

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 RECEIPT 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 conducted 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.

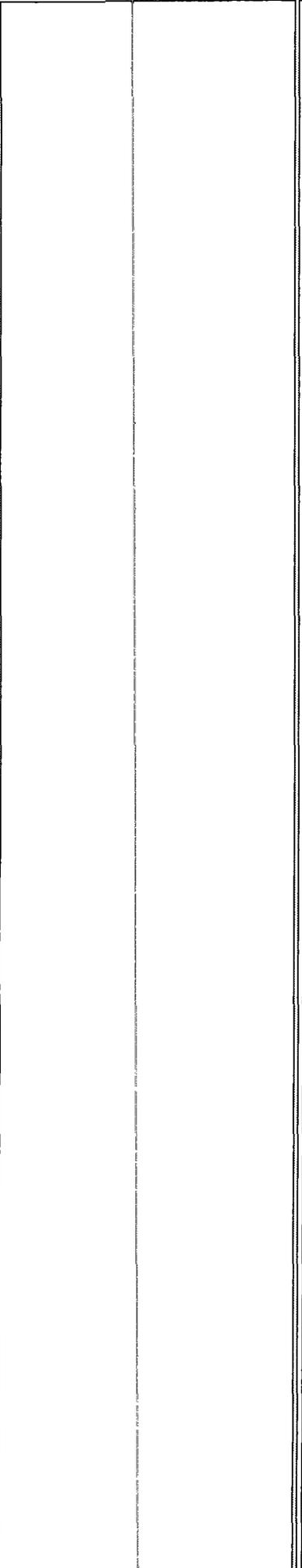
Sincerely,



Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

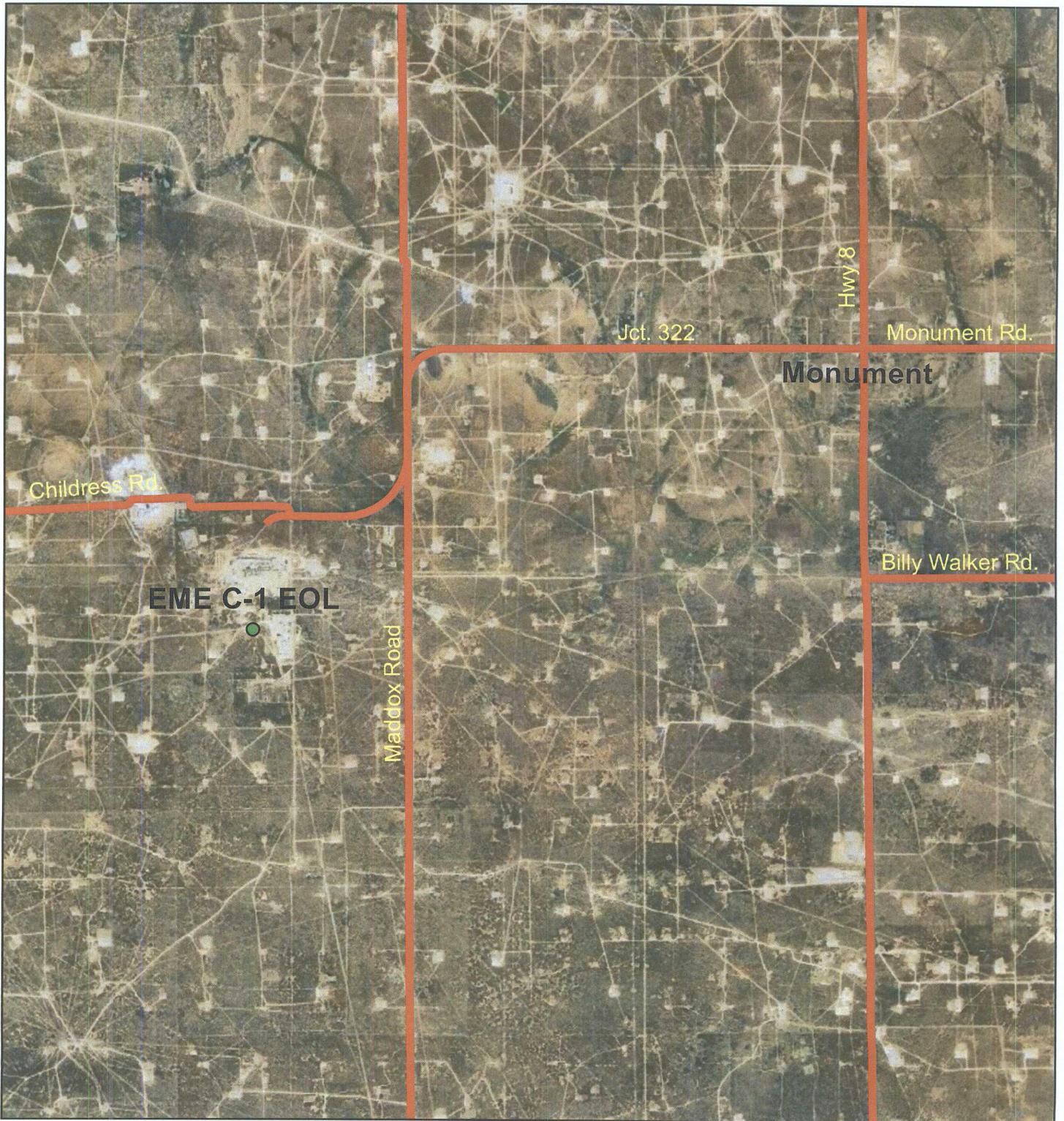
Attachments:

- 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

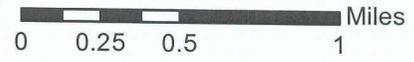


EME C-1 EOL

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

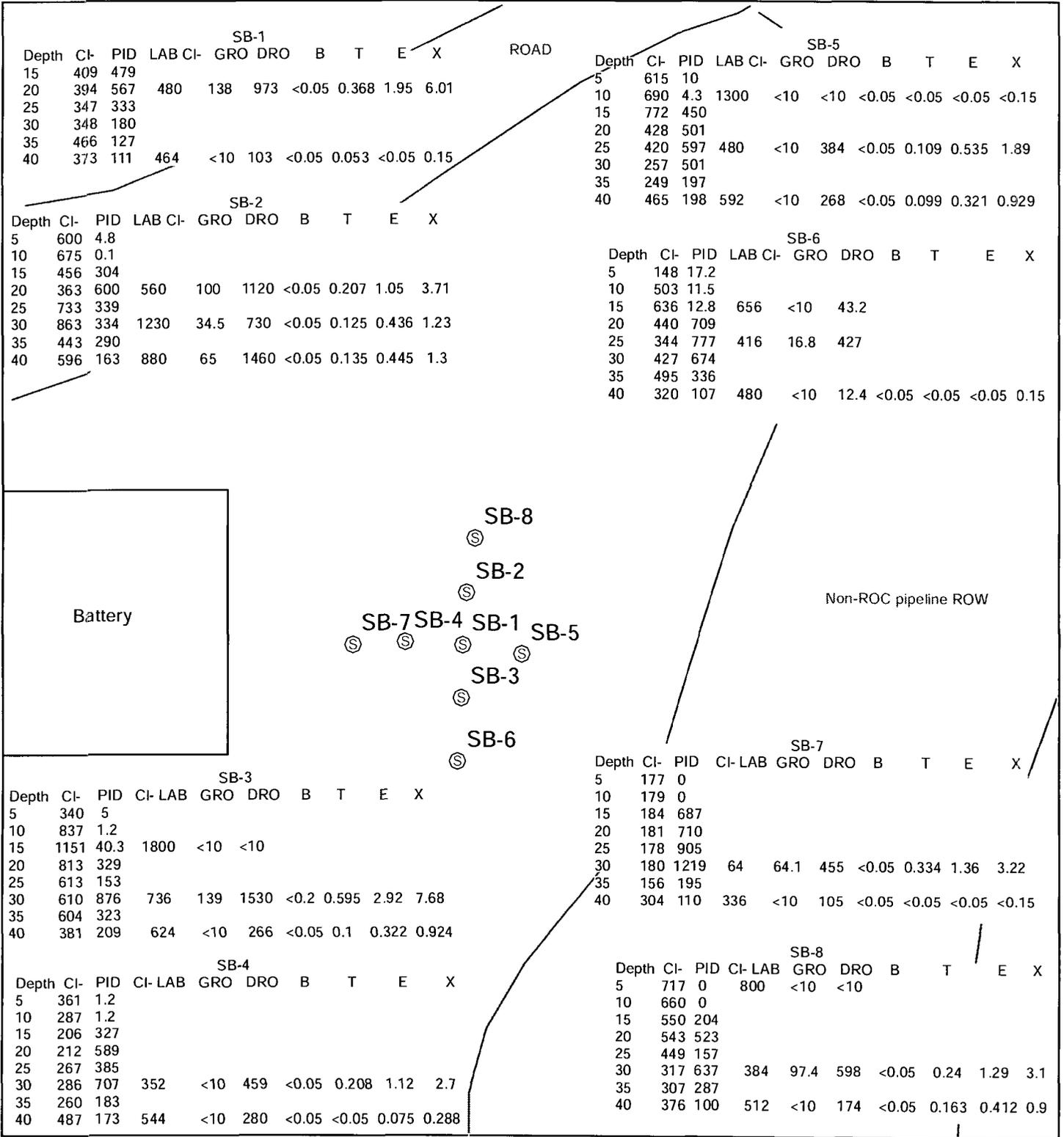
Case #: 1R427-320

Figure 1

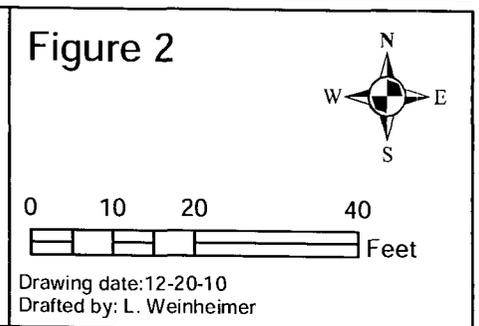


Drawing date: 11-1-10
Drafted by: L. Weinheimer

Soil bore information



EME C-1 EOL
 Legals: UL/C sec. 1
 T20S R36E
 Case #: 1R427-320

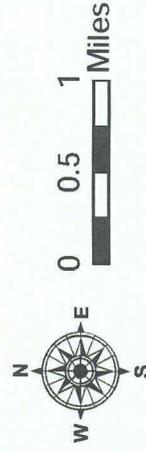


EME Groundwater Contamination



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

- Cl- concentration > 10,000
- 10,000 > Cl- concentration > 5,000
- 5,000 > Cl- concentration > 2,000
- 2,000 > Cl- concentration > 700
- Hypothetical Cl- 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.

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

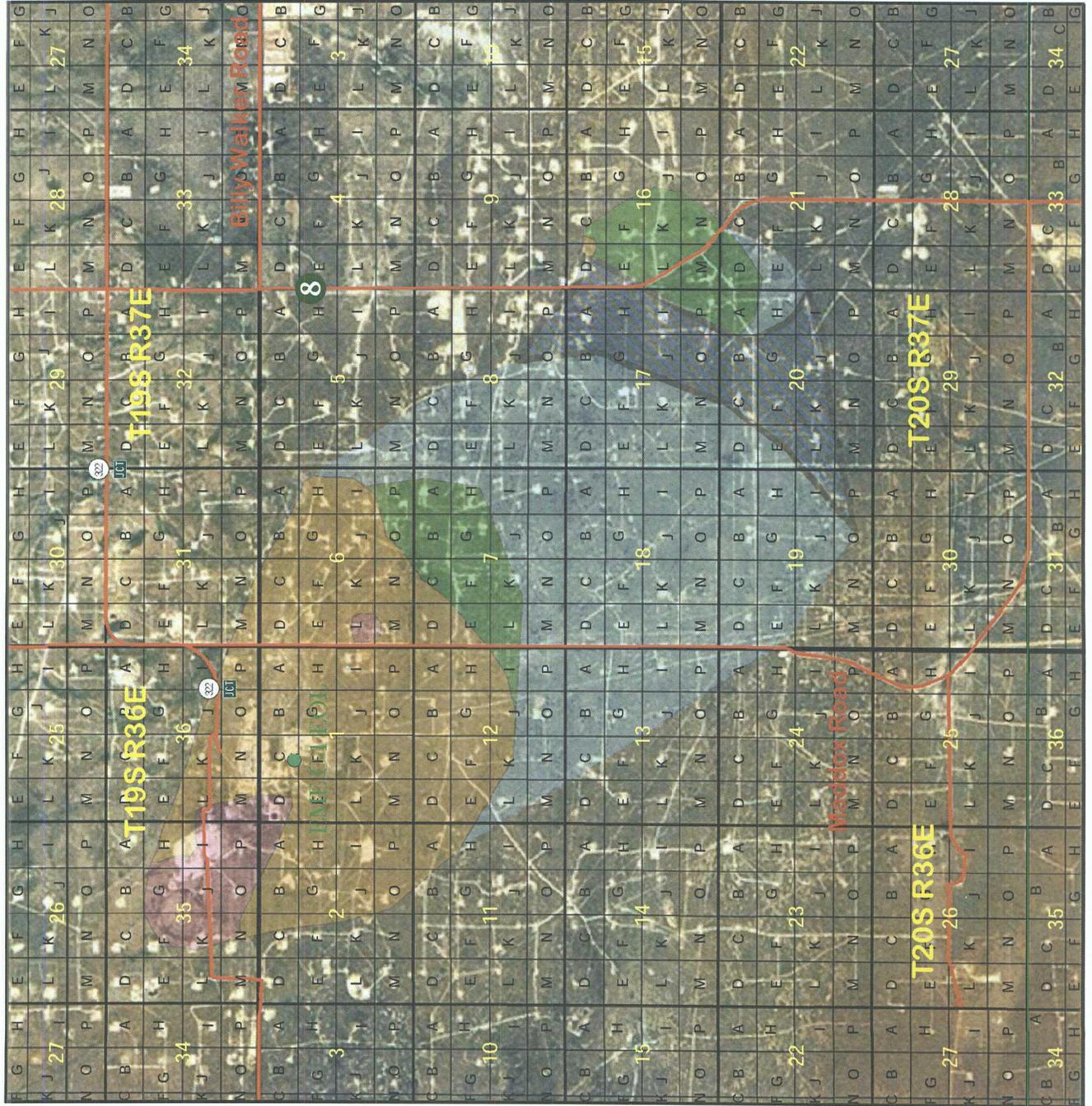
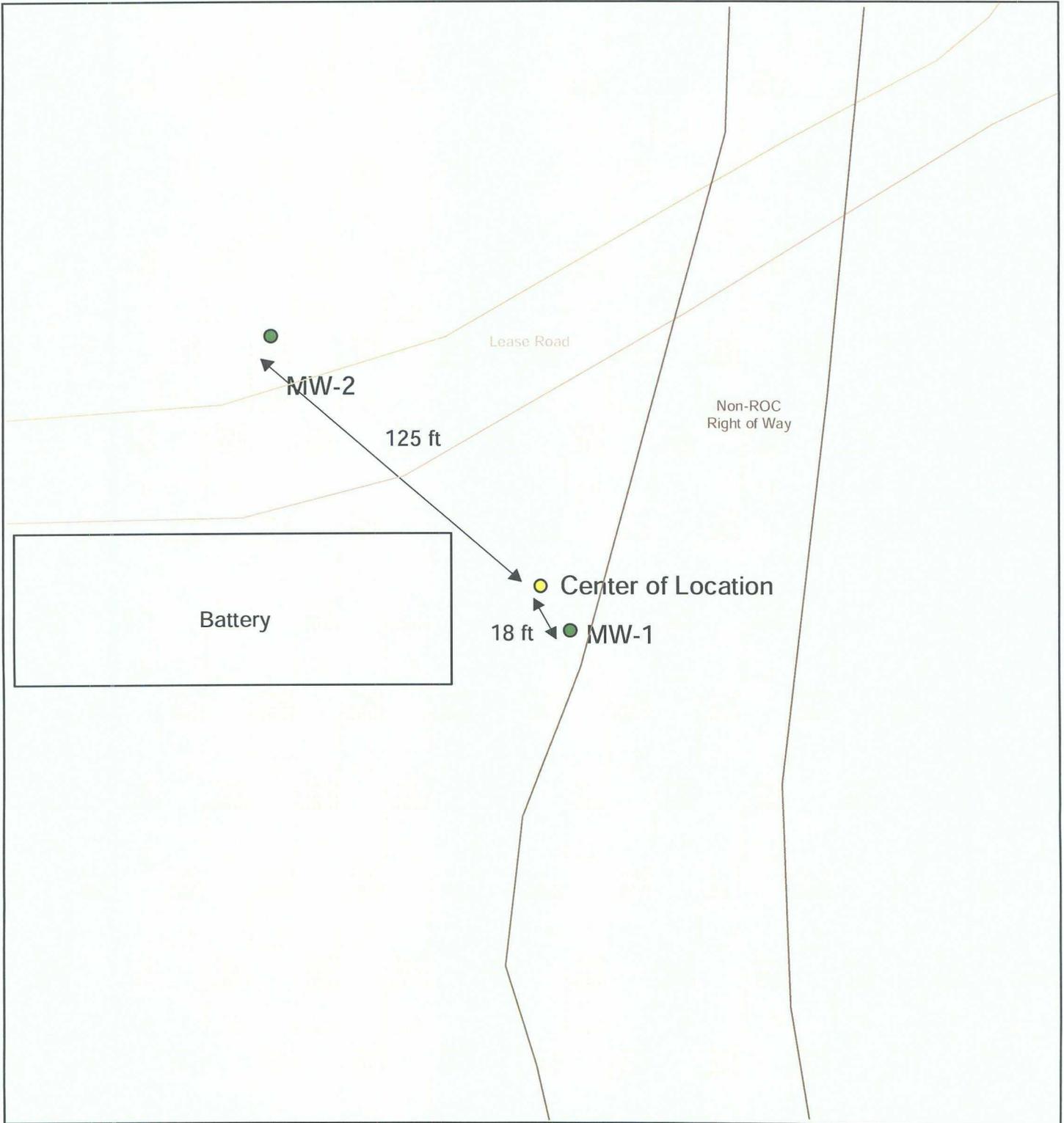
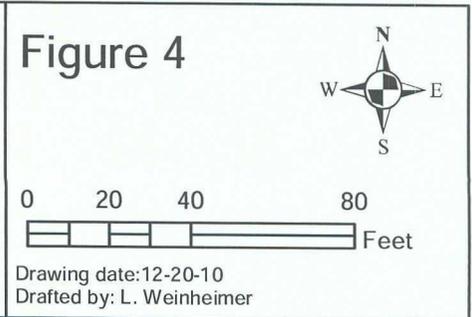


Figure 3

Proposed MW Locations



EME C-1 EOL
Legals: UL/C sec. 1
T20S R36E
Case #: 1R427-320



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		
							Length	Width	Depth
EME	Amerada St. 'D' boot EOL	C	1	20S	36E	Lea	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
REMED. 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.

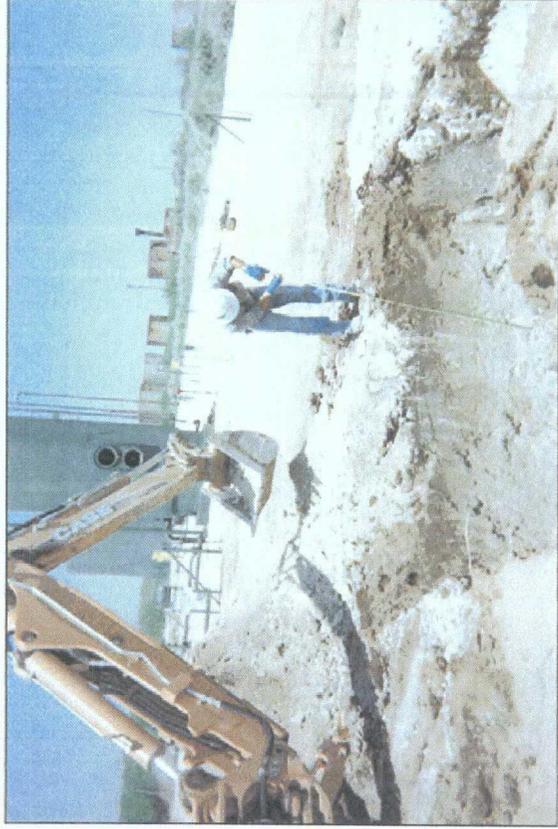
EME Amerada St. 'D' boot EOL

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



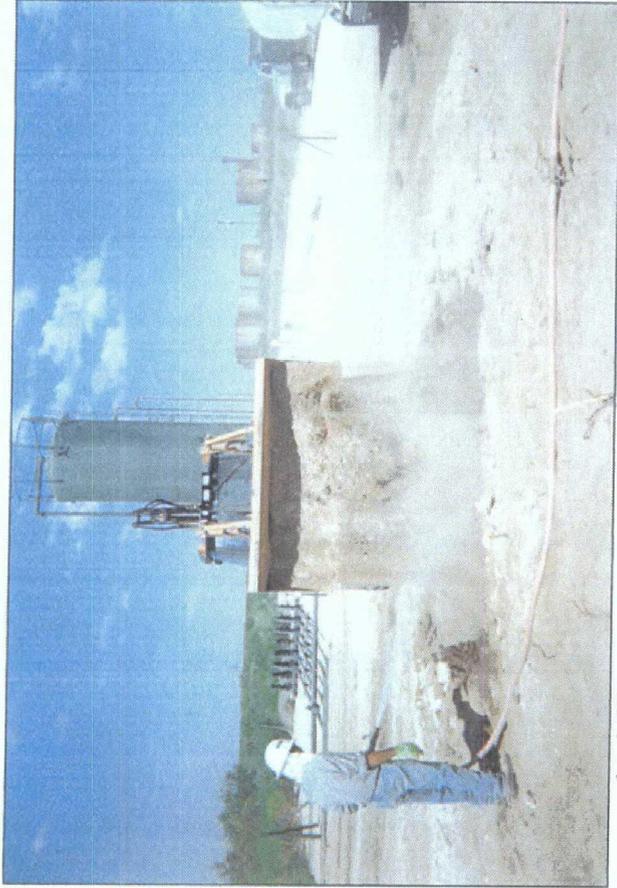
undisturbed junction box

10/28/2004



delineation & excavation

6/23/2005



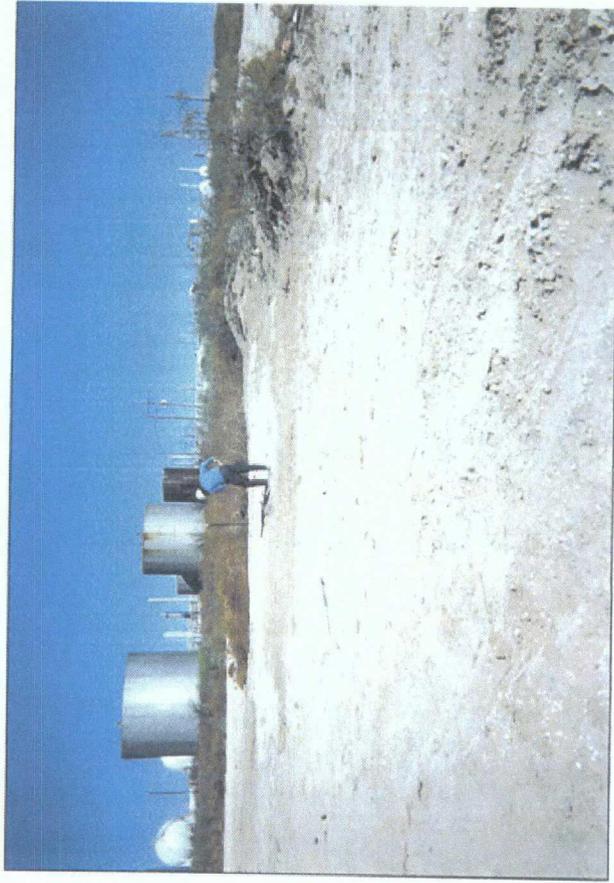
7/14/2005

backfilling excavation



7/14/2005

identification plate on surface of backfilled site



11/21/2005

seeding disturbed surface

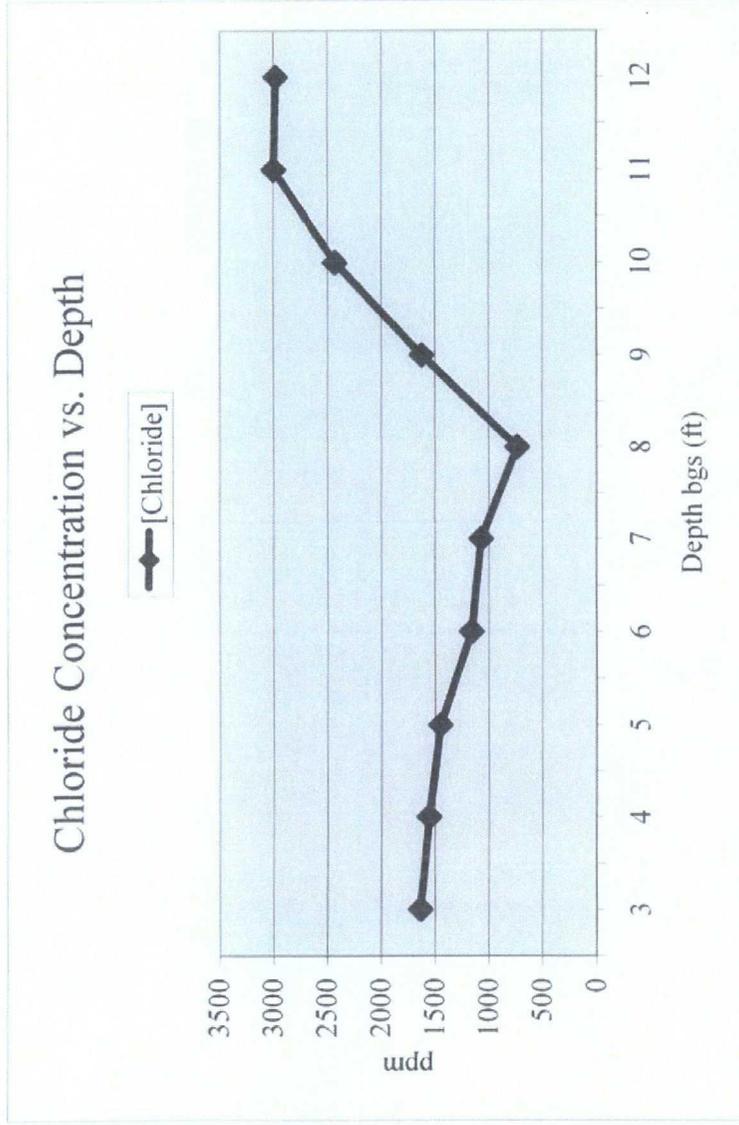
EME Amerada St. 'D' boot EOL

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

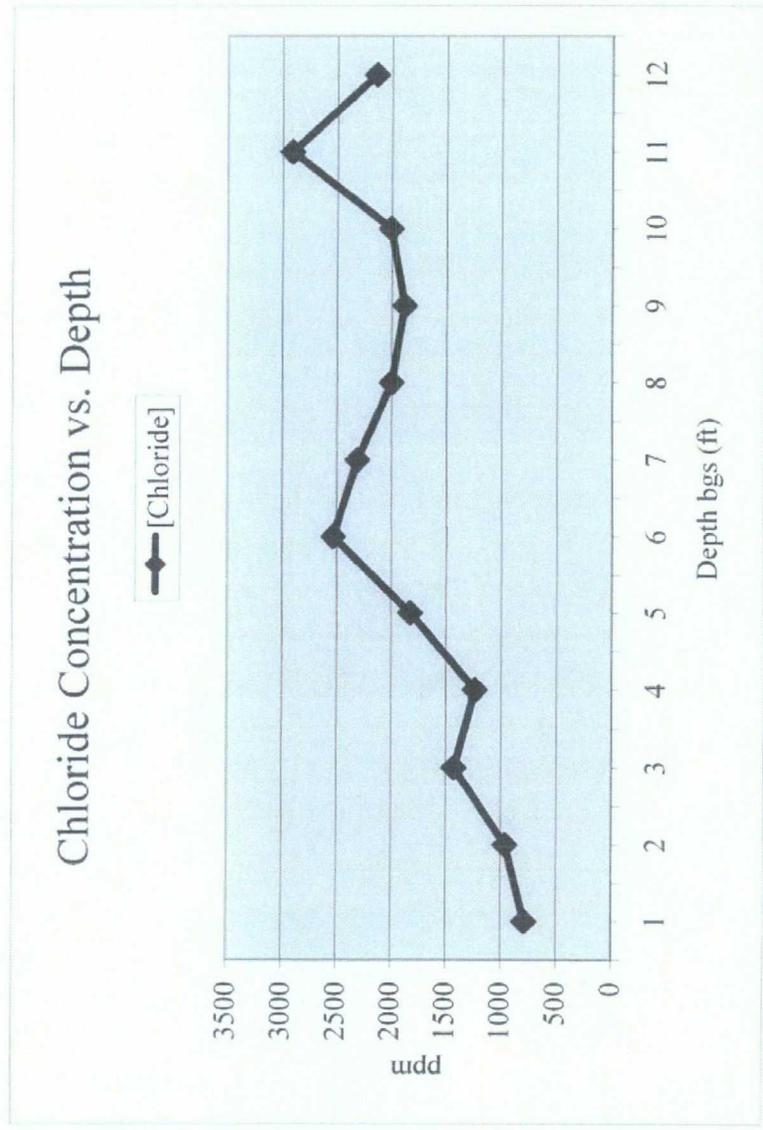


EME Amerada St. 'D' boot EOL

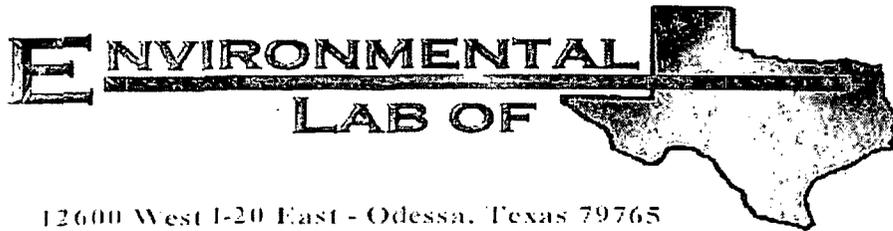
Unit 'C', Sec. 1, T20S, R36E

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



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 09:14

**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	250	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	250	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	250	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	

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

Project: EME Amerada St. D'Boat
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
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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

This material is intended only for the use of the individual (s) or entity to whom it is addressed and may contain information that is privileged and confidential.

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

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: _____

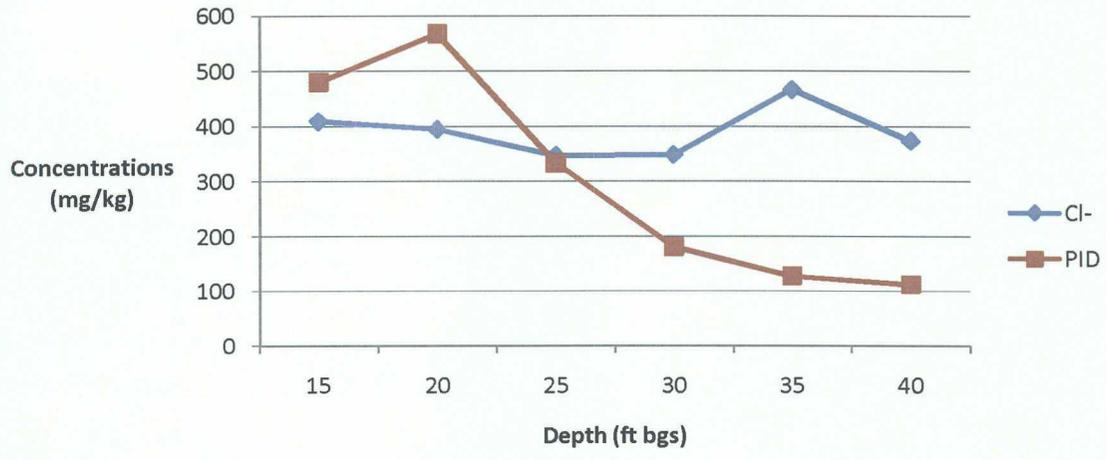
Corrective Action Taken:

Appendix A

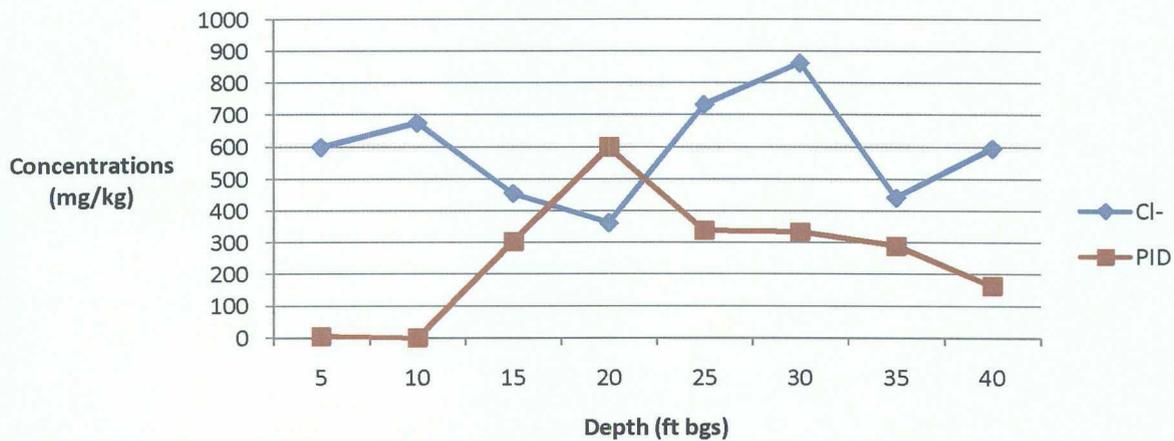
Soil bore installation per ICP

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

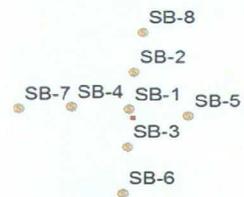
Chloride and PID concentrations versus depth



Chloride and PID concentration versus depth



Logger: Jordan Woodfin
Driller: Harrison & Cooper, Inc.
Drilling Method: Air rotary
Start Date: 12/7/2010
End Date: 12/7/2010

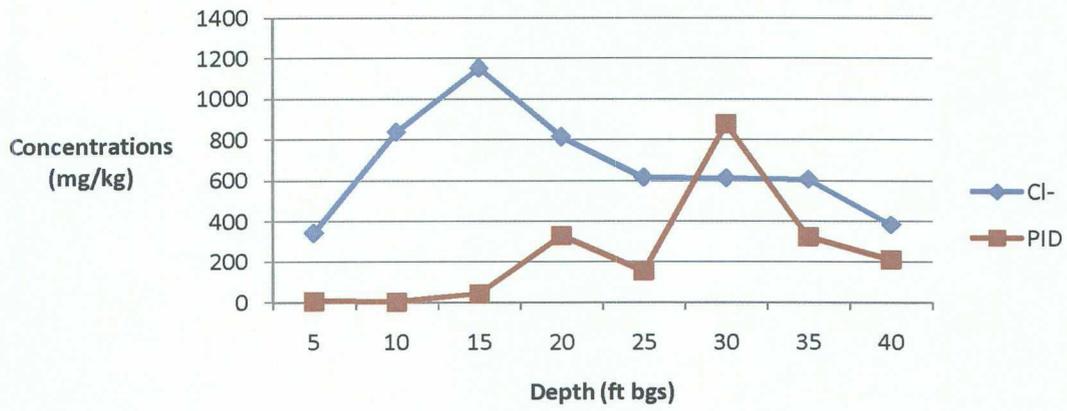


Project Name: EME C-1 EOL
Well ID: SB-3
Project Consultant: RECS
Location: UL/C sec. 1 T20S R36E
Lat: 32°36'23.31"N
Long: 103°18'38.255"W
County: LEA
State: NM

Comments: Located 8 ft south of the former junction box site.
DRAFTED BY: L. Weinheimer
 TD = 40 ft GW = 40 ft

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		Black silty sand (hydrocarbon odor)		
20 ft	813	DRO <10	329			
				Brownish yellow silty sand (hydrocarbon odor)		
25 ft	613		153			
				Brownish grey medium sand with small caliche fragments (hydrocarbon odor)		
30 ft	610	Cl-736	876			
	B <0.2 T = 0.595	GRO 139				
	E = 2.92 X = 7.68	DRO 1530				
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				

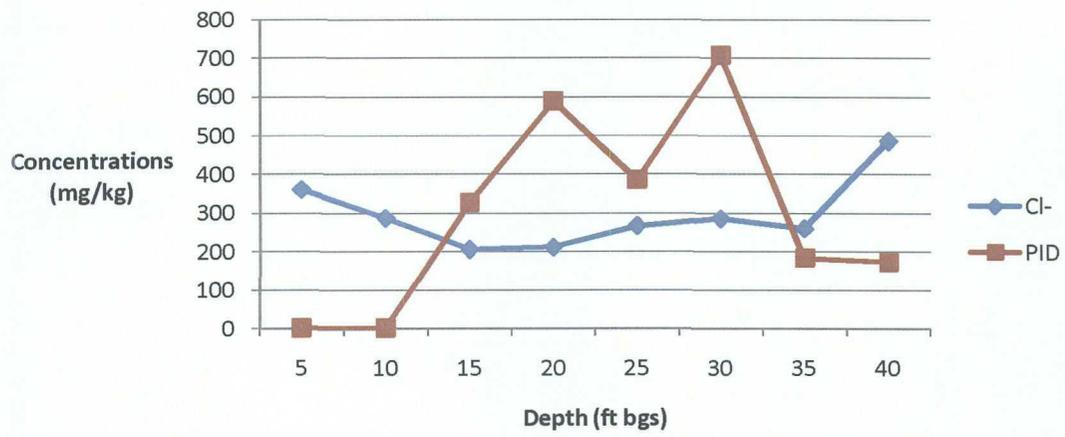
Chloride and PID concentrations versus depth



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



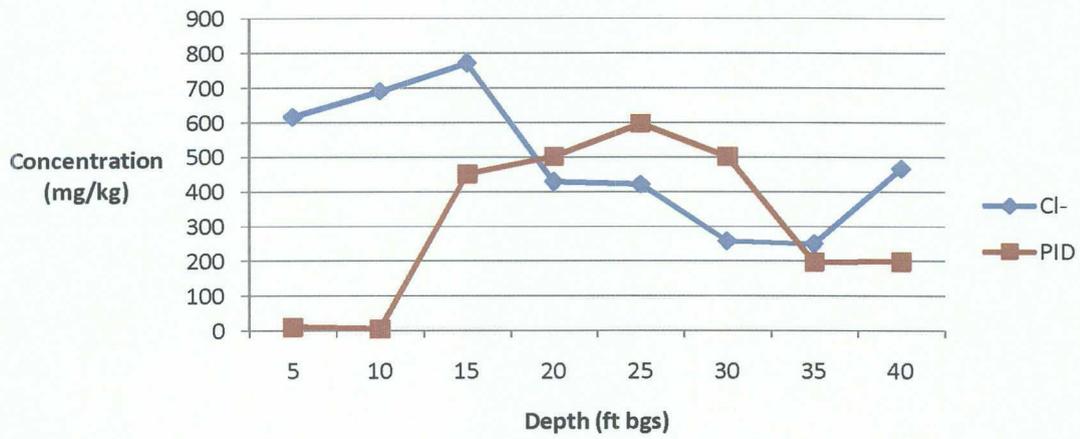
Project Name: EME C-1 EOL
Well ID: SB-5
Project Consultant: RECS
Location: UL/C sec. 1 T20S R36E
Lat: 32°36'23.382"N
Long: 103°18'38.135"W
County: LEA
State: NM

Comments: Located 9 ft east of the former junction box site.

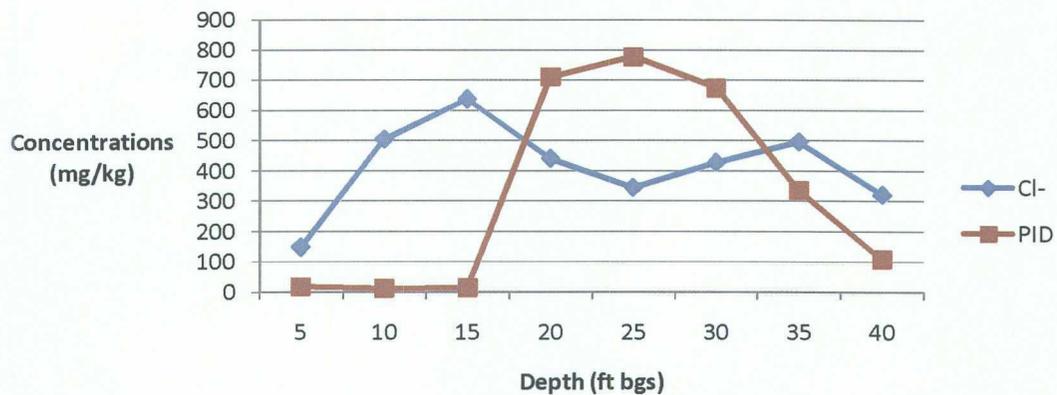
DRAFTED BY: L. Weinheimer
 TD = 40 ft GW = 40 ft

Depth (feet)	chloride field tests	LAB	PID	Description	Lithology	Well Construction
				Light brown very fine sand		
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)		bentonite seal
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			
				Gray silty sand (hydrocarbon odor)		
35 ft	249		197			
40 ft	465	CI-592	198			
	B <0.05 T = 0.099	GRO <10				
	E = 0.321 X = 0.929	DRO 268				

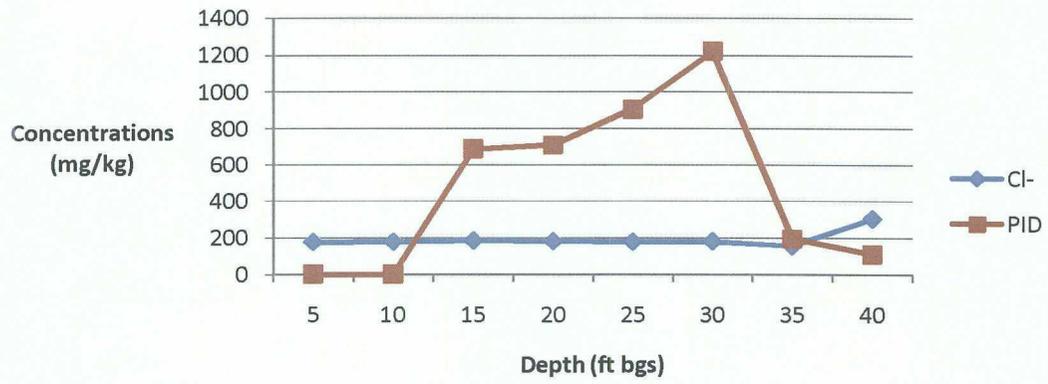
Chloride and PID concentrations versus depth



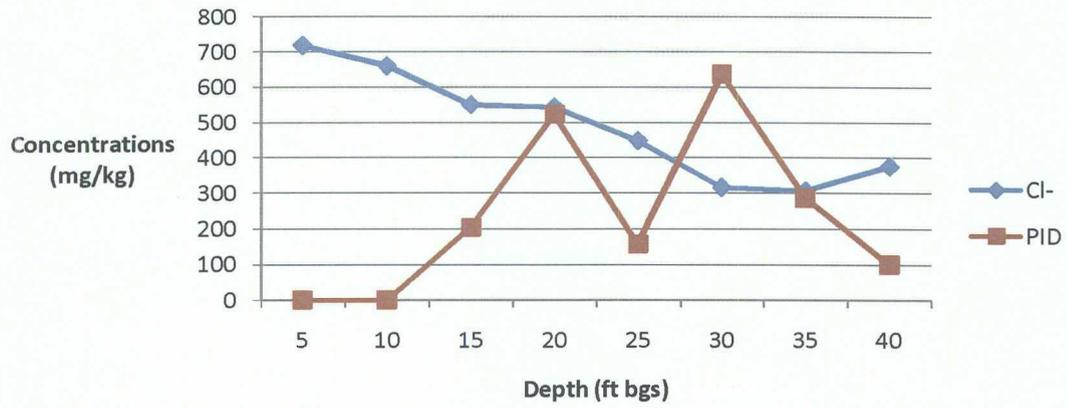
Chloride and PID concentrations versus depth



Chloride and PID concentrations versus depth



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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

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	Sampling Date:	12/07/2010
Reported:	12/13/2010	Sampling Type:	Soil
Project Name:	EME C-1 EOL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

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							S-04
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	Sampling Date:	12/07/2010
Reported:	12/13/2010	Sampling Type:	Soil
Project Name:	EME C-1 EOL	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

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, SM4500CI-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

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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

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Analytical Results For:

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 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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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							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	<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 (PII) 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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*=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 @ 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

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

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

Lab I.D.	Sample I.D.	(G) RAB OR (C)OMP	MATRIX			PRESERV		DATE	TIME	ANALYSIS REQUEST							
			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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12/7/10	01:45	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
2	SB # 1 @ 40'	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12/7/10	02:15	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
3	SB # 2 @ 20'	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12/7/10	02:30	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
4	SB # 2 @ 30'	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12/7/10	02:45	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
5	SB # 2 @ 40'	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12/7/10	03:00	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
6	SB # 3 @ 15'	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12/7/10	03:15	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
7	SB # 3 @ 30'	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12/7/10	03:30	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
8	SB # 3 @ 40'	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12/7/10	04:00	<input checked="" type="checkbox"/>	<input type="checkbox"/>						

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Relinquished By: *Jordan Woodfin* Date: 12/13/10 Time: 8:15
 Received By: *Jordan Woodfin* Date: 12/13/10 Time: 8:15
 Relinquished By: *Jordan Woodfin* Date: 12/13/10 Time: 8:15
 Received By: *Jordan Woodfin* Date: 12/13/10 Time: 8:15

Delivered By: (Circle One) UPS Bus Other: *#26*

Sample Condition: Cool Intact Yes No Checked By: *Jordan Woodfin* (Initials)

REMARKS: email results
 Hconder@riceswd.com; jwoodfin@riceswd.com;
 Lweinheimer@riceswd.com kiones@riceswd.com

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 (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	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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Celestine 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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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 @ 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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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 #6 @ 15' (H021479-06)

Chloride, SM4500CI-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, SM4500CI-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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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 #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 (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	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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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 #7 @ 30' (H021479-09)

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*	0.334	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 (PII) 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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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 #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 #015M		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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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 @ 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 (PII) 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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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 @ 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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

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

Lab I.D.	Sample I.D.	MATRIX			PRESERV.			DATE	TIME
		GROUNDWATER	WASTEWATER	SOIL	ACID/BASE	ICE / COOL	OTHER:		
1	SB # 4 @ 30'	✓			✓			12/8/10	08:00
2	SB # 4 @ 40'	✓			✓				08:30
3	SB # 5 @ 10'	✓			✓				09:00
4	SB # 5 @ 25'	✓			✓				09:15
5	SB # 5 @ 40'	✓			✓				09:30
6	SB # 6 @ 15'	✓			✓				10:00
7	SB # 6 @ 25'	✓			✓				10:30
8	SB # 6 @ 40'	✓			✓				10:45
9	SB # 7 @ 30'	✓			✓				11:00
10	SB # 7 @ 40'	✓			✓				11:30

FOR LAB USE ONLY

Company: **Attn:** **Address:** **City:** **State:** **Zip:** **Phone #:** **Fax #:**

Matrix: GROUNDWATER WASTEWATER SOIL SLUDGE OTHER:

Preserv: ACID/BASE ICE / COOL OTHER:

Analysis Request: Chlorides BTEX Complete Cations/Anions Texas TPH TPH 8015 M Extended Thru C40

Relinquished By: Jordan Woodfin **Received By:** [Signature]
Relinquished Date/Time: 12/9/10 8:30 **Received Date/Time:** 12/9/10 9:50
Delivered By: (Circle One) **Checked By:** [Signature]
Sampler - UPS - Bus - Other: UPS Bus Other

Remarks: email results
 Hconder@riceswd.com; jwoodfin@riceswd.com;
 Lweinheimer@riceswd.com kjonas@riceswd.com

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

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

BILL TO
ANALYSIS REQUEST

Lab I.D.	Sample I.D.	(GRAB OR COMP)	MATRIX			PRESERV			DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TPH 8015 M Extended Thru C40
			GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER	ACID/BASE								
H2-1479-11	SB # 8 @ 5'	1	<input checked="" type="checkbox"/>	12/8/10	01:00	<input checked="" type="checkbox"/>										
12	SB # 8 @ 30'	1	<input checked="" type="checkbox"/>		01:15	<input checked="" type="checkbox"/>										
13	SB # 8 @ 40'	1	<input checked="" type="checkbox"/>		01:30	<input checked="" type="checkbox"/>										

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Relinquished By: Jordan Woodfin
Relinquished Date: 12/19/10
Relinquished Time: 4:30
Received By: [Signature]
Received Date: 12/19/10
Received Time: 4:30
Delivered By: (Circle One)
Sampler - UPS Bus - Other:
Sample Condition: Cool Intact
Checked By: [Signature]
Remarks: email results
 Hconder@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