

1R - 427-320

REPORTS

DATE:

2-18-11

Rice Environmental Consulting & Safety

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

RECEIVED OCD

2011 FEB 22 P 12: 52

CERTIFIED MAIL

RETURN RECIEPT NO. 7008 1140 0001 3070 5160

February 18th, 2011

Mr. Edward Hansen

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

RE: ICP REPORT

**Rice Operating Company – EME SWD System
EME C-1 EOL (1R427-320): UL/C sec. 1 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/usage basis.

Background and Previous Work

The site is located approximately 3 miles south-west of Monument, New Mexico at UL/C sec. 1 T20S R36E as shown on the Site Location Map (Figure 1). NM OSE records indicate that groundwater will likely be encountered at a depth of approximately 40 +/- feet. In 2005, ROC initiated work on the former EME C-1 EOL junction. The site was delineated using a backhoe to form a 10 x 10 x 12 ft deep excavation and soil samples were screened at regular intervals for both hydrocarbons and chlorides. From the excavation, the 4 wall composite, the bottom composite, and the remediated backfill samples were taken for laboratory verification. Laboratory tests of the site showed substantial gasoline range organics (GRO) and diesel range organics (DRO) in the 4-wall composite, bottom composite, and the remediated backfill (see Appendix A). Chloride concentrations from the excavation did not relent with depth with depth or breadth. The 4-wall composite had a reading of 1,690 ppm and the bottom composite had a reading of 1,960 ppm. The soil from the excavation was blended on site and backfilled into the excavation. The area was contoured to the surrounding landscape, seeded, and an identification plate was placed on the surface of the site to mark its location for future environmental consideration. NMOCD was notified of potential groundwater impact on December 7, 2005 and a junction box disclosure report (Appendix A) was submitted to NMOCD with all the 2005 junction box closures and disclosures.

ICP Investigative Results

As part of the Investigation and Characterization Plan approved by NMOCD on December 22nd, 2010, eight soil bores were advanced through the former junction box site to a depth of 40 ft bgs on December 7th and 8th, 2010 (Figure 2). ROC personnel field tested the soil for chlorides and screened in the field with a photo-ionization detector (PID). Representative samples from the bores were taken to a commercial laboratory for confirmation of chloride and hydrocarbon field numbers (Appendix B). Laboratory readings showed chloride numbers ranging from high of 1,800 mg/kg in soil bore #3 at 15 ft bgs to a low of 64 mg/kg in soil bore #7 at 30 ft bgs. GRO ranged from a high of 139 mg/kg in soil bore #3 at 30 ft bgs to a low of non-detect encountered in many of the bores. DRO ranged from a high of 1,530 mg/kg in soil bore #3 at 30 ft bgs to a low of non-detect encountered at various depths and in various bores. BTEX was also encountered in the bores. Based on these findings, additional lateral delineation is required.

Recommendations

The C-1 EOL site is located within a regionally impacted groundwater area (Figure 3). To verify groundwater quality, ROC proposes to install a 4 inch, near-source monitor well approximately 18 ft southeast and a 2 inch, up gradient monitor well approximately 125 ft northwest of the former junction box site (Figure 4). Additional monitoring wells may be required to fully delineate groundwater quality. ROC also proposes to conduct additional lateral delineation of soils surrounding the former box site. The results of the additional delineation will be evaluated to determine dimensions of a possible infiltration barrier. Upon completion of the proposed work and sufficient quarters of monitor well sampling, a Corrective Action Plan (CAP) will be submitted to NMOCD with recommendations.

ROC appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-9174 or me if you have any questions or wish to discuss the site.

Sincerely,



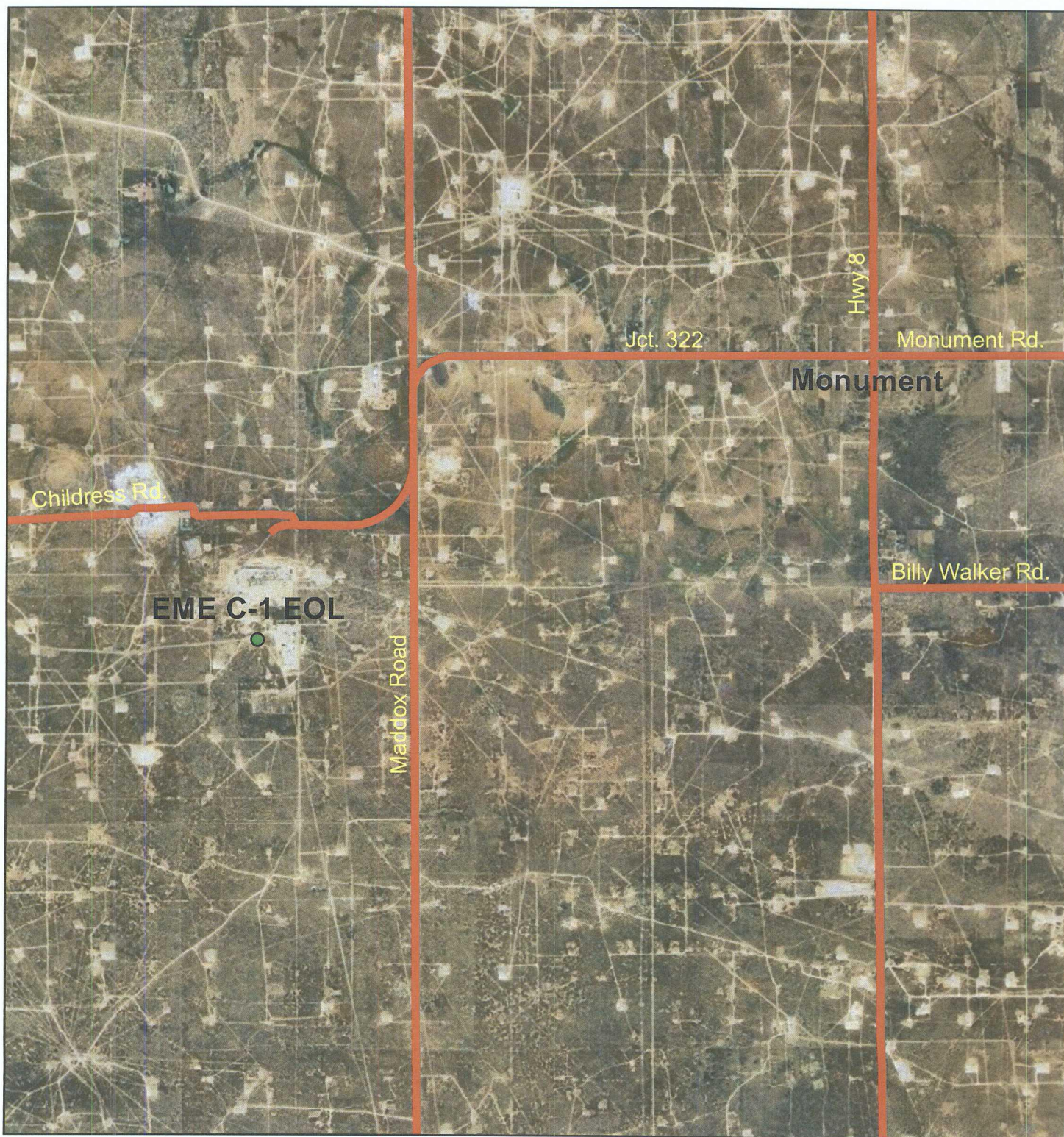
Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

Attachments:

- Figures – Site location map, Soil bore installation plat, Groundwater Contamination plat, and Proposed MW installation locations
- Appendix A – Disclosure report form
- Appendix B – Soil bore log and laboratory analysis

Figures

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



EME C-1 EOL

**Legals: UL/C sec. 1
T20S R36E**

Case #: 1R427-320

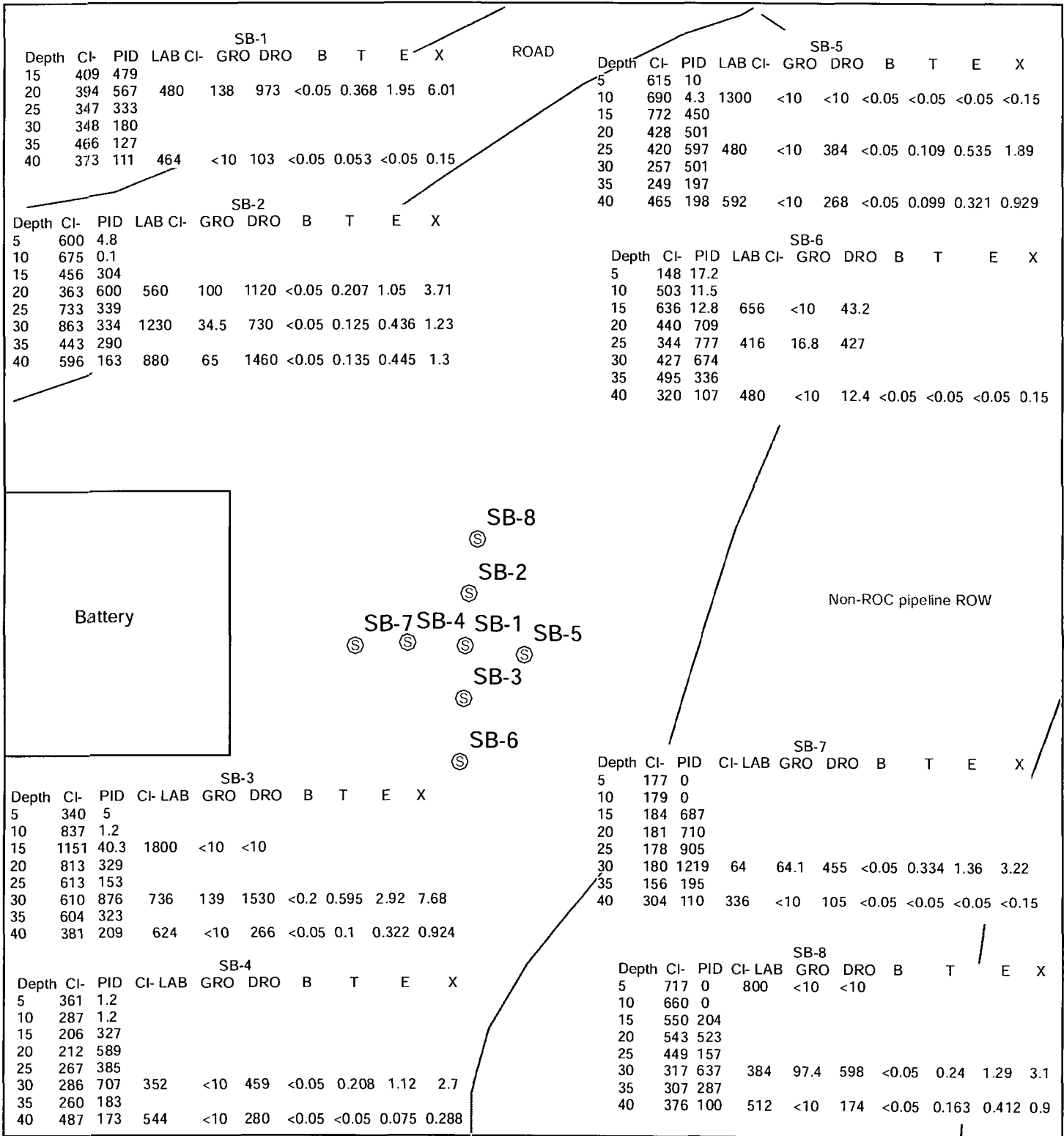
Figure 1



0 0.25 0.5 1 Miles

Drawing date: 11-1-10
Drafted by: L. Weinheimer

Soil bore information

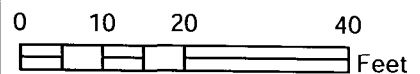


EME C-1 EOL

Legals: UL/C sec. 1
T20S R36E

Case #: 1R427-320

Figure 2



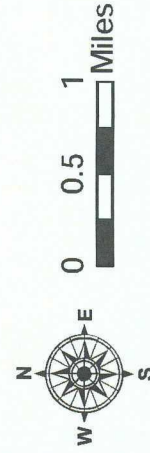
Drawing date: 12-20-10
Drafted by: L. Weinheimer

EME Groundwater Contamination



122 W. Taylor
Hobbs, NM 88240
Phone (575) 393-9174
Fax (575) 397-1471

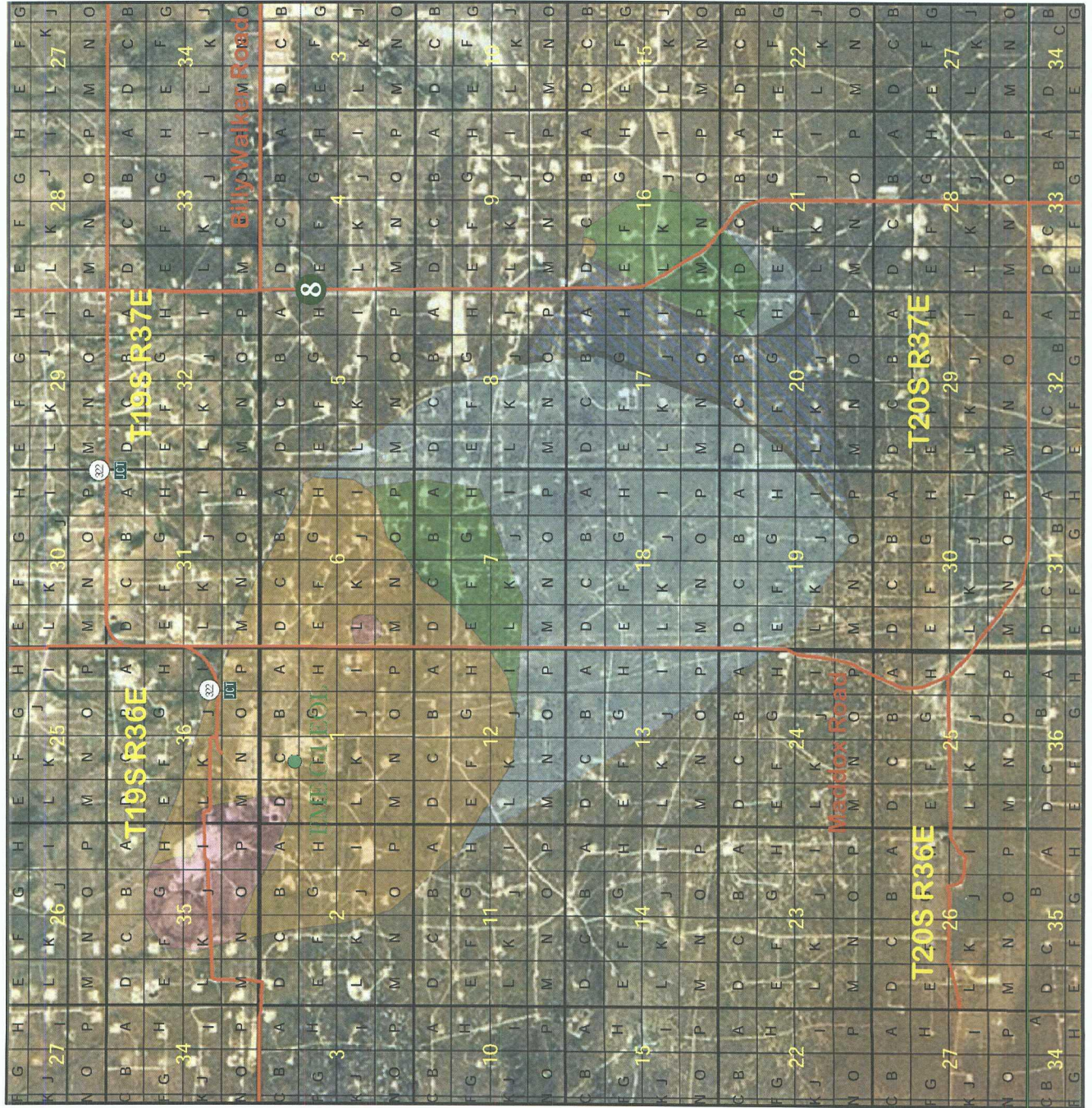
- CI- concentration > 10,000
- 10,000 > CI- concentration > 5,000
- 5,000 > CI- concentration > 2,000
- 2,000 > CI- concentration > 700
- Hypothetical CI- contamination area



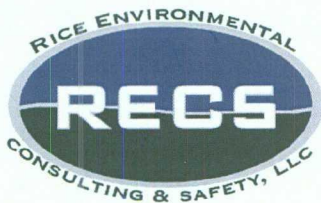
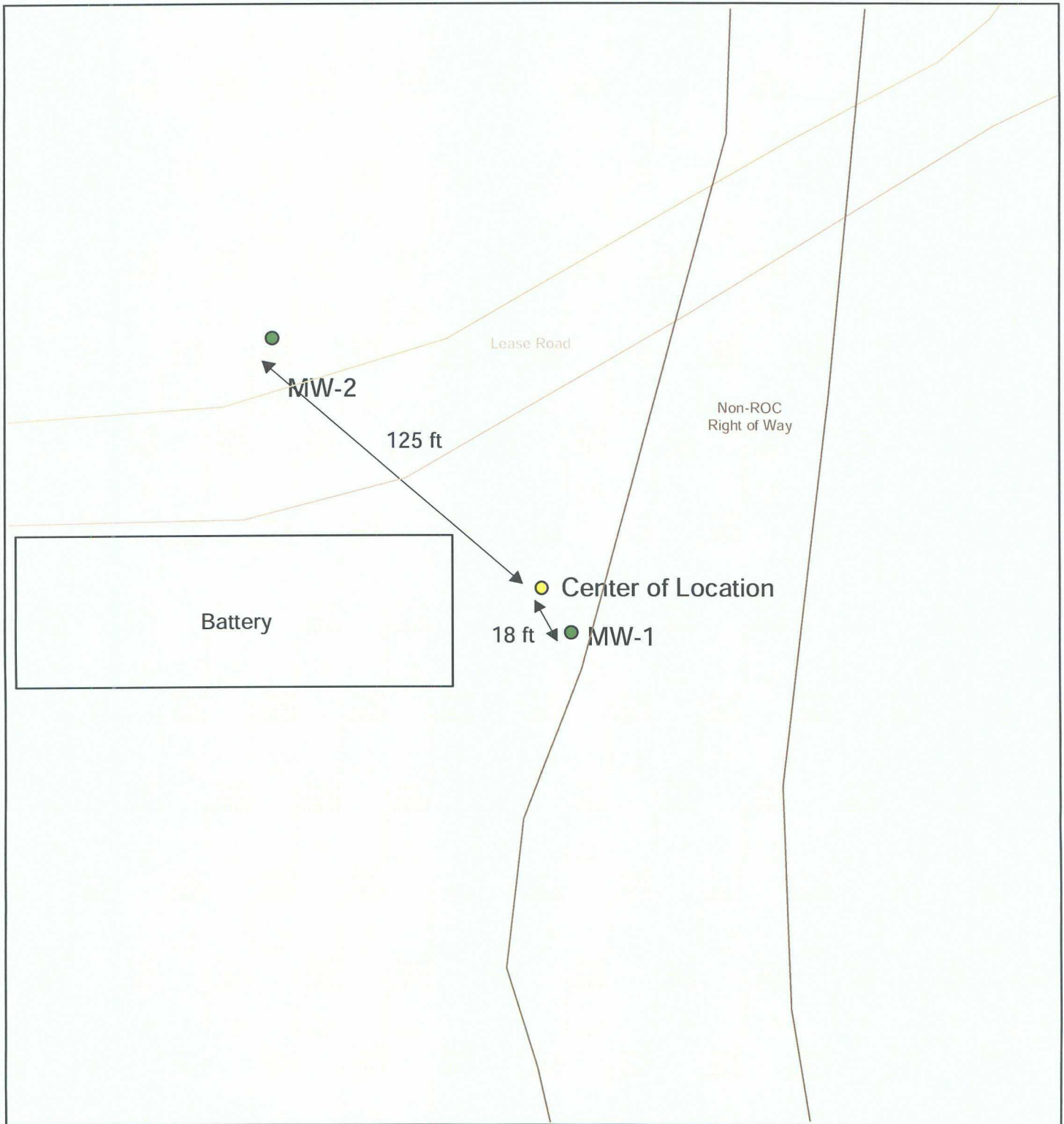
This map was prepared by and for Rice Operating Company. This map represents the known chloride impact concentrations in the groundwater as of 2011. As conditions change and/or new monitor wells are added, the contamination plume will undergo permutations that will be reflected in future maps. Rice Operating Company does not assume any responsibility for the use of this information by others.

Figure 3

Drawing date: 12-15-09
Revision date: 1-11-11
Drafted by: Lara Wetzelmeier



Proposed MW Locations

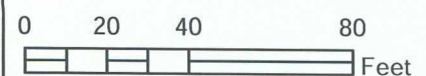


EME C-1 EOL

**Legals: UL/C sec. 1
T20S R36E**

Case #: 1R427-320

Figure 4



Drawing date: 12-20-10
Drafted by: L. Weinheimer

Appendix A

Junction Box Disclosure Report

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

RICE OPERATING COMPANY
JUNCTION BOX DISCLOSURE REPORT

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
EME	Amerada St. 'D' boot EOL	C	1	20S	36E	Lea	Length	Width	Depth
							no box--eliminated		

LAND TYPE: BLM _____ STATE X FEE LANDOWNER _____ OTHER _____

Depth to Groundwater 40 feet NMOCD SITE ASSESSMENT RANKING SCORE: 20

Date Started 6/23/2005 Date Completed 7/14/2005 NMOCD Witness no

Soil Excavated 44 cubic yards Excavation Length 10 Width 10 Depth 12 feet

Soil Disposed 0 cubic yards Offsite Facility n/a Location n/a

FINAL ANALYTICAL RESULTS: Sample Date 7/6/2005 Sample Depth 12 ft

5-point composite sample of bottom and 4-point composite sample of excavation sidewalls. TPH and chloride laboratory test results completed by using an approved lab and testing procedures pursuant to NMOCD guidelines.

CHLORIDE FIELD TESTS

Sample Location	PID ppm	GRO mg/kg	DRO mg/kg	Chloride mg/kg
4-WALL COMP.	54.8	251	784	1690
BOTTOM COMP.	28.1	821	2010	1960
REMEDI. BACKFILL	20.7	230	2260	1610

LOCATION	DEPTH (ft)	ppm
delineation trench at junction	3	1634
	4	1554
	5	1447
	6	1159
	7	1072
	8	734
	9	1621
	10	2430
	11	2999
	12	2979
5 ft SOUTH of junction	1	786
	2	962
	3	1425
	4	1238
	5	1825
	6	2532
	7	2313
	8	2001
	9	1882
	10	2005
	11	2909
	12	2138
4-wall comp.	n/a	1619
bottom comp.	12	1785
backfill comp.	n/a	1082

General Description of Remedial Action: This End-Of-Line (EOL) junction box contained a boot. The junction was eliminated as part of the pipeline replacement program. The junction and box was removed and the location was re-plumbed with a new pipeline. A backhoe was used to conduct delineation trenches at the former junction site. Soil samples were collected at regular intervals and were field tested for chloride and screened using a PID. Chloride concentrations did not relent with depth throughout the 10 x 10 x 12-ft excavation. Soil samples exhibited signs of hydrocarbon impact and lab analysis on the final excavation samples confirmed that NMOCD TPH guidelines were not met. The excavated soil was blended on site and then backfilled into the excavation. The disturbed surface was seeded with a blend of native vegetation. An identification plate has been placed on the surface of the former junction site to mark the site for future environmental considerations. NMOCD has been notified of potential groundwater impact at this site.

ADDITIONAL EVALUATION IS HIGH PRIORITY

enclosures: chloride graphs, photos, lab results, PID field screenings

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SITE SUPERVISOR Jorge Hernandez SIGNATURE not available COMPANY RICE Operating Company

REPORT ASSEMBLED BY Kristin Farris Pope SIGNATURE Kristin Farris Pope

DATE 12/8/2005 TITLE Project Scientist

* This site is a "DISCLOSURE." It will be placed on a prioritized list of similar sites for further consideration.

EME Amerada St. 'D' boot EOL

Unit 'C', Sec. 1, T20S, R36E



undisturbed junction box

10/28/2004



delineation & excavation

6/23/2005



backfilling excavation

7/14/2005



identification plate on surface of backfilled site

7/14/2005



seeding disturbed surface

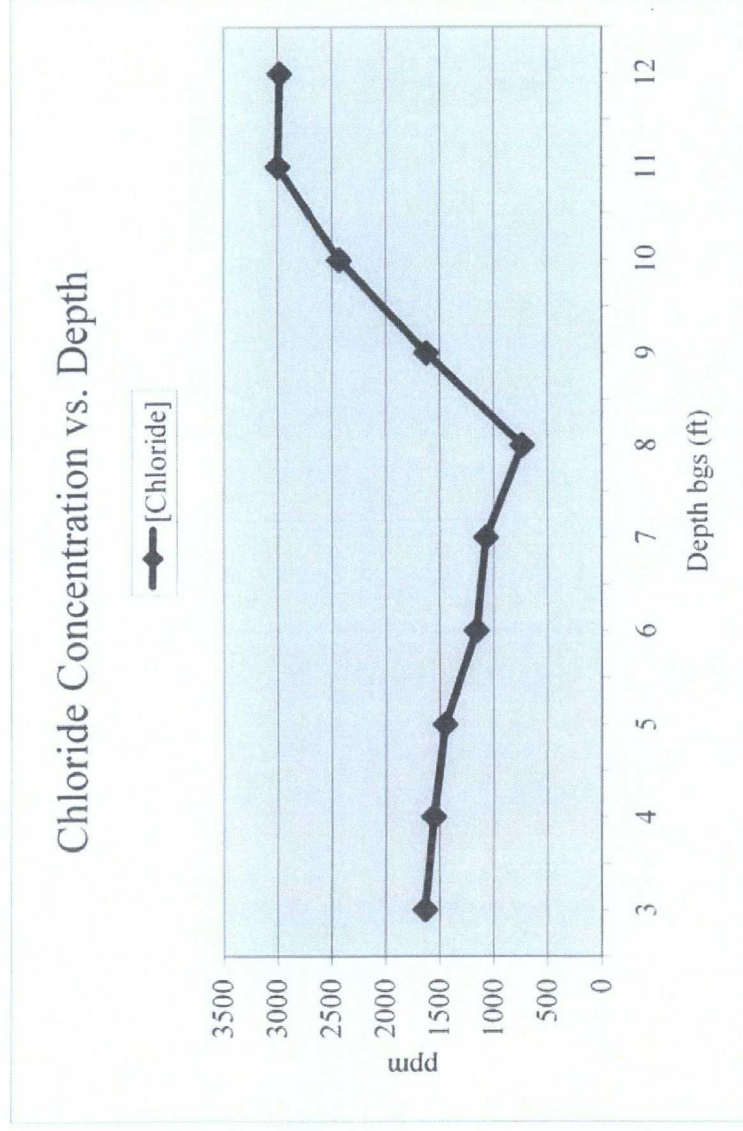
11/21/2005

EME Amerada St. 'D' boot EOL Unit 'C', Sec. 1, T20S, R36E

Vertical Delineation at Junction

Depth bgs (ft)	[Cl ⁻] ppm
3	1634
4	1554
5	1447
6	1159
7	1072
8	734
9	1621
10	2430
11	2999
12	2979

Groundwater = 40 ft



EME Amerada St. 'D' boot EOL

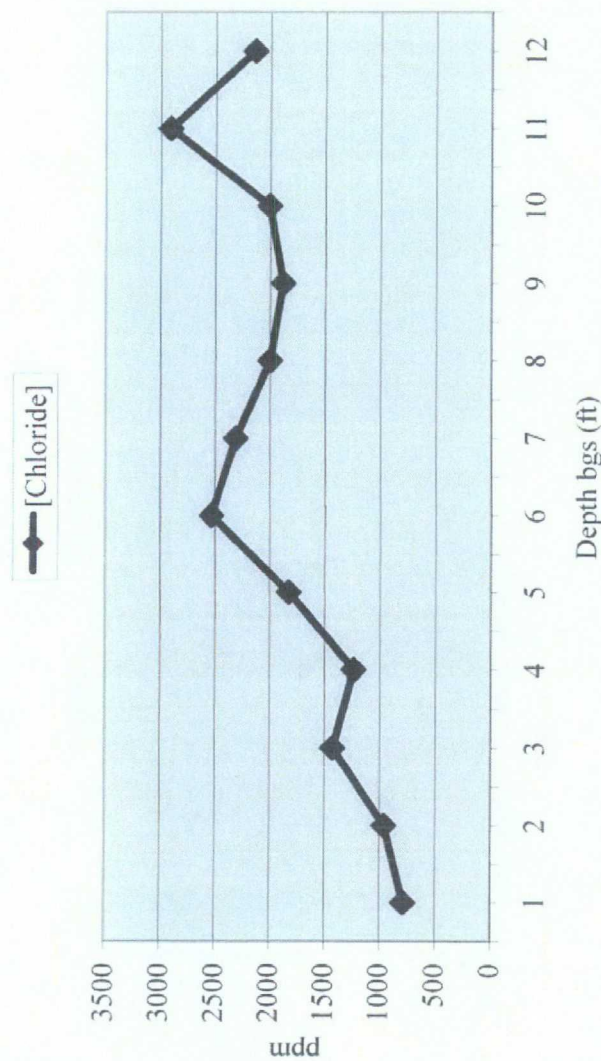
Unit 'C', Sec. 1, T20S, R36E

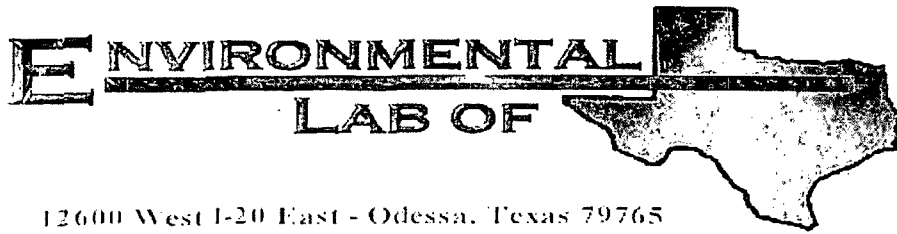
5 ft SOUTH of junction

Depth bgs (ft)	[Cl ⁻] ppm
1	786
2	962
3	1425
4	1238
5	1825
6	2532
7	2313
8	2001
9	1882
10	2005
11	2909
12	2138

Groundwater = 40 ft

Chloride Concentration vs. Depth





12600 West I-20 East - Odessa, Texas 79765

COPY

Analytical Report

Prepared for:

Roy Rascon
Rice Operating Co.
122 W. Taylor
Hobbs, NM 88240

Project: EME Amerada St. D Boot

Project Number: None Given

Location: None Given

Lab Order Number: 5G07002

Report Date: 07/11/05

Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME Amerada St. D Boot
Project Number: None Given
Project Manager: Roy Rascon

Fax: (505) 397-1471

Reported:
07/11/05 09:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Bottom @ 12'	5G07002-01	Soil	07/06/05 08:43	07/06/05 17:20
Remediate Backfill	5G07002-02	Soil	07/06/05 09:10	07/06/05 17:20
4-Wall Composite	5G07002-03	Soil	07/06/05 09:15	07/06/05 17:20

Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME Amerada St. D Boot
Project Number: None Given
Project Manager: Roy Rascon

Fax: (505) 397-1471

Reported:
07/11/05 09:14

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bottom @ 12' (5G07002-01) Soil									
Gasoline Range Organics C6-C12	821	10.0	mg/kg dry	1	EG50709	07/07/05	07/08/05	EPA 8015M	
Diesel Range Organics >C12-C35	2010	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	2830	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		120 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		106 %	70-130		"	"	"	"	
Remediate Backfill (5G07002-02) Soil									
Gasoline Range Organics C6-C12	230	10.0	mg/kg dry	1	EG50709	07/07/05	07/08/05	EPA 8015M	
Diesel Range Organics >C12-C35	2260	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	2490	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		103 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		122 %	70-130		"	"	"	"	
4-Wall Composite (5G07002-03) Soil									
Gasoline Range Organics C6-C12	251	10.0	mg/kg dry	1	EG50709	07/07/05	07/08/05	EPA 8015M	
Diesel Range Organics >C12-C35	784	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	1040	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		96.8 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		105 %	70-130		"	"	"	"	

Rice Operating Co.,
122 W. Taylor
Hobbs NM, 88240

Project: EME Amerada St. D. Boot
Project Number: None Given
Project Manager: Roy Rascon

Fax: (505) 397-1471
Reported:
07/11/05 09:44

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bottom @ 12' (SG07002-01) Soil									
Chloride	1960	25.0	mg/kg	50	EG51104	07/08/05	07/08/05	EPA 300.0	
% Moisture	19.0	0.1	%	1	EG50801	07/07/05	07/08/05	% calculation	
Remediate Backfill (SG07002-02) Soil									
Chloride	1610	25.0	mg/kg	50	EG51104	07/08/05	07/08/05	EPA 300.0	
% Moisture	8.5	0.1	%	1	EG50801	07/07/05	07/08/05	% calculation	
4-Wall Composite (SG07002-03) Soil									
Chloride	1690	25.0	mg/kg	50	EG51104	07/08/05	07/08/05	EPA 300.0	
% Moisture	11.0	0.1	%	1	EG50801	07/07/05	07/08/05	% calculation	

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety with written approval of Environmental Lab of Texas.

Page 3 of 6

Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME Amerada St. D'Boot
Project Number: None Given
Project Manager: Roy Rascon

Fax: (505) 397-1471

Reported:
07/11/05 09:14

Organics by GC - Quality Control Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG50709 - Solvent Extraction (GC)										
Blank (EG50709-BLK1)				Prepared & Analyzed: 07/07/05						
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	39.4		mg/kg	50.0		78.8	70-130			
Surrogate: 1-Chlorooctadecane	38.9		"	50.0		77.8	70-130			
LCS (EG50709-BS1)				Prepared & Analyzed: 07/07/05						
Gasoline Range Organics C6-C12	382	10.0	mg/kg wet	500		76.4	75-125			
Diesel Range Organics >C12-C35	475	10.0	"	500		95.0	75-125			
Total Hydrocarbon C6-C35	857	10.0	"	1000		85.7	75-125			
Surrogate: 1-Chlorooctane	46.2		mg/kg	50.0		92.4	70-130			
Surrogate: 1-Chlorooctadecane	41.5		"	50.0		83.0	70-130			
Calibration Check (EG50709-CCV1)				Prepared: 07/07/05 Analyzed: 07/08/05						
Gasoline Range Organics C6-C12	497		mg/kg	500		99.4	80-120			
Diesel Range Organics >C12-C35	556		"	500		111	80-120			
Total Hydrocarbon C6-C35	1050		"	1000		105	80-120			
Surrogate: 1-Chlorooctane	57.0		"	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	51.7		"	50.0		103	70-130			
Matrix Spike (EG50709-MS1)				Source: 5G07001-01	Prepared: 07/07/05 Analyzed: 07/08/05					
Gasoline Range Organics C6-C12	557	10.0	mg/kg dry	570	ND	97.7	75-125			
Diesel Range Organics >C12-C35	648	10.0	"	570	ND	114	75-125			
Total Hydrocarbon C6-C35	1210	10.0	"	1140	ND	106	75-125			
Surrogate: 1-Chlorooctane	64.2		mg/kg	50.0		128	70-130			
Surrogate: 1-Chlorooctadecane	58.6		"	50.0		117	70-130			
Matrix Spike Dup (EG50709-MSD1)				Source: 5G07001-01	Prepared: 07/07/05 Analyzed: 07/08/05					
Gasoline Range Organics C6-C12	558	10.0	mg/kg dry	570	ND	97.9	75-125	0.179	20	
Diesel Range Organics >C12-C35	662	10.0	"	570	ND	116	75-125	2.14	20	
Total Hydrocarbon C6-C35	1220	10.0	"	1140	ND	107	75-125	0.823	20	
Surrogate: 1-Chlorooctane	64.3		mg/kg	50.0		129	70-130			
Surrogate: 1-Chlorooctadecane	59.2		"	50.0		118	70-130			

Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME Amerida St. D Boot
Project Number: None Given
Project Manager: Roy Rascon

Fax: (505) 397-1471

Reported:
07/11/05 09:14

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch EG50801 - General Preparation (Prep)

Blank (EG50801-BLK1) Prepared: 07/07/05 Analyzed: 07/08/05

% Moisture ND 0.1 %

Duplicate (EG50801-DUP1) Source: 5G07001-01 Prepared: 07/07/05 Analyzed: 07/08/05

% Moisture 14.2 0.1 % 12.3 14.3 20

Batch EG51104 - Water Extraction

Blank (EG51104-BLK1) Prepared & Analyzed: 07/08/05

Chloride ND 0.500 mg/kg

LCS (EG51104-BS1) Prepared & Analyzed: 07/08/05

Chloride 10.7 mg/L 10.0 107 80-120

Calibration Check (EG51104-CCV1) Prepared & Analyzed: 07/08/05

Chloride 10.9 mg/L 10.0 109 80-120

Duplicate (EG51104-DUP1) Source: 5G07001-01 Prepared & Analyzed: 07/08/05

Chloride 85.2 5.00 mg/kg 85.4 0.234 20

Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME, Amcrada St. D. Boot
Project Number: None Given
Project Manager: Roy Rascon

Fax: (505) 397-1471
Reported:
07/11/05, 09:14

Notes and Definitions

DET: Analyte DETECTED.
ND: Analyte NOT DETECTED at or above the reporting limit.
NR: Not Reported.
dry: Sample results reported on a dry weight basis.
RPD: Relative Percent Difference.
LCS: Laboratory Control Spike.
MS: Matrix Spike.
Dup: Duplicate.

Report Approved By:

Raland K. Tuttle

Date:

7-11-05

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech

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If you have received this material in error, please notify us immediately at 432-563-1800.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Roy Rascon

Project Name: Envy - Intergal - st 'j' Beef

Company Name Rice Operating Company

Project #:

Company Address: 122 W Taylor

Project Loc:

City/State/Zip: Hobbs, NM 88240

३०५

Telephone No: 505-393-9174

Fax No: 505-397-1471

Sampler Signature:

Cheryl Wade

[illegible]

Special Instructions:

Sample Containers Intact? ☒ Y ☐ N
 Temperature Upon Receipt: 4 oz. glass
 Laboratory Comments:

Relinquished by: /

received by: W. Baymen

Date	Time
7/6/05	15:00

Revised by:

Received by EL0T:

Date	7-06-05
Time	1720

Rec 0.0°C
Labels, custody seals.

Environmental Lab of Texas

Variance / Corrective Action Report – Sample Log-In

Client: Rice Operating Co.

Date/Time: 07-06-05 @ 1720

Order #: 5607002

Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	<input checked="" type="checkbox"/> Yes	No	O.O	C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/> Yes	No		
Custody Seals intact on shipping container/cooler?	<input checked="" type="checkbox"/> Yes	No	Not present	
Custody Seals intact on sample bottles?	<input checked="" type="checkbox"/> Yes	No	Not present	
Chain of custody present?	<input checked="" type="checkbox"/> Yes	No		
Sample Instructions complete on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
Chain of Custody signed when relinquished and received?	<input checked="" type="checkbox"/> Yes	No		
Chain of custody agrees with sample label(s)	<input checked="" type="checkbox"/> Yes	No		
Container labels legible and intact?	<input checked="" type="checkbox"/> Yes	No		
Sample Matrix and properties same as on chain of custody?	<input checked="" type="checkbox"/> Yes	No		
Samples in proper container/bottle?	<input checked="" type="checkbox"/> Yes	No		
Samples properly preserved?	<input checked="" type="checkbox"/> Yes	No		
Sample bottles intact?	<input checked="" type="checkbox"/> Yes	No		
Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	No		
Sufficient sample amount for indicated test?	<input checked="" type="checkbox"/> Yes	No		
All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	No		
VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	No	Not Applicable	

Other observations:

Variance Documentation:

Contact Person: - _____ Date/Time: _____ Contacted by: _____

Regarding:

Corrective Action Taken:

10 x 10 x 12 ft excavation

Rice Operating Company

HOBBS, NEW MEXICO 88240

PHONE: (505) 393-9174 FAX: (505) 397-1471

VOC FIELD TEST REPORT FORM

MODEL NO: PGM 76IS
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE AIR

LOT NO: 74-2747
EXP. DATE: 8-1-06
METER READING
ACCURACY: _____

SERIAL NO: 104412

100 PPM
BALANCE
FILL DATE: 7-1-05
ACCURACY: ± 2%

All composite
samples

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
EMF AMERBANA	St 10' Port	C	1	26 S	36 E

SAMPLE	PID RESULT	SAMPLE	PID RESULT
Bottom Composite 0-12" Ags. 78.1			
5' North well	46.9		
5' South well	11.4		
5' East well	25.2		
5' West well	20.8		
Diagonal Port 7/11	20.7		
Up Well Composite	54.8		

I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Signature [Signature]

Date 7-1-05

Appendix A

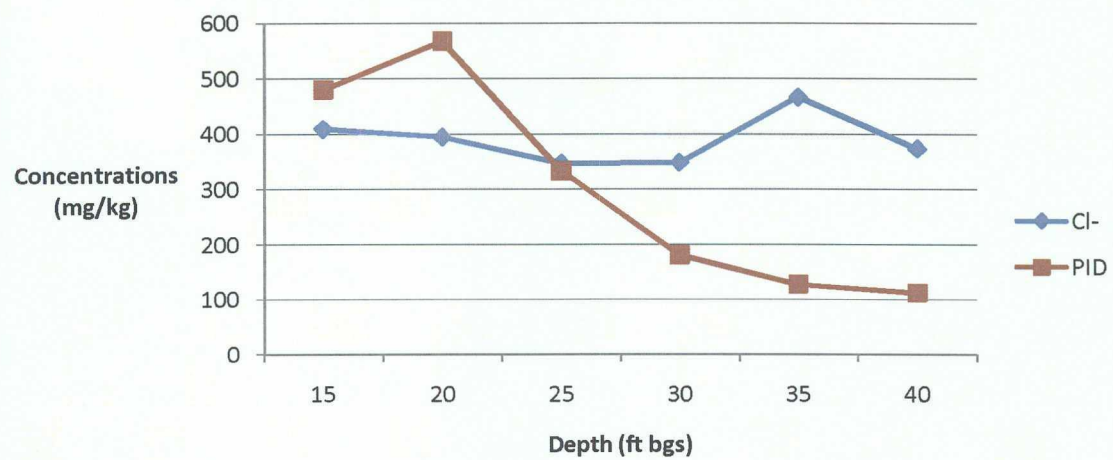
Soil bore installation per ICP

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

Logger:	Jordan Woodfin			
Driller:	Harrison & Cooper, Inc.			
Drilling Method:	Air rotary		Project Name:	Well ID:
Start Date:	12/7/2010		EME C-1 EOL	SB-1
End Date:	12/7/2010	Project Consultant: RECS		Location: UL/C sec. 1 T20S R36E
Comments: Located at the source of the former junction box site.		Lat: 32°36'23.399"N		County: LEA
DRAFTED BY: L. Weinheimer		Long: 103°18'38.252"W		State: NM
TD = 40 ft		GW = 40 ft		

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
15 ft	409		479	Black silty sand with small caliche fragments (hydrocarbon odor)		
20 ft	394	CI-480	567			
	B <0.05 T = 0.368	GRO 138				
	E = 1.95 X = 6.01	DRO 973				
25 ft	347		333			
30 ft	348		180	Gray silty sand with small caliche fragments (hydrocarbon odor)		bentonite seal
35 ft	466		127			
40 ft	373	CI-464	111			
	B <0.05 T = 0.053	GRO <10		Red coarse sand with gravel mixture (hydrocarbon odor)		
	E <0.05 X <0.15	DRO 103				

Chloride and PID concentrations versus depth

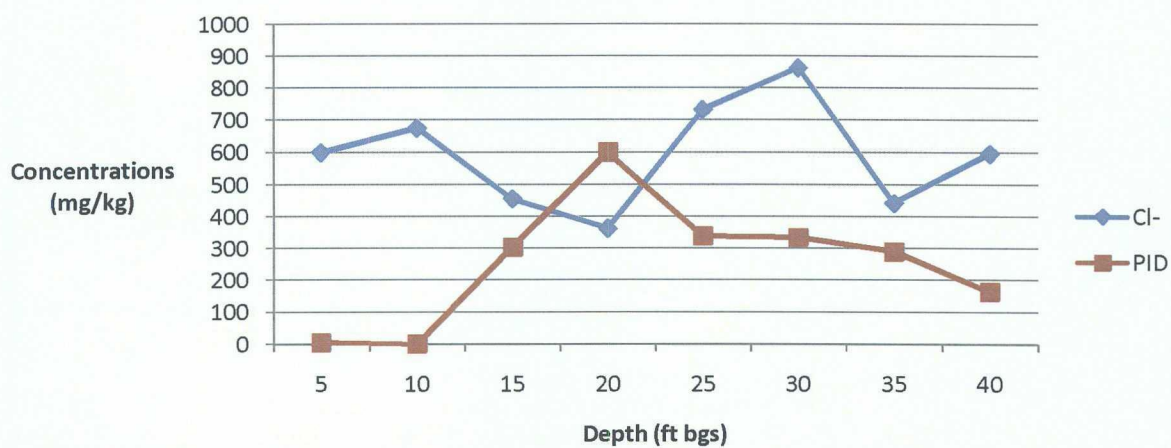


Logger:	Jordan Woodfin			
Driller:	Harrison & Cooper, Inc.			
Drilling Method:	Air rotary		Project Name:	Well ID:
Start Date:	12/7/2010		EME C-1 EOL	SB-2
End Date:	12/7/2010	Project Consultant: RECS		
Comments: Located 8 ft north of the former junction box site.		Location: UL/C sec. 1 T20S R36E		
DRAFTED BY: L. Weinheimer		Lat: 32°36'23.485"N	County: LEA	
TD = 40 ft GW = 40 ft		Long: 103°18'38.241"W	State: NM	

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Light brown silty sand		
5 ft	600		4.8			
				Yellowish tan silty sand with caliche fragments		
10 ft	675		0.1			
				Light brown silty sand with caliche fragments (hydrocarbon odor)		
15 ft	456		304			
20 ft	363	CI-560	600			
	B <0.05 T = 0.207	GRO 100				
	E = 1.05 X = 3.71	DRO 1120				
25 ft	733		339			
30 ft	863	CI-1230	334			
	B <0.05 T = 0.125	GRO 34.5				
	E = 0.436 X = 1.23	DRO 730				
35 ft	443		290	Gray coarse sand and silt with caliche fragments (hydrocarbon odor)		
40 ft	596	CI-880	163			
	B <0.05 T = 0.135	GRO 65.0				
	E = 0.445 X = 1.30	DRO 1460				

bentonite seal

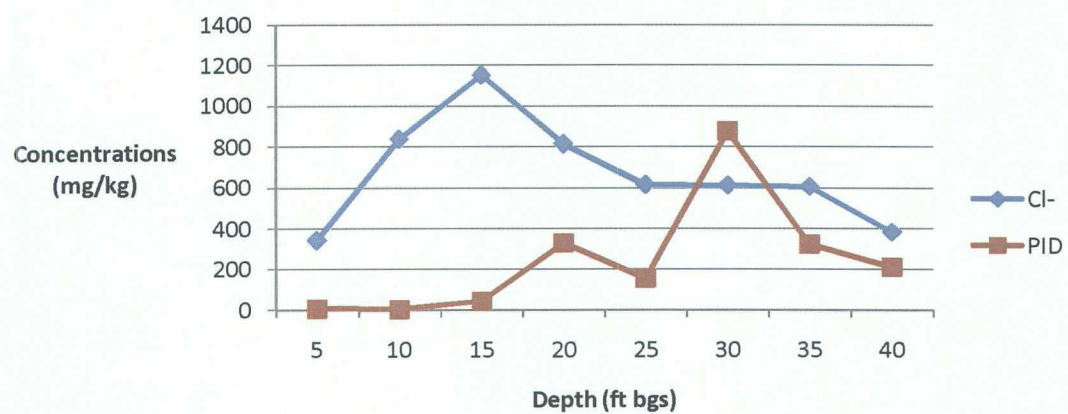
Chloride and PID concentration versus depth



Logger:	Jordan Woodfin			
Driller:	Harrison & Cooper, Inc.			
Drilling Method:	Air rotary		Project Name:	Well ID:
Start Date:	12/7/2010		EME C-1 EOL	SB-3
End Date:	12/7/2010	Project Consultant: RECS		
Comments: Located 8 ft south of the former junction box site.			Location: UL/C sec. 1 T20S R36E	
DRAFTED BY: L. Weinheimer			Lat: 32°36'23.31"N	County: LEA
TD = 40 ft GW = 40 ft			Long: 103°18'38.255"W	State: NM

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Brown very fine sand		
5 ft	340		5			
				Brown very fine silty sand		
10 ft	837		1.2			
				Light brown silty sand with small caliche fragments (hydrocarbon odor)		
15 ft	1,151	Cl-1800	40.3			
		GRO <10				
		DRO <10		Black silty sand (hydrocarbon odor)		
20 ft	813		329			
				Brownish yellow silty sand (hydrocarbon odor)		
25 ft	613		153			
30 ft	610	Cl-736	876			
	B <0.2 T = 0.595	GRO 139				
	E = 2.92 X = 7.68	DRO 1530		Brownish grey medium sand with small caliche fragments (hydrocarbon odor)		
35 ft	604		323			
40 ft	381	Cl-624	209			
	B <0.05 T = 0.1	GRO <10				
	E = 0.322 X = 0.924	DRO 266				

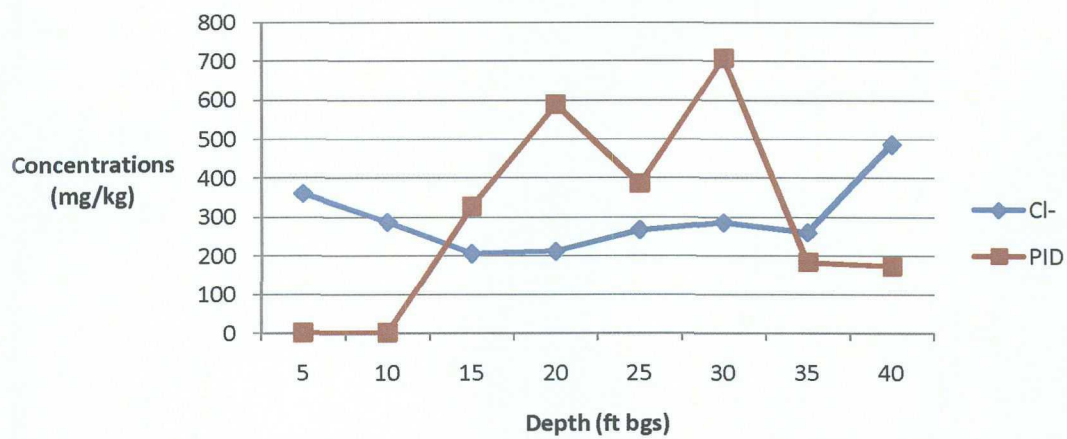
Chloride and PID concentrations versus depth



Logger:	Jordan Woodfin			
Driller:	Harrison & Cooper, Inc.			
Drilling Method:	Air rotary		Project Name:	Well ID:
Start Date:	12/8/2010		EME C-1 EOL	SB-4
End Date:	12/8/2010	Project Consultant: RECS		Location: UL/C sec. 1 T20S R36E
Comments: Located 10 ft west of the former junction box site.			Lat: 32°36'23.404"N	County: LEA
DRAFTED BY: L. Weinheimer TD = 40 ft GW = 40 ft			Long: 103°18'38.363"W	State: NM

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Light brown very fine sand		
5 ft	361		1.2			
				Tannish to yellow silty sand		
10 ft	287		1.2			
				Gray fine sand with small caliche fragments (hydrocarbon odor)		
15 ft	206		327			
				Light black silty sand with small caliche fragments (hydrocarbon odor)		
20 ft	212		589			
25 ft	267		385			
				Light brown very fine silty sand (hydrocarbon odor)		
30 ft	286	CI-352	707			
	B < 0.05 T = 0.208	GRO < 10		Gray silt with some very fine sand (hydrocarbon odor)		
	E = 1.12 X = 2.7	DRO 459				
35 ft	260		183			
				Light brown very fine silty sand (hydrocarbon odor)		
40 ft	487	CI-544	173			
	B < 0.05 T < 0.05	GRO < 10				
	E = 0.075 X = 0.288	DRO 280				

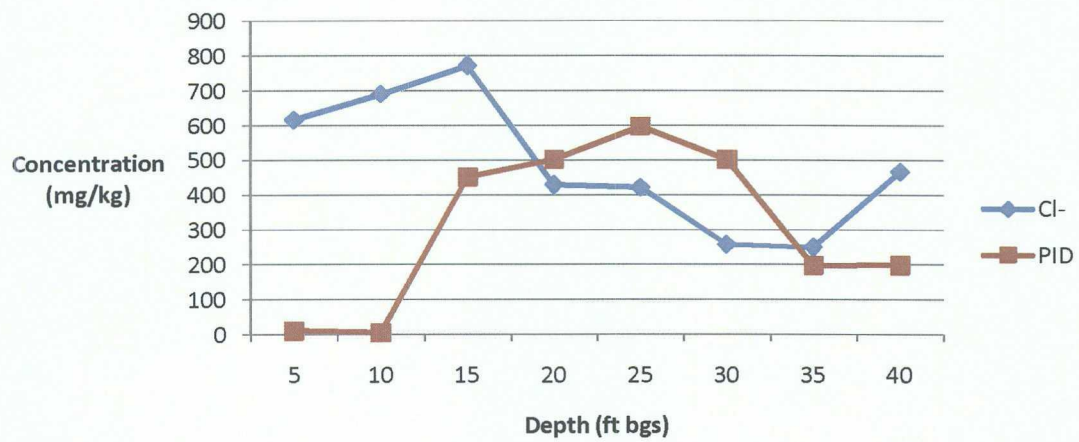
Chloride and PID concentrations versus depth



Logger:	Jordan Woodfin			
Driller:	Harrison & Cooper, Inc.			
Drilling Method:	Air rotary		Project Name:	Well ID:
Start Date:	12/8/2010		EME C-1 EOL	SB-5
End Date:	12/8/2010		Project Consultant: RECS	
Comments: Located 9 ft east of the former junction box site.			Location: UL/C sec. 1 T20S R36E	
DRAFTED BY: L. Weinheimer TD = 40 ft GW = 40 ft			Lat: 32°36'23.382"N County: LEA Long: 103°18'38.135"W State: NM	

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Light brown very fine sand		
5 ft	615		10			
				Tan silty sand with large caliche fragments		
10 ft	690	CI-1300	4.3			
	B <0.05 T <0.05	GRO <10		Tan silty sand with small caliche fragments (hydrocarbon odor)		
	E <0.05 X <0.15	DRO <10				
15 ft	772		450			
				Tan silty sand with small caliche fragments and one large red clay fragments (hydrocarbon odor)		
20 ft	428		501			
				Tan silty sand with small caliche fragments (hydrocarbon odor)		
25 ft	420	CI-480	597			
	B <0.05 T = 0.109	GRO <10		Light brown to grey sitly sand with small caliche fragments		
	E = 0.535 X = 1.89	DRO 384				
30 ft	257		501			
35 ft	249		197			
				Gray silty sand (hydrocarbon odor)		
40 ft	465	CI-592	198			
	B <0.05 T = 0.099	GRO <10				
	E = 0.321 X = 0.929	DRO 268				

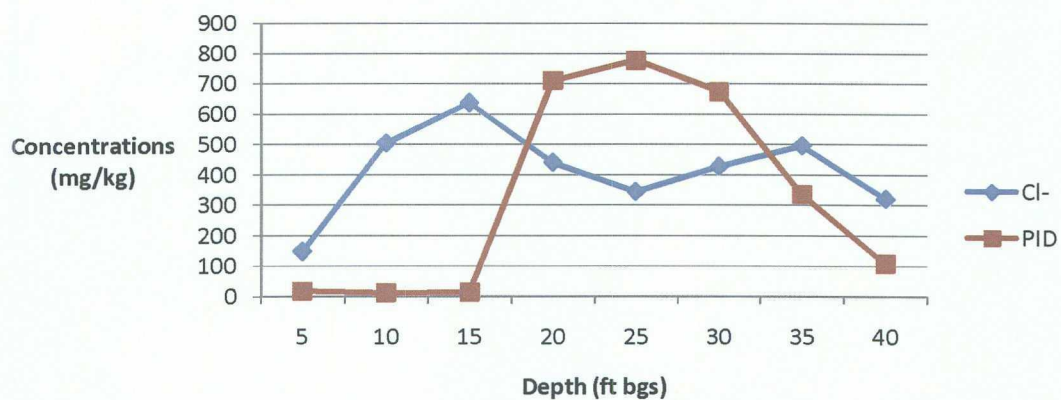
Chloride and PID concentrations versus depth



Logger:	Jordan Woodfin			
Driller:	Harrison & Cooper, Inc.			
Drilling Method:	Air rotary			
Start Date:	12/8/2010			
End Date:	12/8/2010		Project Name: EME C-1 EOL Project Consultant: RECS	Well ID: SB-6
Comments: Located 17 ft south of the former junction box site.			Location: UL/C sec. 1 T20S R36E	
DRAFTED BY: L. Weinheimer TD = 40 ft GW = 40 ft			Lat: 32°36'23.208"N County: LEA Long: 103°18'38.263"W State: NM	

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Tan very fine sand		
5 ft	148		17.2			
				Tan silty sand with a lot of medium sized caliche fragments		
10 ft	503		11.5			
				Light brown very fine silty sand		
15 ft	636	CI-656	12.8			
		GRO <10		Light brown very fine silty sand (hydrocarbon odor)		
		DRO 43.2				
20 ft	440		709			
				Light brown very fine silty sand with small caliche fragments (hydrocarbon odor)		
25 ft	344	CI-416	777			
		GRO 16.8		Tan silty sand with small caliche fragments (hydrocarbon odor)		
		DRO 427				
30 ft	427		674			
				Gray medium sand with small caliche fragments (hydrocarbon odor)		
35 ft	495		336			
				Red silty sand (moist) (hydrocarbon odor)		
40 ft	320	CI-480	107			
	B <0.05 T <0.05	GRO <10				
	E < 0.05 X < 0.15	DRO 12.4				

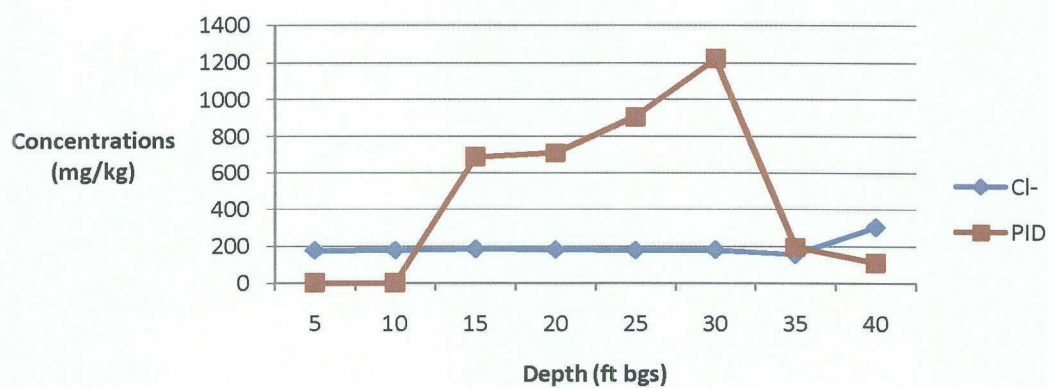
Chloride and PID concentrations versus depth



Logger:	Jordan Woodfin		
Driller:	Harrison & Cooper, Inc.		
Drilling Method:	Air rotary		
Start Date:	12/8/2010		
End Date:	12/8/2010		
Comments: Located 19 ft west of the former junction box site.		Project Name: EME C-1 EOL Well ID: SB-7 Project Consultant: RECS Location: UL/C sec. 1 T20S R36E Lat: 32°36'23.4"N Long: 103°18'38.468"W County: LEA State: NM	
DRAFTED BY: L. Weinheimer TD = 40 ft GW = 40 ft			

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Light brown very fine sand with small caliche rubble		
5 ft	177		0			
				Tan very fine silty sand		
10 ft	179		0			
				Gray very fine silty sand (hydrocarbon odor)		
15 ft	184		687			
				Gray fine sand with small caliche fragments (hydrocarbon odor)		
20 ft	181		710			
				Tan to grey fine silty sand (hydrocarbon odor)		
25 ft	178		905			
				Tan silty sand with medium sized caliche fragments (hydrocarbon odor)		
30 ft	180	CI-64	1219			
	B < 0.05 T = 0.334	GRO 64.1		Gray coarse sand with small caliche fragments (hydrocarbon odor)		
	E = 1.36 X = 3.22	DRO 455				
35 ft	156		195			
				Red and grey fine silty sand with small caliche fragments (hydrocarbon odor)		
40 ft	304	CI-336	110			
	B < 0.05 T < 0.05	GRO < 10				
	E < 0.05 X < 0.15	DRO 105				

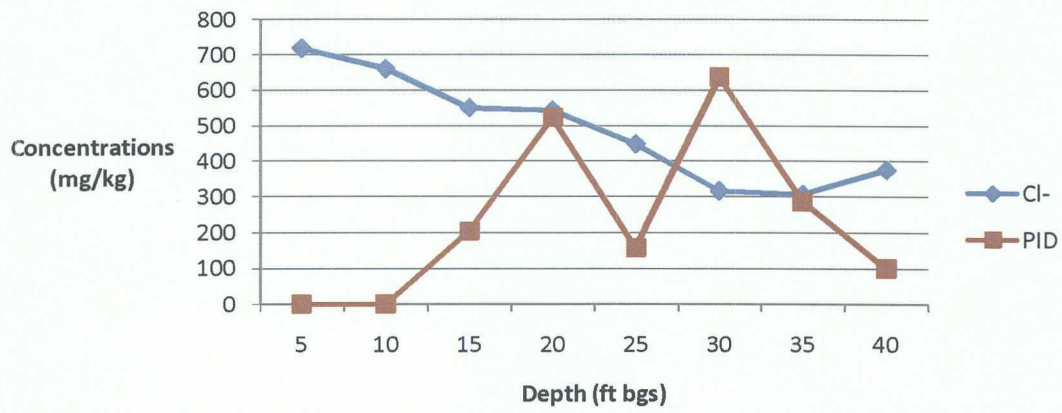
Chloride and PID concentrations versus depth



Logger:	Jordan Woodfin			
Driller:	Harrison & Cooper, Inc.			
Drilling Method:	Air rotary		Project Name:	Well ID:
Start Date:	12/8/2010		EME C-1 EOL	SB-8
End Date:	12/8/2010	Project Consultant: RECS		Location: UL/C sec. 1 T20S R36E
Comments: Located 20 ft north of the former junction box site.			Lat: 32°36'23.574"N	County: LEA
DRAFTED BY: L. Weinheimer TD = 40 ft GW = 40 ft			Long: 103°18'38.224"W	State: NM

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Tan very fine sand		
5 ft	717	CI-800	0			
		GRO <10				
		DRO <10				
10 ft	660		0	Gray very fine sand with small caliche fragments (hydrocarbon odor)		
15 ft	550		204			
20 ft	543		523	Light brown fine silty sand (hydrocarbon odor)		 bentonite seal
25 ft	449		157			
30 ft	317	CI-384	637	Gray coarse sand with small caliche fragments (hydrocarbon odor)		
	B <0.05 T = 0.24	GRO 97.4				
	E = 1.29 X = 3.1	DRO 598				
35 ft	307		287			
				Light brown coarse sand with small caliche fragments (hydrocarbon odor)		
40 ft	376	CI-512	100			
	B <0.05 T = 0.163	GRO <10				
	E = 0.412 X = 0.9	DRO 174				

Chloride and PID concentrations versus depth





December 13, 2010

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

RE: EME C-1 EOL

Enclosed are the results of analyses for samples received by the laboratory on 12/08/10 8:15.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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

Received: 12/08/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/07/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #1 @ 20' (H021473-01)

BTEX 8021B			mg/kg		Analyzed By: CK				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2010	ND	2.00	99.9	2.00	5.09	
Toluene*	0.368	0.050	12/09/2010	ND	2.12	106	2.00	4.20	
Ethylbenzene*	1.95	0.050	12/09/2010	ND	2.13	107	2.00	3.85	
Total Xylenes*	6.01	0.150	12/09/2010	ND	6.33	106	6.00	3.65	

Surrogate: 4-Bromofluorobenzene (PII) 103 % 70-130

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	12/08/2010	ND	432	108	400	0.00	

TPH 8015M			mg/kg		Analyzed By: AB				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	138	10.0	12/09/2010	ND	192	96.1	200	15.1	
DRO >C10-C28	973	10.0	12/09/2010	ND	204	102	200	8.69	

Surrogate: 1-Chlorooctane 77.2 % 70-130

Surrogate: 1-Chlorooctadecane 43.8 % 70-130

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: 12/08/2010
 Reported: 12/13/2010
 Project Name: EME C-1 EOL
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 12/07/2010
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SB #1 @ 40' (H021473-02)

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2010	ND	2.00	99.9	2.00	5.09	
Toluene*	0.053	0.050	12/09/2010	ND	2.12	106	2.00	4.20	
Ethylbenzene*	<0.050	0.050	12/09/2010	ND	2.13	107	2.00	3.85	
Total Xylenes*	<0.150	0.150	12/09/2010	ND	6.33	106	6.00	3.65	

Surrogate: 4-Bromofluorobenzene (PII) 104 % 70-130

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	464	16.0	12/08/2010	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: AB						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/09/2010	ND	192	96.1	200	15.1		
DRO >C10-C28	103	10.0	12/09/2010	ND	204	102	200	8.69		

Surrogate: 1-Chlorooctane 90.6 % 70-130

Surrogate: 1-Chlorooctadecane 58.5 % 70-130

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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: 12/08/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/07/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #2 @ 20' (H021473-03)

BTEX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/10/2010	ND	2.00	99.9	2.00	5.09		
Toluene*	0.207	0.050	12/10/2010	ND	2.12	106	2.00	4.20		
Ethylbenzene*	1.05	0.050	12/10/2010	ND	2.13	107	2.00	3.85		
Total Xylenes*	3.71	0.150	12/10/2010	ND	6.33	106	6.00	3.65		

Surrogate: 4-Bromofluorobenzene (PIL) 103 % 70-130

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	560	16.0	12/08/2010	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	100	10.0	12/09/2010	ND	192	96.1	200	15.1	
DRO >C10-C28	1120	10.0	12/09/2010	ND	204	102	200	8.69	

Surrogate: 1-Chlorooctane 106 % 70-130

Surrogate: 1-Chlorooctadecane 83.5 % 70-130

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: 12/08/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/07/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #2 @ 30' (H021473-04)

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2010	ND	2.00	99.9	2.00	5.09	
Toluene*	0.125	0.050	12/10/2010	ND	2.12	106	2.00	4.20	
Ethylbenzene*	0.436	0.050	12/10/2010	ND	2.13	107	2.00	3.85	
Total Xylenes*	1.23	0.150	12/10/2010	ND	6.33	106	6.00	3.65	

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 70-130

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1230	16.0	12/08/2010	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	34.5	10.0	12/09/2010	ND	192	96.1	200	15.1	
DRO >C10-C28	730	10.0	12/09/2010	ND	204	102	200	8.69	

Surrogate: 1-Chlorooctane 112 % 70-130

Surrogate: 1-Chlorooctadecane 95.3 % 70-130

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: 12/08/2010
 Reported: 12/13/2010
 Project Name: EME C-1 EOL
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 12/07/2010
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SB #2 @ 40' (H021473-05)

BTEX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/10/2010	ND	2.00	99.9	2.00	5.09		
Toluene*	0.135	0.050	12/10/2010	ND	2.12	106	2.00	4.20		
Ethylbenzene*	0.445	0.050	12/10/2010	ND	2.13	107	2.00	3.85		
Total Xylenes*	1.30	0.150	12/10/2010	ND	6.33	106	6.00	3.65		

Surrogate: 4-Bromofluorobenzene (PIE) 97.6 % 70-130

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	880	16.0	12/08/2010	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	65.0	10.0	12/09/2010	ND	192	96.1	200	15.1	
DRO >C10-C28	1460	10.0	12/09/2010	ND	204	102	200	8.69	

Surrogate: 1-Chlorooctane 92.1 % 70-130

Surrogate: 1-Chlorooctadecane 74.9 % 70-130

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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: 12/08/2010
 Reported: 12/13/2010
 Project Name: EME C-1 EOL
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 12/07/2010
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SB #3 @ 15' (H021473-06)

Chloride, SM4500Cl-B			mg / kg							Analyzed By: HM
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1800	16.0	12/08/2010	ND	432	108	400	0.00		
TPH 8015M			mg / kg							Analyzed By: AB
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	S-04
GRO C6-C10	<10.0	10.0	12/09/2010	ND	192	96.1	200	15.1		
DRO >C10-C28	<10.0	10.0	12/09/2010	ND	204	102	200	8.69		
Surrogate: 1-Chlorooctane	86.7 %	70-130								
Surrogate: 1-Chlorooctadecane	56.2 %	70-130								

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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: 12/08/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/07/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #3 @ 30' (H021473-07)

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	12/11/2010	ND	2.00	99.9	2.00	5.09	
Toluene*	0.595	0.200	12/11/2010	ND	2.12	106	2.00	4.20	
Ethylbenzene*	2.92	0.200	12/11/2010	ND	2.13	107	2.00	3.85	
Total Xylenes*	7.68	0.600	12/11/2010	ND	6.33	106	6.00	3.65	

Surrogate: 4-Bromofluorobenzene (PIL) 91.0 % 70-130

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	736	16.0	12/08/2010	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	139	10.0	12/09/2010	ND	192	96.1	200	15.1	
DRO >C10-C28	1530	10.0	12/09/2010	ND	204	102	200	8.69	

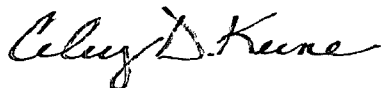
Surrogate: 1-Chlorooctane 93.9 % 70-130

Surrogate: 1-Chlorooctadecane 72.2 % 70-130

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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: 12/08/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/07/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #3 @ 40' (H021473-08)

BTEX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/10/2010	ND	2.00	99.9	2.00	5.09		
Toluene*	0.100	0.050	12/10/2010	ND	2.12	106	2.00	4.20		
Ethylbenzene*	0.322	0.050	12/10/2010	ND	2.13	107	2.00	3.85		
Total Xylenes*	0.924	0.150	12/10/2010	ND	6.33	106	6.00	3.65		

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 70-130

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	624	16.0	12/08/2010	ND	432	108	400	0.00		

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2010	ND	192	96.1	200	15.1	
DRO >C10-C28	266	10.0	12/09/2010	ND	204	102	200	8.69	

Surrogate: 1-Chlorooctane 90.6 % 70-130

Surrogate: 1-Chlorooctadecane 72.5 % 70-130

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
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

ARDINAL 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

Company Name: Rice Operating Company		P.O. #:	
Project Manager: Hack Conder		Company:	
Address: 122 West Taylor		Attn:	
City: Hobbs		State: NM Zip: 88240	
Phone #: 575-393-9174		Fax #: 575-397-1471	
Project #:		Project Owner:	
Project Name: EME C-1 EOL		State: Zip:	
Project Location: EME C-1 EOL		Phone #:	
Sampler Name: Jordan Woodfin		Fax #:	

Lab I.D.	Sample I.D.	(G) RAB OR (C) OMP	MATRIX				PRESERV	SAMPLING	DATE	TIME	ANALYSIS REQUEST					
			GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER	ACID/BASE	ICE/COOL	OTHER	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TPH 8015 M Extended Thru C40
121413-1	SB # 1 @ 20'	1	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
2	SB # 1 @ 40'	1	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
3	SB # 2 @ 20'	1	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
4	SB # 2 @ 30'	1	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
5	SB # 2 @ 40'	1	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
6	SB # 3 @ 15'	1	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
7	SB # 3 @ 30'	1	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
8	SB # 3 @ 40'	1	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

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Relinquished By: <i>Jordan Woodfin</i>	Date: 12/13/10	Received By: <i>Jordan Woodfin</i>	Date: 12/13/10
Relinquished By: <i>Jordan Woodfin</i>	Date: 12/13/10	Received By: <i>Jordan Woodfin</i>	Date: 12/13/10
Delivered By: (Circle One)	Sampler - UPS - Bus - Other:	Sample Condition	CHECKED BY: (Initials)
		Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>	<i>JW</i>
		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Add'l Phone #: Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Add'l Fax #: REMARKS: email results Hcorder@riceswd.com; jwoodfin@riceswd.com; Lweinheimer@riceswd.com kjonas@riceswd.com			

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

NEED SAMPLES BACK, PLEASE

December 13, 2010

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

RE: EME C-1 EOL

Enclosed are the results of analyses for samples received by the laboratory on 12/09/10 9:50.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

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

Received: 12/09/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/08/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #4 @ 30' (H021479-01)

BTEX 8021B			mg/kg		Analyzed By: CK				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2010	ND	2.00	99.9	2.00	5.09	
Toluene*	0.208	0.050	12/10/2010	ND	2.12	106	2.00	4.20	
Ethylbenzene*	1.12	0.050	12/10/2010	ND	2.13	107	2.00	3.85	
Total Xylenes*	2.70	0.150	12/10/2010	ND	6.33	106	6.00	3.65	

Surrogate: 4-Bromofluorobenzene (PIL) 95.1 % 70-130

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	12/09/2010	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: AB				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2010	ND	164	81.9	200	3.76	
DRO >C10-C28	459	10.0	12/09/2010	ND	163	81.3	200	2.60	

Surrogate: 1-Chlorooctane 81.8 % 70-130

Surrogate: 1-Chlorooctadecane 86.6 % 70-130

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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: 12/09/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/08/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #4 @ 40' (H021479-02)

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2010	ND	2.00	99.9	2.00	5.09	
Toluene*	<0.050	0.050	12/10/2010	ND	2.12	106	2.00	4.20	
Ethylbenzene*	0.075	0.050	12/10/2010	ND	2.13	107	2.00	3.85	
Total Xylenes*	0.288	0.150	12/10/2010	ND	6.33	106	6.00	3.65	

Surrogate: 4-Bromofluorobenzene (PII) 106 % 70-130

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	544	16.0	12/09/2010	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2010	ND	164	81.9	200	3.76	
DRO >C10-C28	280	10.0	12/09/2010	ND	163	81.3	200	2.60	

Surrogate: 1-Chlorooctane 95.5 % 70-130

Surrogate: 1-Chlorooctadecane 97.4 % 70-130

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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: 12/09/2010
 Reported: 12/13/2010
 Project Name: EME C-1 EOL
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 12/08/2010
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SB #5 @ 10' (H021479-03)

BTEX 8021B			mg/kg		Analyzed By: CK				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2010	ND	2.00	99.9	2.00	5.09	
Toluene*	<0.050	0.050	12/10/2010	ND	2.12	106	2.00	4.20	
Ethylbenzene*	<0.050	0.050	12/10/2010	ND	2.13	107	2.00	3.85	
Total Xylenes*	<0.150	0.150	12/10/2010	ND	6.33	106	6.00	3.65	

Surrogate: 4-Bromofluorobenzene (PIE) 104 % 70-130

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1300	16.0	12/09/2010	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: AB				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2010	ND	164	81.9	200	3.76	
DRO >C10-C28	<10.0	10.0	12/09/2010	ND	163	81.3	200	2.60	

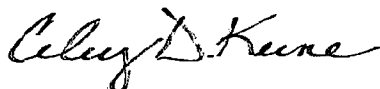
Surrogate: 1-Chlorooctane 71.9 % 70-130

Surrogate: 1-Chlorooctadecane 78.3 % 70-130

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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: 12/09/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/08/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #5 @ 25' (H021479-04)

BTEX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/10/2010	ND	2.00	99.9	2.00	5.09		
Toluene*	0.109	0.050	12/10/2010	ND	2.12	106	2.00	4.20		
Ethylbenzene*	0.535	0.050	12/10/2010	ND	2.13	107	2.00	3.85		
Total Xylenes*	1.89	0.150	12/10/2010	ND	6.33	106	6.00	3.65		

Surrogate: 4-Bromofluorobenzene (PIE) 102 % 70-130

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	12/09/2010	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/10/2010	ND	164	81.9	200	3.76	
DRO >C10-C28	384	10.0	12/10/2010	ND	163	81.3	200	2.60	

Surrogate: 1-Chlorooctane 95.4 % 70-130

Surrogate: 1-Chlorooctadecane 96.4 % 70-130

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Analytical Results For:

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

Received: 12/09/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/08/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #5 @ 40' (H021479-05)

BTEX 8021B			mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	12/10/2010	ND	2.00	99.9	2.00	5.09		
Toluene*	0.099	0.050	12/10/2010	ND	2.12	106	2.00	4.20		
Ethylbenzene*	0.321	0.050	12/10/2010	ND	2.13	107	2.00	3.85		
Total Xylenes*	0.929	0.150	12/10/2010	ND	6.33	106	6.00	3.65		

Surrogate: 4-Bromofluorobenzene (PII) 101 % 70-130

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	592	16.0	12/09/2010	ND	432	108	400	3.77	

TPH 8015M			mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	12/10/2010	ND	164	81.9	200	3.76		
DRO >C10-C28	268	10.0	12/10/2010	ND	163	81.3	200	2.60		

Surrogate: 1-Chlorooctane 96.4 % 70-130

Surrogate: 1-Chlorooctadecane 102 % 70-130

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Analytical Results For:

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

Received: 12/09/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/08/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #6 @ 15' (H021479-06)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	656	16.0	12/09/2010	ND	416	104	400	0.00	
TPH 8015M			mg/kg		Analyzed By: AB				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/10/2010	ND	164	81.9	200	3.76	
DRO >C10-C28	43.2	10.0	12/10/2010	ND	163	81.3	200	2.60	
Surrogate: 1-Chlorooctane	84.5 %	70-130							
Surrogate: 1-Chlorooctadecane	86.1 %	70-130							

Sample ID: SB #6 @ 25' (H021479-07)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	12/09/2010	ND	416	104	400	0.00	
TPH 8015M			mg/kg		Analyzed By: AB				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	16.8	10.0	12/10/2010	ND	164	81.9	200	3.76	
DRO >C10-C28	427	10.0	12/10/2010	ND	163	81.3	200	2.60	
Surrogate: 1-Chlorooctane	92.1 %	70-130							
Surrogate: 1-Chlorooctadecane	91.6 %	70-130							

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Analytical Results For:

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

Received: 12/09/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/08/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #6 @ 40' (H021479-08)

BTEX 8021B			mg / kg		Analyzed By: CK				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/10/2010	ND	2.00	99.9	2.00	5.09	
Toluene*	<0.050	0.050	12/10/2010	ND	2.12	106	2.00	4.20	
Ethylbenzene*	<0.050	0.050	12/10/2010	ND	2.13	107	2.00	3.85	
Total Xylenes*	<0.150	0.150	12/10/2010	ND	6.33	106	6.00	3.65	

Surrogate: 4-Bromofluorobenzene (PIE) 101 % 70-130

Chloride, SM4500Cl-B			mg / kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	12/09/2010	ND	416	104	400	0.00	

TPH 8015M			mg / kg		Analyzed By: AB				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/10/2010	ND	164	81.9	200	3.76	
DRO >C10-C28	12.4	10.0	12/10/2010	ND	163	81.3	200	2.60	

Surrogate: 1-Chlorooctane 92.7 % 70-130

Surrogate: 1-Chlorooctadecane 96.5 % 70-130

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Analytical Results For:

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

Received: 12/09/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/08/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #7 @ 30' (H021479-09)

BTX 8021B		mg/kg		Analyzed By: CMS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/13/2010	ND	2.00	99.9	2.00	5.09	
Toluene*	0.334	0.050	12/13/2010	ND	2.12	106	2.00	4.20	
Ethylbenzene*	1.36	0.050	12/13/2010	ND	2.13	107	2.00	3.85	
Total Xylenes*	3.22	0.150	12/13/2010	ND	6.33	106	6.00	3.65	

Surrogate: 4-Bromofluorobenzene (PIL) 79.8 % 70-130

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	64.0	16.0	12/09/2010	ND	416	104	400	0.00		

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	64.1	10.0	12/10/2010	ND	164	81.9	200	3.76	
DRO >C10-C28	455	10.0	12/10/2010	ND	163	81.3	200	2.60	

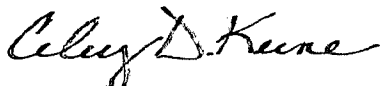
Surrogate: 1-Chlorooctane 97.1 % 70-130

Surrogate: 1-Chlorooctadecane 97.6 % 70-130

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Analytical Results For:

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

Received: 12/09/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/08/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #7 @ 40' (H021479-10)

BTEX 8021B			mg/kg		Analyzed By: CMS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/13/2010	ND	2.00	99.9	2.00	5.09	
Toluene*	<0.050	0.050	12/13/2010	ND	2.12	106	2.00	4.20	
Ethylbenzene*	<0.050	0.050	12/13/2010	ND	2.13	107	2.00	3.85	
Total Xylenes*	<0.150	0.150	12/13/2010	ND	6.33	106	6.00	3.65	

Surrogate: 4-Bromofluorobenzene (PII) 110 % 70-130

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	12/09/2010	ND	416	104	400	0.00	

TPH 8015M			mg/kg		Analyzed By: AB				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/10/2010	ND	164	81.9	200	3.76	
DRO >C10-C28	105	10.0	12/10/2010	ND	163	81.3	200	2.60	

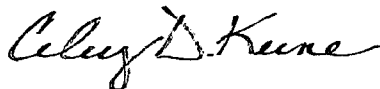
Surrogate: 1-Chlorooctane 92.5 % 70-130

Surrogate: 1-Chlorooctadecane 97.2 % 70-130

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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: 12/09/2010
 Reported: 12/13/2010
 Project Name: EME C-1 EOL
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 12/08/2010
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

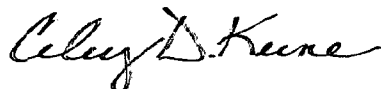
Sample ID: SB #8 @ 5' (H021479-11)

Chloride, SM4500Cl-B			mg / kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	12/09/2010	ND	416	104	400	0.00	
TPH 8015M			mg / kg		Analyzed By: AB				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/10/2010	ND	164	81.9	200	3.76	
DRO >C10-C28	<10.0	10.0	12/10/2010	ND	163	81.3	200	2.60	
Surrogate: 1-Chlorooctane	95.1 %	70-130							
Surrogate: 1-Chlorooctadecane	95.2 %	70-130							

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Analytical Results For:

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

Received: 12/09/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/08/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #8 @ 30' (H021479-12)

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2010	ND	2.00	99.9	2.00	5.09	
Toluene*	0.240	0.050	12/11/2010	ND	2.12	106	2.00	4.20	
Ethylbenzene*	1.29	0.050	12/11/2010	ND	2.13	107	2.00	3.85	
Total Xylenes*	3.10	0.150	12/11/2010	ND	6.33	106	6.00	3.65	

Surrogate: 4-Bromofluorobenzene (PIL) 81.1 % 70-130

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	384	16.0	12/09/2010	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	97.4	10.0	12/10/2010	ND	164	81.9	200	3.76	
DRO >C10-C28	598	10.0	12/10/2010	ND	163	81.3	200	2.60	

Surrogate: 1-Chlorooctane 96.6 % 70-130

Surrogate: 1-Chlorooctadecane 95.7 % 70-130

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

Received: 12/09/2010
Reported: 12/13/2010
Project Name: EME C-1 EOL
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 12/08/2010
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: SB #8 @ 40' (H021479-13)

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/11/2010	ND	2.00	99.9	2.00	5.09	
Toluene*	0.163	0.050	12/11/2010	ND	2.12	106	2.00	4.20	
Ethylbenzene*	0.412	0.050	12/11/2010	ND	2.13	107	2.00	3.85	
Total Xylenes*	0.900	0.150	12/11/2010	ND	6.33	106	6.00	3.65	

Surrogate: 4-Bromofluorobenzene (PII) 76.8 % 70-130

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	16.0	12/09/2010	ND	416	104	400	0.00	

TPH 8015M		mg/kg		Analyzed By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/10/2010	ND	164	81.9	200	3.76	
DRO >C10-C28	174	10.0	12/10/2010	ND	163	81.3	200	2.60	

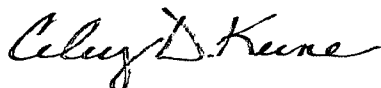
Surrogate: 1-Chlorooctane 90.4 % 70-130

Surrogate: 1-Chlorooctadecane 99.0 % 70-130

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Celey D. Keene, Lab Director/Quality Manager


Notes and Definitions

QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
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

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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: Rice Operating Company										P.O. #:										BILL TO										ANALYSIS REQUEST									
Project Manager: Hack Conder										Company:																													
Address: 122 West Taylor										State: NM Zip: 88240																													
City: Hobbs										Attn:																													
Phone #: 575-393-9174										Fax #: 575-397-1471																													
Project #:										Project Owner:																													
Project Name: EME C-1 EOL										State:										Zip:																			
Project Location: EME C-1 EOL										Phone #:																													
Sampler Name: Jordan Woodfin										Fax #:																													
FOR LAB USE ONLY										MATRIX										PRESERV										SAMPLING									
Lab I.D.										Sample I.D.																													
12/14/19-1										SB # 4 @ 30'																													
2										SB # 4 @ 40'																													
3										SB # 5 @ 10'																													
4										SB # 5 @ 25'																													
5										SB # 5 @ 40'																													
6										SB # 6 @ 15'																													
7										SB # 6 @ 25'																													
8										SB # 6 @ 40'																													
9										SB # 7 @ 30'																													
10										SB # 7 @ 40'																													
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Relinquished By: Jordan Woodfin										Date: 12/9/19										Received By: [Signature]										Date: 12/9/19									
Relinquished By: [Signature]										Time: 2:30										Received By: [Signature]										Time: 2:30									
Delivered By: (Circle One)										Sample Condition										Checked By: [Signature]										Checked By: [Signature]									
Sampler - UPS - Bus - Other:										Cool Intact										Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>										Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No										Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No										Add'l Phone #:										Add'l Fax #:									
REMARKS:										email results																													
Hconder@riceswd.com; jwoodfin@riceswd.com;																																							
Lweinheimer@riceswd.com kjonas@riceswd.com																																							

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