Reported: 11/11/2013
 Project Name: H. E. WEST B #10
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 11/04/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: POINT 3 @ 15.5' (H302698-02)

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	11/08/2013	ND	2.02	101	2.00	0.0983	
Toluene*	<0.050	0.050	11/08/2013	ND	2.01	100	2.00	0.0618	
Ethylbenzene*	<0.050	0.050	11/08/2013	ND	2.01	101	2.00	0.0369	
Total Xylenes*	<0.150	0.150	11/08/2013	ND	5.90	98.4	6.00	0.540	
Total BTEX	<0.300	0.300	11/08/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID) 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	80.0	16.0	11/07/2013	ND	432	108	400	4.01	

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	11/06/2013	ND	198	98.8	200	1.81	
DRO >C10-C28	<10.0	10.0	11/06/2013	ND	224	112	200	17.8	

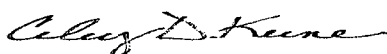
Surrogate: 1-Chlorooctane 104 % 65.2-140

Surrogate: 1-Chlorooctadecane 109 % 63.6-154

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

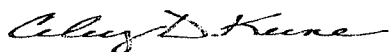
Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



Page 5 of 5

[illegible]

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Relinquished By:		Date:	Received By:	Phone Result:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
Kyle Schnaith		Time:	Jodi Benson	Fax Result:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:		Date:	Received By:	REMARKS:		
		Time:		Send to All		
Delivered By: (Circle One)			Sample Condition	CHECKED BY:		
Sampler - UPS - Bus - Other:			Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	JH		

† Ca cannot accept verbal changes. Please fax written changes to (575) 393-2326.

Appendix C

Photo Documentation

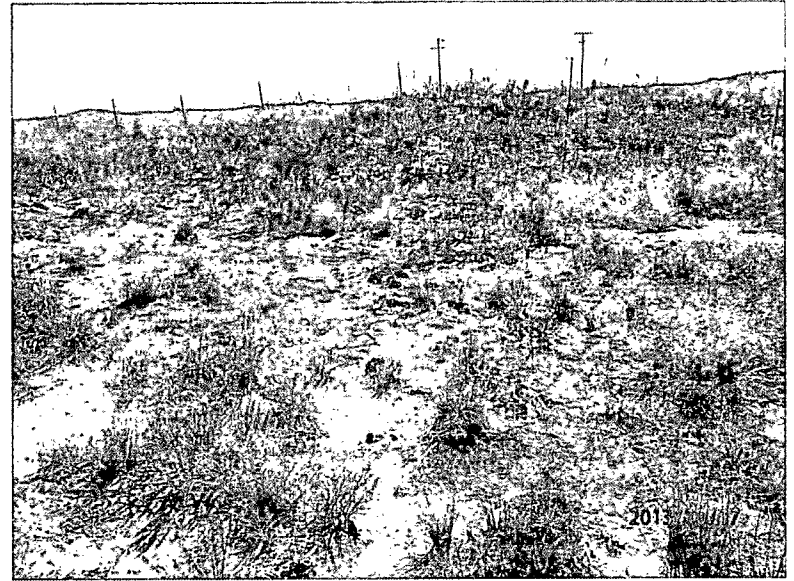
RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

Linn H.E. West B #10
Unit Letter E, Section 9, T17S, R31E



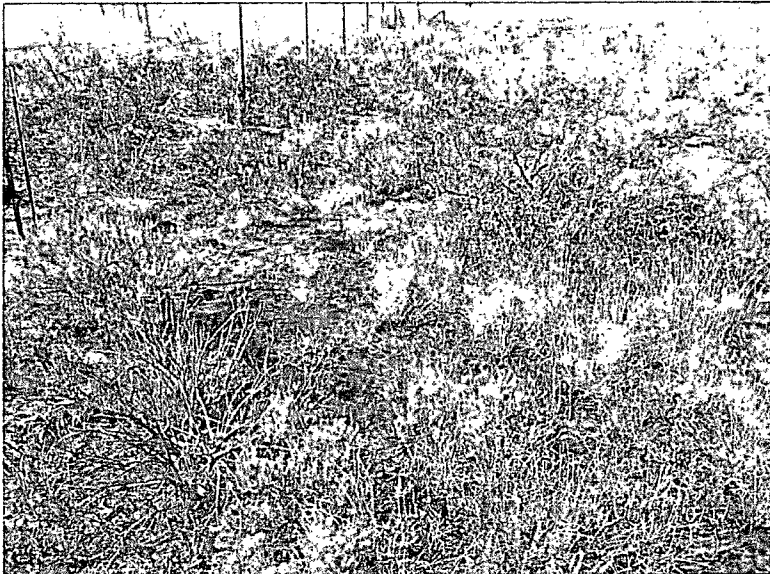
Source of release, facing south

10/17/13



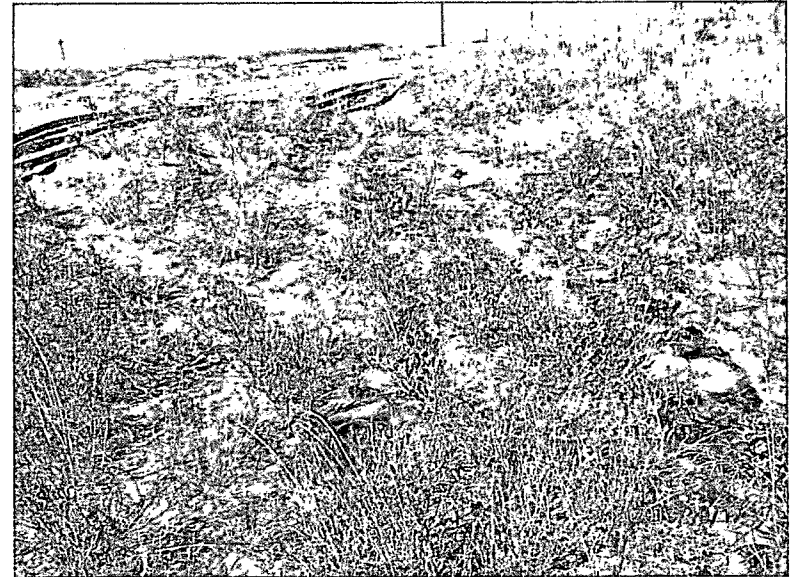
Initial release area, facing south

10/17/13



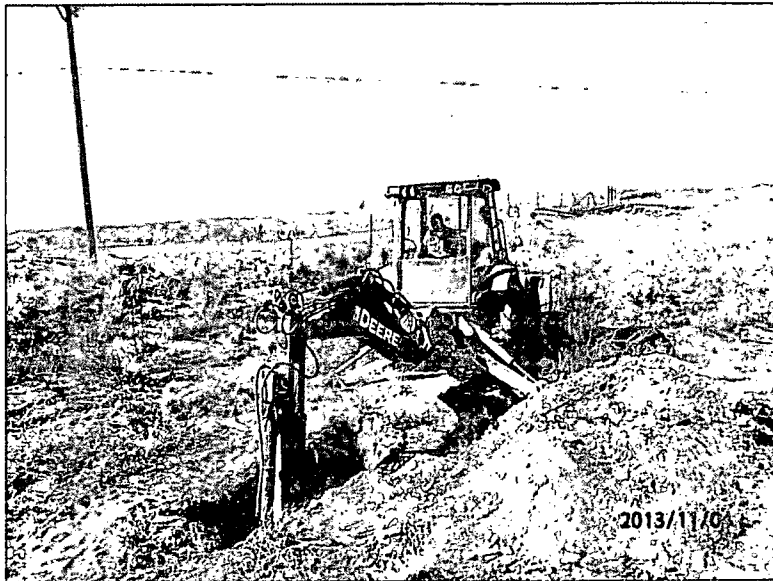
Initial release area, facing west

10/17/13



Initial release area, facing northwest

10/17/13



Installing vertical, facing west

11/4/13