

1R - 427-02

# REPORTS

DATE:

7-19-13

## Rice Environmental Consulting & Safety

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

CERTIFIED MAIL  
RETURN RECEIPT NO. 7007 2560 0003 0320 5594

July 19<sup>th</sup>, 2013

**Mr. Edward Hansen**  
New Mexico Energy, Minerals, & Natural Resources  
Oil Conservation Division, Environmental Bureau  
1220 S. St. Francis Drive  
Santa Fe, New Mexico 87505

**RECEIVED**

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 H-10 (1R427-02): UL/H sec. 10 T20S R36E**

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 4.8 miles southwest of Monument, New Mexico at UL/H sec. 10 T20S R36E as shown on the Site Location Map (Figure 1 & 2). An updated study of NM OSE records, conducted in 2013, indicates that groundwater will likely be encountered at a depth of approximately 34 +/- feet.

In 2003, ROC initiated work on the former EME H-10 junction box. The site was delineated using a backhoe to form a 24 ft x 11 ft x 16 ft deep excavation and soil samples were screened at regular intervals for chlorides. From the excavation, the four-wall composite, the bottom composite, and the remediated backfill were taken to a commercial laboratory for analysis. Laboratory tests of the four-wall composite showed a chloride reading of 88.6 mg/kg and a gasoline range organics (GRO) and diesel range organics (DRO) reading of non-detect. The bottom composite showed a chloride laboratory reading of 677 mg/kg and a GRO and DRO reading of non-detect. The remediated backfill showed a chloride laboratory reading of 106 mg/kg, a GRO reading of non-detect and a DRO reading of 65.7 mg/kg. BTEX readings for all three samples were non-detect. A one-foot thick, compacted clay layer was installed at the base of the excavation and the site was backfilled with the remediated soil. The area was contoured to the surrounding landscape since a junction box is no longer necessary at the site. NMOCD was notified of potential groundwater impact on February 24<sup>th</sup>, 2003 and a

junction box disclosure report was submitted to NMOCD with all the 2003 junction box closures and disclosures.

An Investigation and Characterization Plan (ICP) was submitted to NMOCD on March 25<sup>th</sup>, 2013 and approved on April 22<sup>nd</sup>, 2013. As part of the ICP, RECS personnel were on site to conduct soil bores on May 8<sup>th</sup>, 2013 (Figure 2). A total of five 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 176 mg/kg at 18 ft bgs and 96 mg/kg at 21 ft bgs. SB-2 returned laboratory chloride results of non-detect at the surface, 48 mg/kg at 3 ft bgs and non-detect at 6 ft bgs. SB-3 returned laboratory chloride results of 48 mg/kg at the surface, 3 ft bgs and 6 ft bgs. SB-4 returned laboratory chloride results of non-detect at the surface and 3 ft bgs and 32 mg/kg at 6 ft bgs. SB-5 returned laboratory chloride results of 32 mg/kg at 3 ft bgs, 208 mg/kg at 9 ft bgs and 160 mg/kg at 12 ft bgs. GRO results for all bores at all depth were non-detect. DRO results for all bores at all depths were non-detect except for in SB-2 where the DRO readings were 10.3 mg/kg at the surface and 35 mg/kg at 3 ft bgs, in SB-3 where the DRO readings 98.3 mg/kg at 3 ft bgs and 252 mg/kg at 6 ft bgs, and in SB-4 where the DRO reading was 23.2 mg/kg at 3 ft bgs.

All of the soil bore data shows laboratory reading below 250 mg/kg. Therefore, it is evident the residual chloride in the vadose zone will not adversely affect groundwater beneath the site. In addition, the 11 ft x 24 ft clay liner will also inhibit the downward migration of any residual constituents at the site. The site has returned to normal vegetative capacity (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

2013 05 23 P 3:08  
RECEIVED OOD

**Attachments:**

**Figure 1 – Site Location Map**

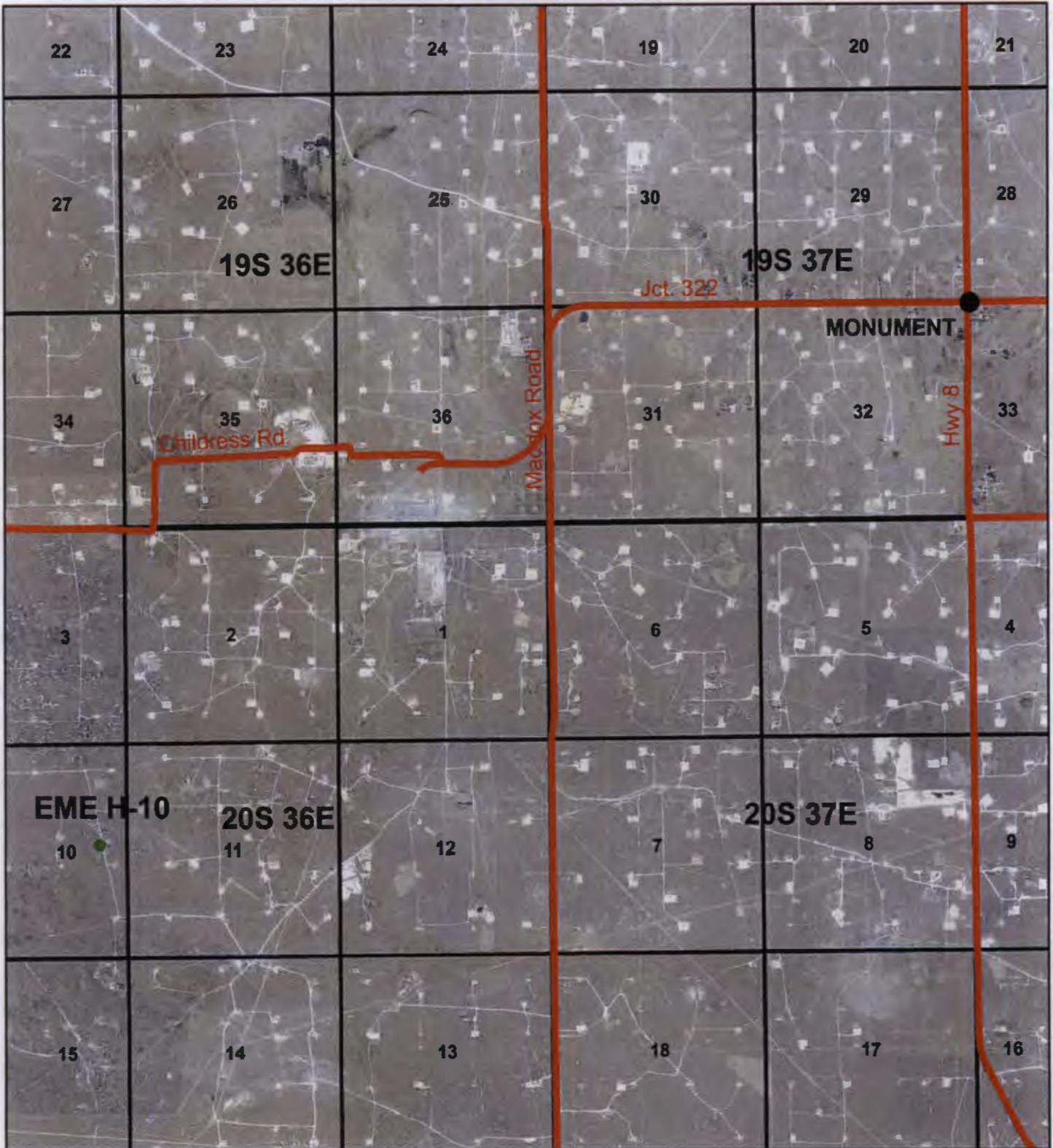
**Figure 2 – Close-Up Site Location Map**

**Figure 3 – Soil Bore Installation Map**

**Appendix A – Soil Bore Installation Documentation**

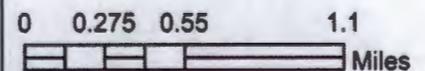
**Appendix B – Site Photo Documentation**

# Site Location Map



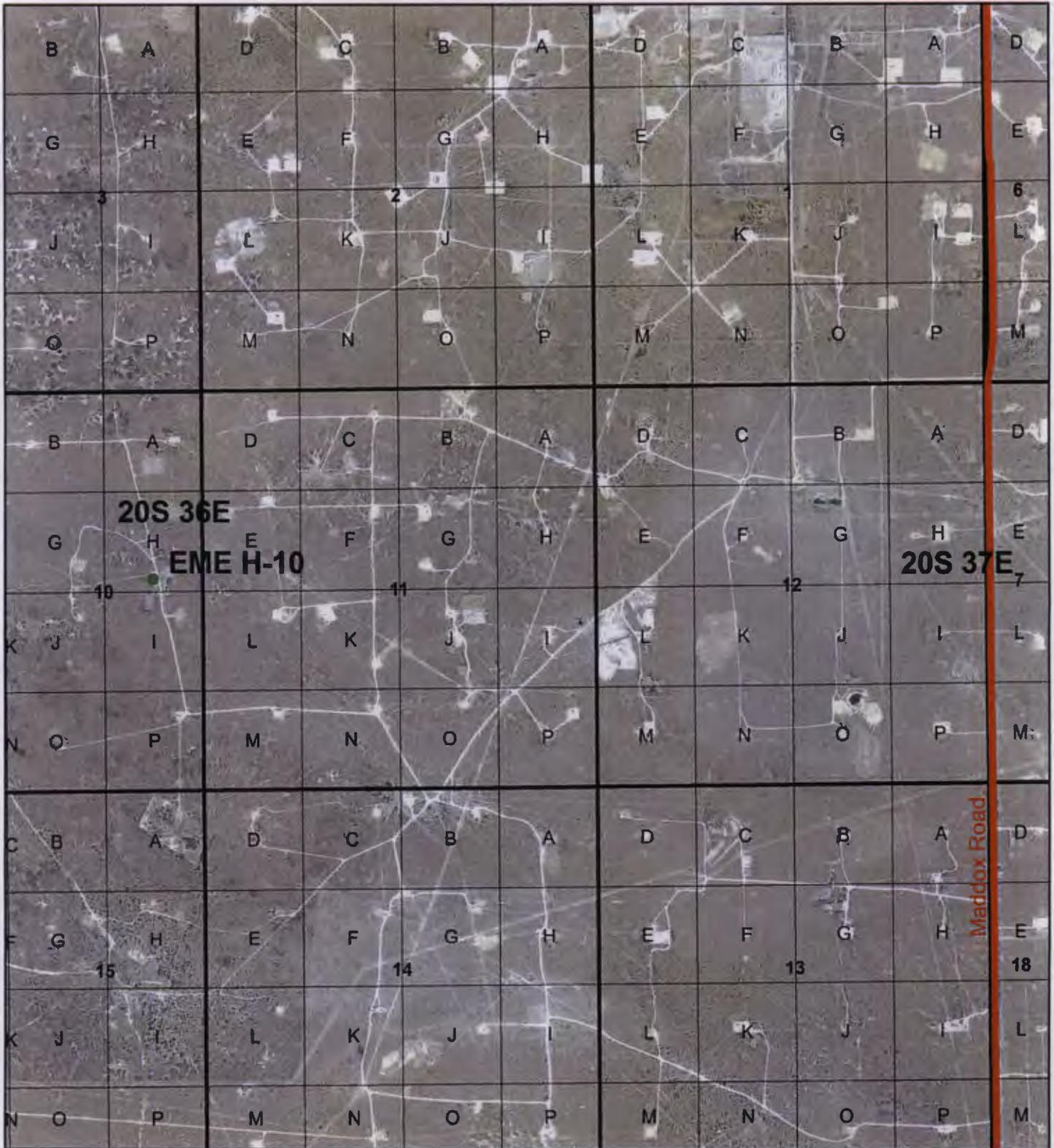
**EME H-10**  
Legals: UL/H sec. 10  
T-20-S R-36-E  
LEA COUNTY, NM  
NMOCD CASE #: 1R427-02

Figure 1



Drawing date: 2-27-13  
Drafted by: LS

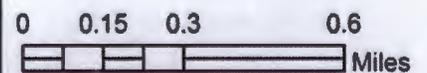
# Site Location Map



## EME H-10

Legals: UL/H sec. 10  
 T-20-S R-36-E  
 LEA COUNTY, NM  
 NMOCD CASE #: 1R427-02

Figure 2



Drawing date: 2-27-13  
 Drafted by: LS

# Soil Bore Installation Map

SB-1					
Depth	Cl-	PID	Lab Cl-	GRO	DRO
SS	141	2.0			
5'	93	1.0			
10'	113	0.8			
15'	173	0.8			
18'	187	1.1	176	<10.0	<10.0
21'	110	0.9	96	<10.0	<10.0

SB-2					
Depth	Cl-	PID	Lab Cl-	GRO	DRO
SS	87	0.3	<16	<10.0	10.3
3'	93	1.2	48	<10.0	35.0
6'	90	1.8	<16	<10.0	<10.0

SB-3					
Depth	Cl-	PID	Lab Cl-	GRO	DRO
SS	58	0.2	48	<10.0	<10.0
3'	88	2.0	48	<50.0	98.3
6'	85	2.4	48	<50.0	252

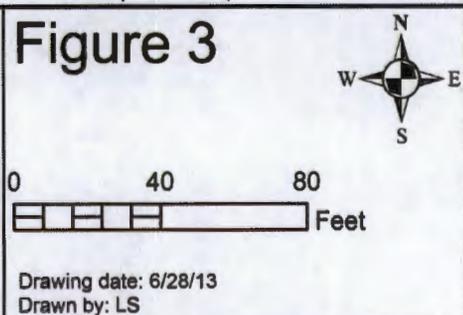
SB-4					
Depth	Cl-	PID	Lab Cl-	GRO	DRO
SS	58	0.1	<16.0	<10.0	<10.0
3'	92	1.8	<16.0	<10.0	23.2
6'	89	1.2	32	<10.0	<10.0

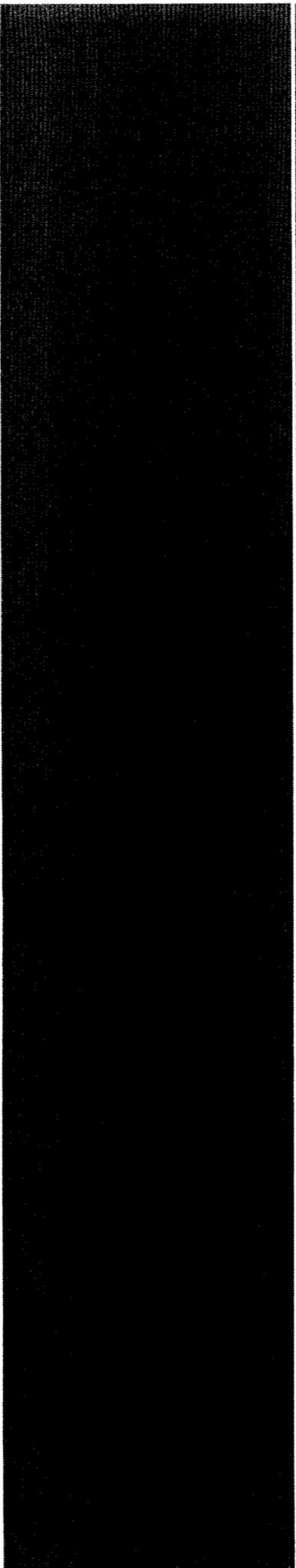
SB-5					
Depth	Cl-	PID	Lab Cl-	GRO	DRO
SS	86	0.0			
3'	116	2.4	32	<10.0	<10.0
6'	122	1.8			
9'	202	0.8	208	<10.0	<10.0
12'	111	2.3	160	<10.0	<10.0



**EME H-10**  
 UL/H SECTION 10  
 T20S, R36E  
 LEA COUNTY, NM  
 NMOCD Case #: 1R427-02

**Figure 3**





# Appendix A

Soil Bore Installation Documentation

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













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

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May 13, 2013

Hack Conder  
Rice Operating Company  
112 W. Taylor  
Hobbs, NM 88240

RE: EME H-10 20S/36E

Enclosed are the results of analyses for samples received by the laboratory on 05/08/13 15:20.

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](http://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,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene  
Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	05/08/2013	Sampling Date:	05/08/2013
Reported:	05/13/2013	Sampling Type:	Soil
Project Name:	EME H-10 20S/36E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SB 1 @ 18' (H301106-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>176</b>	16.0	05/10/2013	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	05/13/2013	ND	198	99.2	200	1.21		
DRO >C10-C28	<10.0	10.0	05/13/2013	ND	179	89.7	200	4.30		

Surrogate: 1-Chlorooctane 102 % 65.2-140

Surrogate: 1-Chlorooctadecane 108 % 63.6-154

**Sample ID: SB 1 @ 21' (H301106-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>96.0</b>	16.0	05/10/2013	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	05/11/2013	ND	198	99.2	200	1.21		
DRO >C10-C28	<10.0	10.0	05/11/2013	ND	179	89.7	200	4.30		

Surrogate: 1-Chlorooctane 104 % 65.2-140

Surrogate: 1-Chlorooctadecane 112 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

 Received: 05/08/2013  
 Reported: 05/13/2013  
 Project Name: EME H-10 20S/36E  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

 Sampling Date: 05/08/2013  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Jodi Henson

**Sample ID: SB 2 @ SURFACE (H301106-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	05/10/2013	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	05/11/2013	ND	198	99.2	200	1.21		
<b>DRO &gt;C10-C28</b>	<b>10.3</b>	10.0	05/11/2013	ND	179	89.7	200	4.30		

Surrogate: 1-Chlorooctane 106 % 65.2-140

Surrogate: 1-Chlorooctadecane 113 % 63.6-154

**Sample ID: SB 2 @ 3' (H301106-04)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<b>48.0</b>	16.0	05/10/2013	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	05/11/2013	ND	198	99.2	200	1.21		
<b>DRO &gt;C10-C28</b>	<b>35.0</b>	10.0	05/11/2013	ND	179	89.7	200	4.30		

Surrogate: 1-Chlorooctane 101 % 65.2-140

Surrogate: 1-Chlorooctadecane 108 % 63.6-154

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	05/08/2013	Sampling Date:	05/08/2013
Reported:	05/13/2013	Sampling Type:	Soil
Project Name:	EME H-10 20S/36E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SB 2 @ 6' (H301106-05)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	05/10/2013	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	05/11/2013	ND	198	99.2	200	1.21		
DRO >C10-C28	<10.0	10.0	05/11/2013	ND	179	89.7	200	4.30		
Surrogate: 1-Chlorooctane		101 %	65.2-140							
Surrogate: 1-Chlorooctadecane		106 %	63.6-154							

**Sample ID: SB 3 @ SURFACE (H301106-06)**

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	05/10/2013	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	05/11/2013	ND	198	99.2	200	1.21		
DRO >C10-C28	<10.0	10.0	05/11/2013	ND	179	89.7	200	4.30		
Surrogate: 1-Chlorooctane		109 %	65.2-140							
Surrogate: 1-Chlorooctadecane		113 %	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  
 Hack Conder  
 112 W. Taylor  
 Hobbs NM, 88240  
 Fax To: (575) 397-1471

Received:	05/08/2013	Sampling Date:	05/08/2013
Reported:	05/13/2013	Sampling Type:	Soil
Project Name:	EME H-10 20S/36E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SB 3 @ 3' (H301106-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>48.0</b>	16.0	05/10/2013	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	05/11/2013	ND	198	99.2	200	1.21		
<b>DRO &gt;C10-C28</b>	<b>98.3</b>	50.0	05/11/2013	ND	179	89.7	200	4.30		
<i>Surrogate: 1-Chlorooctane</i>		<i>109 %</i>	<i>65.2-140</i>							
<i>Surrogate: 1-Chlorooctadecane</i>		<i>117 %</i>	<i>63.6-154</i>							

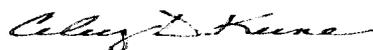
**Sample ID: SB 3 @ 6' (H301106-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>48.0</b>	16.0	05/10/2013	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	05/11/2013	ND	198	99.2	200	1.21		
<b>DRO &gt;C10-C28</b>	<b>252</b>	50.0	05/11/2013	ND	179	89.7	200	4.30		
<i>Surrogate: 1-Chlorooctane</i>		<i>105 %</i>	<i>65.2-140</i>							
<i>Surrogate: 1-Chlorooctadecane</i>		<i>126 %</i>	<i>63.6-154</i>							

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\*=Accredited Analyte

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 Hack Conder  
 112 W. Taylor  
 Hobbs NM, 88240  
 Fax To: (575) 397-1471

Received:	05/08/2013	Sampling Date:	05/08/2013
Reported:	05/13/2013	Sampling Type:	Soil
Project Name:	EME H-10 20S/36E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SB 4 @ SURFACE (H301106-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	05/10/2013	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	05/11/2013	ND	198	99.2	200	1.21		
DRO >C10-C28	<10.0	10.0	05/11/2013	ND	179	89.7	200	4.30		
<i>Surrogate: 1-Chlorooctane</i>		<i>103 %</i>	<i>65.2-140</i>							
<i>Surrogate: 1-Chlorooctadecane</i>		<i>101 %</i>	<i>63.6-154</i>							

**Sample ID: SB 4 @ 3' (H301106-10)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	05/10/2013	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	05/11/2013	ND	198	99.2	200	1.21		
<b>DRO &gt;C10-C28</b>	<b>23.2</b>	10.0	05/11/2013	ND	179	89.7	200	4.30		
<i>Surrogate: 1-Chlorooctane</i>		<i>105 %</i>	<i>65.2-140</i>							
<i>Surrogate: 1-Chlorooctadecane</i>		<i>117 %</i>	<i>63.6-154</i>							

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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 Hack Conder  
 112 W. Taylor  
 Hobbs NM, 88240  
 Fax To: (575) 397-1471

Received:	05/08/2013	Sampling Date:	05/08/2013
Reported:	05/13/2013	Sampling Type:	Soil
Project Name:	EME H-10 20S/36E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SB 4 @ 6' (H301106-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>32.0</b>	16.0	05/10/2013	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	05/11/2013	ND	198	99.2	200	1.21		
DRO >C10-C28	<10.0	10.0	05/11/2013	ND	179	89.7	200	4.30		
<i>Surrogate: 1-Chlorooctane</i>		<i>106 %</i>	<i>65.2-140</i>							
<i>Surrogate: 1-Chlorooctadecane</i>		<i>116 %</i>	<i>63.6-154</i>							

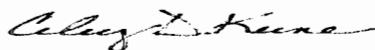
**Sample ID: SB 5 @ 3' (H301106-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>32.0</b>	16.0	05/10/2013	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	05/11/2013	ND	198	99.2	200	1.21		
DRO >C10-C28	<10.0	10.0	05/11/2013	ND	179	89.7	200	4.30		
<i>Surrogate: 1-Chlorooctane</i>		<i>107 %</i>	<i>65.2-140</i>							
<i>Surrogate: 1-Chlorooctadecane</i>		<i>115 %</i>	<i>63.6-154</i>							

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	05/08/2013	Sampling Date:	05/08/2013
Reported:	05/13/2013	Sampling Type:	Soil
Project Name:	EME H-10 20S/36E	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: SB 5 @ 9' (H301106-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>208</b>	16.0	05/10/2013	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	05/11/2013	ND	198	99.2	200	1.21		
DRO >C10-C28	<10.0	10.0	05/11/2013	ND	179	89.7	200	4.30		
<i>Surrogate: 1-Chlorooctane</i>		<i>111 %</i>	<i>65.2-140</i>							
<i>Surrogate: 1-Chlorooctadecane</i>		<i>121 %</i>	<i>63.6-154</i>							

**Sample ID: SB 5 @ 12' (H301106-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: DW						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
<b>Chloride</b>	<b>160</b>	16.0	05/10/2013	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	05/11/2013	ND	200	99.8	200	2.68		
DRO >C10-C28	<10.0	10.0	05/11/2013	ND	187	93.7	200	4.43		
<i>Surrogate: 1-Chlorooctane</i>		<i>108 %</i>	<i>65.2-140</i>							
<i>Surrogate: 1-Chlorooctadecane</i>		<i>115 %</i>	<i>63.6-154</i>							

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

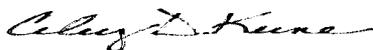
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received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

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Celey D. Keene, Lab Director/Quality Manager





**CARDINAL LABORATORIES**

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

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

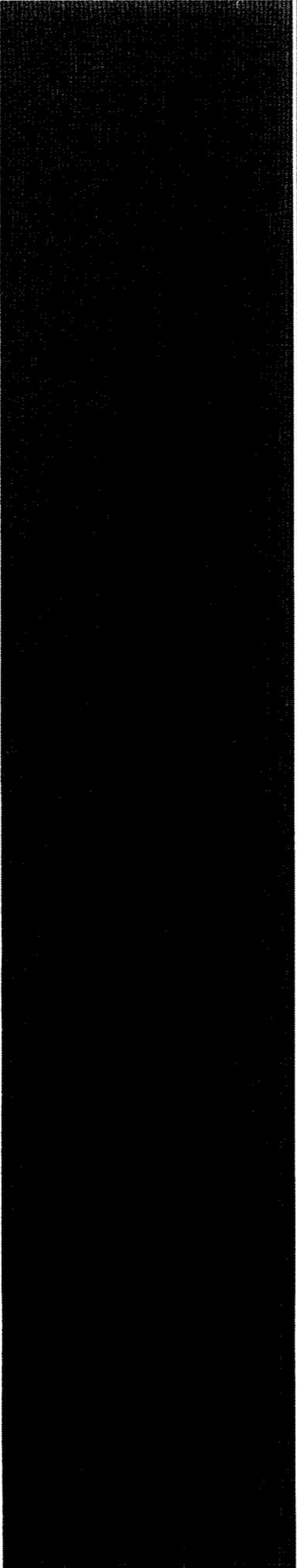
Company Name: <i>Rice</i>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																						
Project Manager: Hack Conder		P.O. #:		Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS																	
Address:		Company:																								
City: Hobbs State: NM Zip: 88240		Attn:																								
Phone #: Fax #:		Address:																								
Project #: Project Owner:		City:																								
Project Name:		State: Zip:																								
Project Location: <i>EME 4-10 205-36E</i>		Phone #:																								
Sampler Name: Kyle Norman		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												
9	<i>SB 4@ Surface</i>	<i>G</i>	<i>1</i>			<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		<i>5-8-13</i>	<i>11:00</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
10	<i>SB 4@ 3'</i>	<i>G</i>	<i>1</i>			<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		<i>11</i>	<i>11:15</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
11	<i>SB 4@ 6'</i>	<i>G</i>	<i>1</i>			<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		<i>11</i>	<i>11:45</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
12	<i>SBS@ 3'</i>	<i>G</i>	<i>1</i>			<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		<i>11</i>	<i>2:15</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
13	<i>SBS@ 9'</i>	<i>G</i>	<i>1</i>			<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		<i>11</i>	<i>2:45</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
14	<i>SB 5@ 12'</i>	<i>G</i>	<i>1</i>			<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>		<i>11</i>	<i>2:50</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										

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Relinquished By: <i>Kyle Norman</i>	Date: <i>5-8-13</i> Time: <i>3:20</i>	Received By: <i>Jodi Henson</i>	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
Relinquished By:	Date:	Received By:	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: <i>[Signature]</i>	REMARKS: email results: zconder@rice-ecs.com Knorman@rice-ecs.com; lpena@riceswd.com Kjones@riceswd.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com	

† 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 H-10 (1R427-02)

UL/H sec. 10 T-20-S R-36-E



Site photo, facing north

6/18/13



Site photo, facing east

6/18/13