

1R - 427-94

APPROVALS

YEAR(S):

2013

Hansen, Edward J., EMNRD

From: Hansen, Edward J., EMNRD
Sent: Tuesday, July 30, 2013 3:19 PM
To: Hack Conder (hconder@riceswd.com)
Cc: Leking, Geoffrey R, EMNRD; Laura Pena (lpna@riceswd.com); Katie Jones <kjones@riceswd.com> (kjones@riceswd.com); Scott Curtis (scurtis@riceswd.com); Lara Weinheimer (lweinheimer@rice-ecs.com)
Subject: Remediation Plan (1R427-94) Termination - ROC EME O-33 Site

**RE: ICP Report and Termination Request
for the Rice Operating Company's
EME O-33 Site
Unit Letter O, Section 33, T19S, R37E, NMPM, Lea County, New Mexico
Remediation Plan (1R427-94) Termination**

Dear Mr. Conder:

The New Mexico Oil Conservation Division (OCD) has received Rice Operating Company's report and request to close the above-referenced site, dated July 19, 2013 (received July 23, 2013). The report is acceptable to the OCD.

The above-referenced report, submitted in accordance with 19.15.29 NMAC (Rule 29; formally, Rule 116), indicates that Rice Operating Company has met the requirements of 19.15.29 NMAC; therefore, the OCD approves the report and hereby notifies you that the remediation plan (1R427-94) is terminated in accordance with 19.15.29 NMAC.

Please be advised that OCD approval of this report does not relieve the owner/operator of responsibility should operations pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the owner/operator of responsibility for compliance with any OCD, federal, state, or local laws and/or regulations.

If you have any questions regarding this matter, please contact me at 505-476-3489.

Edward J. Hansen
Hydrologist
Environmental Bureau

Rice Environmental Consulting & Safety

P.O. Box 2948, Hobbs, NM 88241

Phone 575.393.2967

CERTIFIED MAIL

RETURN RECEIPT NO. 7008 1140 0001 3072 4666

July 19th, 2013

RECEIVED

Mr. Edward Hansen

New Mexico Energy, Minerals, & Natural Resources

Oil Conservation Division, Environmental Bureau

1220 S. St. Francis Drive

Santa Fe, New Mexico 87505

JUL 23 2013

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

**RE: ICP Report and Termination Request
Rice Operating Company – EME SWD System
EME O-33 (1R427-94): UL/O sec. 33 T19S R37E**

Mr. Hansen:

RICE Operating Company (ROC) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site in the EME Salt Water Disposal (SWD) system. ROC is the service provider (agent) for the EME SWD System and has no ownership of any portion of the pipeline, well, or facility. The system is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Background and Previous Work

The site is located approximately 1 mile southeast of Monument, New Mexico at UL/O sec. 33 T19S R37E as shown on the Site Location Map (Figure 1). Groundwater at this site is located at a depth of approximately 34 +/- feet below ground surface (bgs).

In 2002, ROC initiated work on the former EME O-33 junction box. The site was delineated using a backhoe to form a 30 ft x 20 ft x 15 ft deep excavation and soil samples were screened at regular intervals for both hydrocarbons and chlorides. From the excavation, the four-wall composite and the bottom composite were taken to a commercial laboratory for analysis. Laboratory tests of the four-wall composite showed a chloride reading of 465 mg/kg, a gasoline range organics (GRO) reading of non-detect and a diesel range organics (DRO) reading of 42.7 mg/kg. The bottom composite showed a chloride laboratory reading of 815 mg/kg, a GRO reading of non-detect and a DRO reading of 175 mg/kg. BTEX readings for both samples were non-detect. A one foot thick compacted clay layer was installed at the bottom of the excavation. The site was backfilled with clean, imported soil and the area was contoured to the surrounding landscape. The high impact soil was taken to a NMOCD approved facility for disposal. A new junction box was placed over the site. NMOCD was notified of potential groundwater impact on January 31st, 2003 and a junction box disclosure report was submitted to NMOCD with all the 2002 junction box closures and disclosures.

An Investigation and Characterization Plan (ICP) was submitted to NMOCD on March 28th, 2013 and approved on April 22nd, 2013. As part of the ICP, RECS personnel were on site to conduct soil bores on June 18th, 2013 (Figure 2). Two soil bores were installed at the site. Samples were taken at regular intervals and field tested for chlorides and hydrocarbons. Representative samples were taken to a commercial laboratory for analysis (Appendix A). SB-1 returned laboratory chloride results of 64 mg/kg at 18 ft bgs, 48 mg/kg at 21 ft bgs and 32 mg/kg at 24 ft bgs. SB-2 returned laboratory chloride results of 32 mg/kg at 3 ft bgs, 48 mg/kg at 12 ft bgs and 32 mg/kg at 15 ft bgs. GRO and DRO returned results of non-detect at all depths in both soil bores.

All of the soil bore data shows laboratory reading below 250 mg/kg. Therefore, it is evident that the residual chlorides in the vadose zone will not adversely affect groundwater beneath the site. In addition, the existing 20 ft x 30 ft clay liner will also inhibit the downward migration of any residual constituents at the site. The site has returned to normal vegetative capacity and the area surrounding the active junction box is used as a driving surface for oilfield traffic (Appendix B). Vegetation above the liner will also provide a natural infiltration barrier for the site since plants capture water through their roots thereby reducing the volume of water moving through the vadose zone to groundwater.

Given that the residual constituents in the vadose zone will not in any way affect groundwater beneath the site and that the clay liner and vegetation will inhibit further migration of constituents to groundwater, ROC respectfully requests 'remediation termination' or similar closure status of the site.

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

Sincerely,



Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

- Figure 1 – Site Location Map
- Figure 2 – Soil Bore Installation Map
- Appendix A – Soil Bore Installation Documentation
- Appendix B – Site Photo Documentation

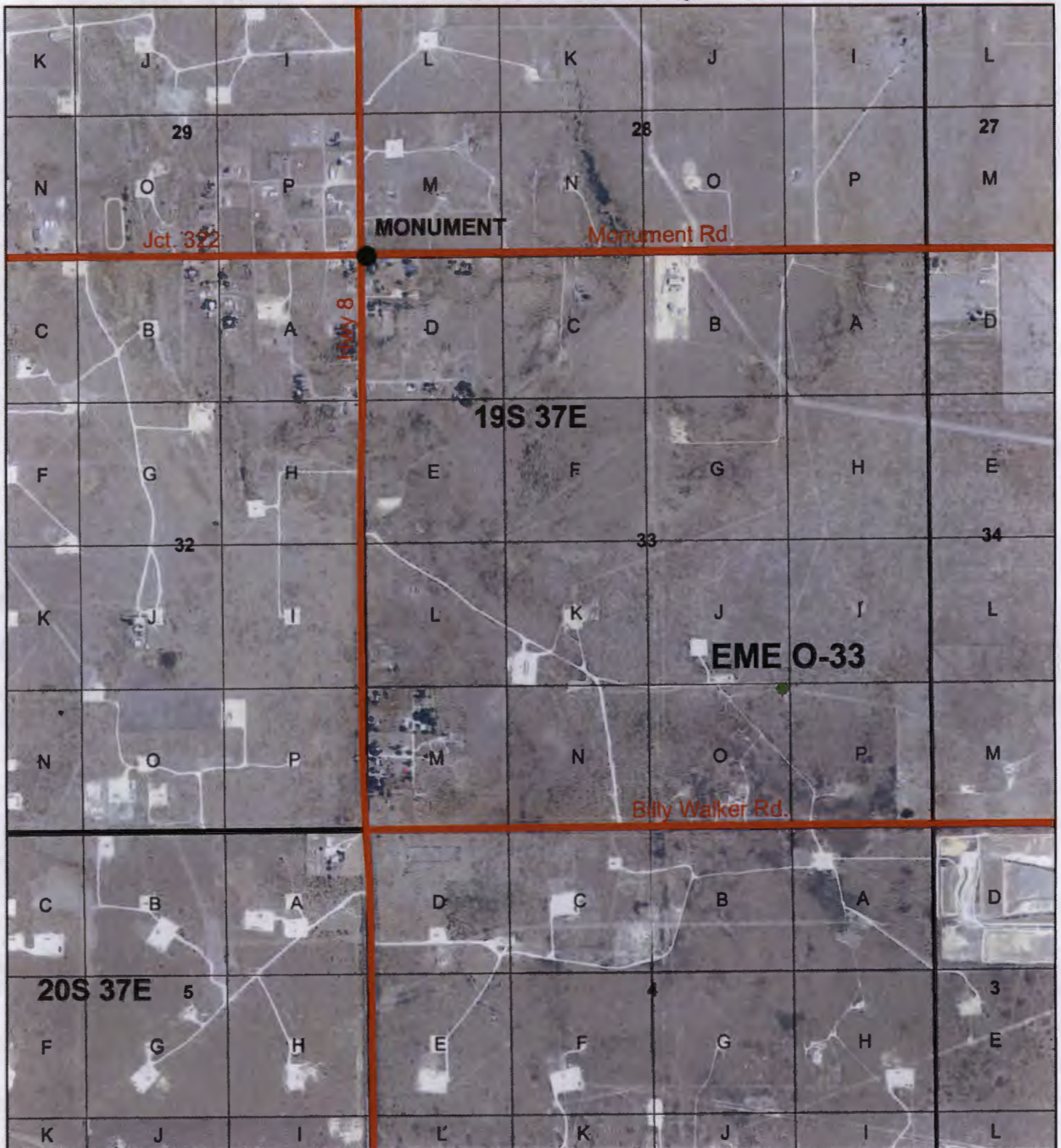
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2013 JUL 23 P 3:05



Figures

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

Site Location Map



EME O-33

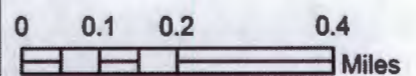
Legals: UL/O sec. 33

T-19S R-37-E

LEA COUNTY, NM

NMOCD CASE #: 1R427-94

Figure 1

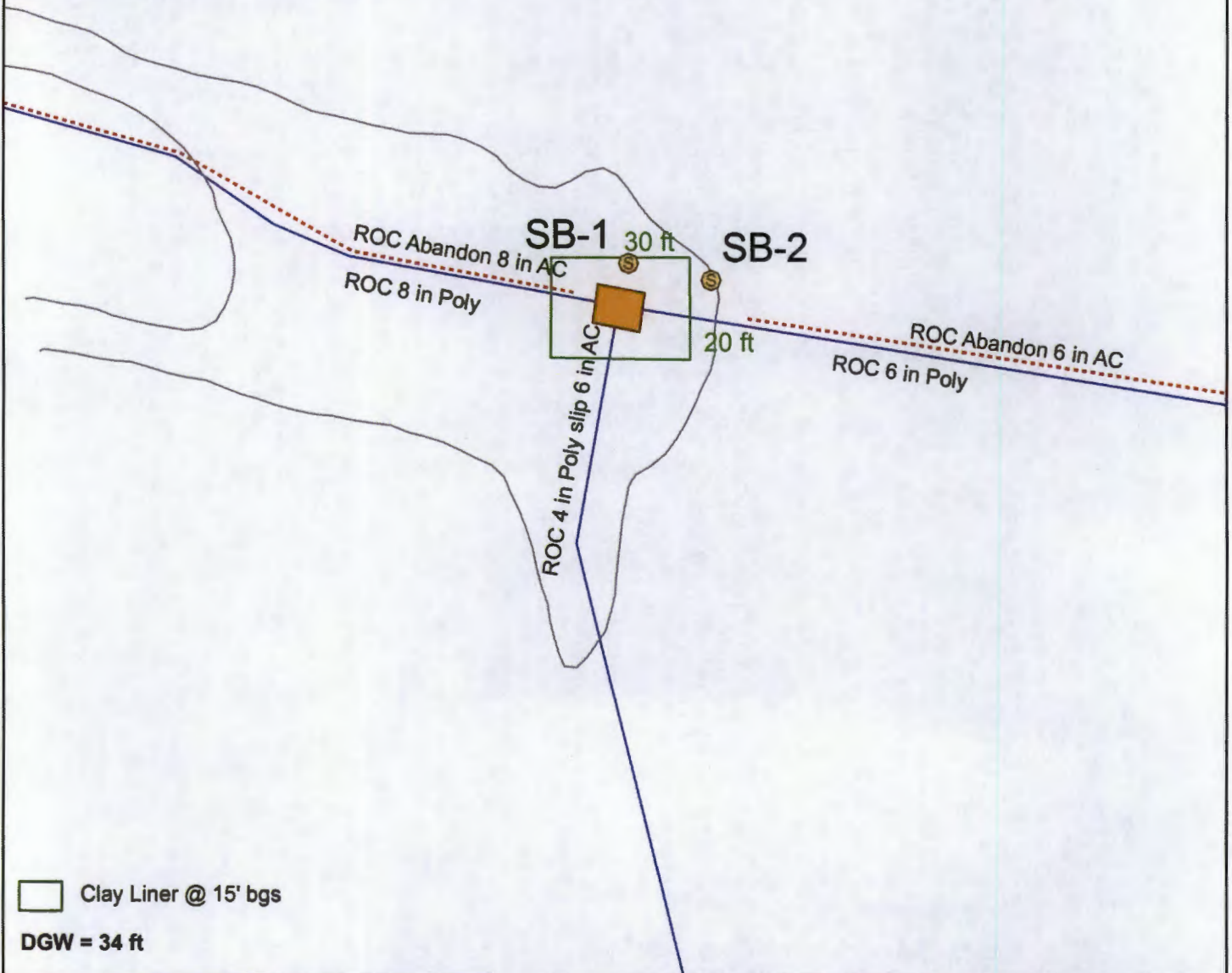


Drawing date: 7/8/13
Drawn by: L. Weinheimer

Soil Bore Installation

SB-1					
Depth	CI-	PID	Lab CI-	GRO	DRO
18	114	1.6	64	<10	<10
21	149	1.8	48	<10	<10
24	148	2.9	32	<10	<10

SB-2					
Depth	CI-	PID	Lab CI-	GRO	DRO
SS	89	1.9			
3	118	2.7	32	<10	<10
6	85	2.3			
9	116	0.8			
12	141	1.3	48	<10	<10
15	117	0.9	32	<10	<10



Clay Liner @ 15' bgs

DGW = 34 ft



EME O-33

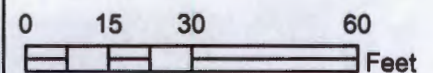
Legals: UL/O sec. 33

T-19-S R-37-E

LEA COUNTY, NM

NMOCD CASE #: 1R427-94

Figure 2



Drawing date: 6/24/13
Drafted by: C. Ursanic



Appendix A

Soil Bore Documentation

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

Logger:	Zach Conder					
Driller:	Harrison & Cooper, Inc.					
Drilling Method:	Air rotary					
Start Date:	6/18/2013					
End Date:	6/18/2013	Comments: SB-1 is located 8 ft north of the current junction box site. All samples were from cuttings. DRAFTED BY: L. Weinheimer TD = 24 ft GW = 34 ft		Project Name: EME O-33 Project Consultant: RECS Location: UL/O sec. 33 T-19-S R-37-E Lat: 32°36'46.911"N Long: 103°15'8.229"W	Well ID: SB-1 County: Lea State: NM	
Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Brown Caliche		
SS				Tan Caliche		
5 ft						
10 ft						
18 ft	114	CI-64	1.6			
		GRO <10				
		DRO <10				
21 ft	149	CI-48	1.8			
		GRO <10				
		DRO <10				
24 ft	148	CI-32	2.9			
		GRO <10				
		DRO <10				
<div style="text-align: right; margin-right: 50px;"> bentonite seal </div>						

Logger:	Zach Conder			
Driller:	Harrison & Cooper, Inc.			
Drilling Method:	Air rotary		Project Name:	Well ID:
Start Date:	6/18/2013		EME O-33	SB-2
End Date:	6/18/2013	Project Consultant: RECS		
Comments: SB-2 is located 19 ft northeast of the current junction box site. All samples were from cuttings. DRAFTED BY: L. Weinheimer TD = 15 ft GW = 34 ft			Location: UL/O sec. 33 T-19-S R-37-E Lat: 32°36'46.876"N County: Lea Long: 103°15'8.028"W State: NM	

Depth (feet)	Chloride field tests	LAB	PID	Description	Lithology	Well Construction
SS	89		1.9	Brown Caliche		
3 ft	118	CI-32	2.7			
		GRO <10				
		DRO <10				
6 ft	85		2.3	Tan Caliche		bentonite seal
9 ft	116		0.8			
12 ft	141	CI-48	1.3			
		GRO <10				
		DRO <10				
15 ft	117	CI-32	0.9			
		GRO <10				
		DRO <10				



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

June 24, 2013

KATIE JONES

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME O-33

Enclosed are the results of analyses for samples received by the laboratory on 06/18/13 15:50.

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 Operating Company
KATIE JONES
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received: 06/18/2013
Reported: 06/24/2013
Project Name: EME O-33
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/18/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #1 18' (H301404-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	06/20/2013	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	06/20/2013	ND	220	110	200	1.01	
DRO >C10-C28	<10.0	10.0	06/20/2013	ND	231	116	200	0.0575	
Surrogate: 1-Chlorooctane	73.0 %	65.2-140							
Surrogate: 1-Chlorooctadecane	77.1 %	63.6-154							

Sample ID: SB #1 21' (H301404-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/20/2013	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	06/20/2013	ND	220	110	200	1.01	
DRO >C10-C28	<10.0	10.0	06/20/2013	ND	231	116	200	0.0575	
Surrogate: 1-Chlorooctane		86.4 %	65.2-140						
Surrogate: 1-Chlorooctadecane		90.8 %	63.6-154						

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

Rice Operating Company
KATIE JONES
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received: 06/18/2013
Reported: 06/24/2013
Project Name: EME O-33
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/18/2013
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #1 24' (H301404-03)

Chloride, SM4500Cl-B			mg/kg Analyzed By: DW							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/20/2013	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	06/21/2013	ND	220	110	200	1.01		
DRO >C10-C28	<10.0	10.0	06/21/2013	ND	231	116	200	0.0575		
Surrogate: 1-Chlorooctane	93.8 %	65.2-140								
Surrogate: 1-Chlorooctadecane	95.6 %	63.6-154								

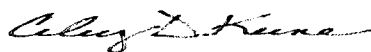
Sample ID: SB #2 3' (H301404-04)

Chloride, SM4500Cl-B			mg/kg Analyzed By: DW							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	06/20/2013	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	06/21/2013	ND	220	110	200	1.01		
DRO >C10-C28	<10.0	10.0	06/21/2013	ND	231	116	200	0.0575		
Surrogate: 1-Chlorooctane	91.1 %	65.2-140								
Surrogate: 1-Chlorooctadecane	91.0 %	63.6-154								

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 Rice Operating Company
 KATIE JONES
 112 W. Taylor
 Hobbs NM, 88240
 Fax To: (575) 397-1471

 Received: 06/18/2013
 Reported: 06/24/2013
 Project Name: EME O-33
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 06/18/2013
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SB #2 12' (H301404-05)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	06/20/2013	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	06/21/2013	ND	220	110	200	1.01	
DRO >C10-C28	<10.0	10.0	06/21/2013	ND	231	116	200	0.0575	
Surrogate: 1-Chlorooctane	97.0 %	65.2-140							
Surrogate: 1-Chlorooctadecane	99.2 %	63.6-154							

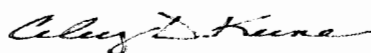
Sample ID: SB #2 15' (H301404-06)

Chloride, SM4500Cl-B		mg/kg	Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	06/20/2013	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	06/21/2013	ND	220	110	200	1.01	
DRO >C10-C28	<10.0	10.0	06/21/2013	ND	231	116	200	0.0575	
Surrogate: 1-Chlorooctane	93.3 %	65.2-140							
Surrogate: 1-Chlorooctadecane	94.3 %	63.6-154							

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

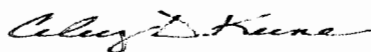
Notes and Definitions

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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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

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

54



Appendix B

Site Photo Documentation

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

EME O-33 (1R427-94)

UL/O sec. 33 T19S R37E



Site photo, facing south 6/12/13



Site photo, facing west 6/12/13