427 - 31R -

REPORTS

DATE:

2-18

Rice Environmental Consulting & Safety

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

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.

RECEIVED OCD

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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,

JC.W.

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



RECS

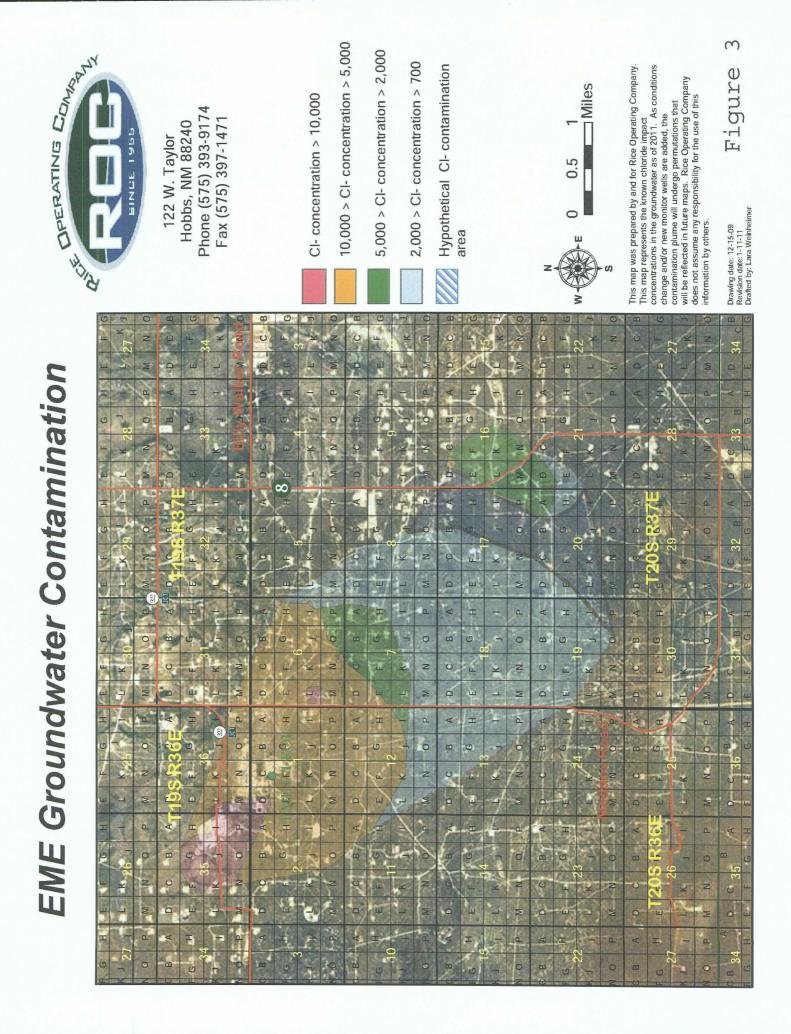
Legals: UL/C sec. 1 T20S R36E

Case #: 1R427-320

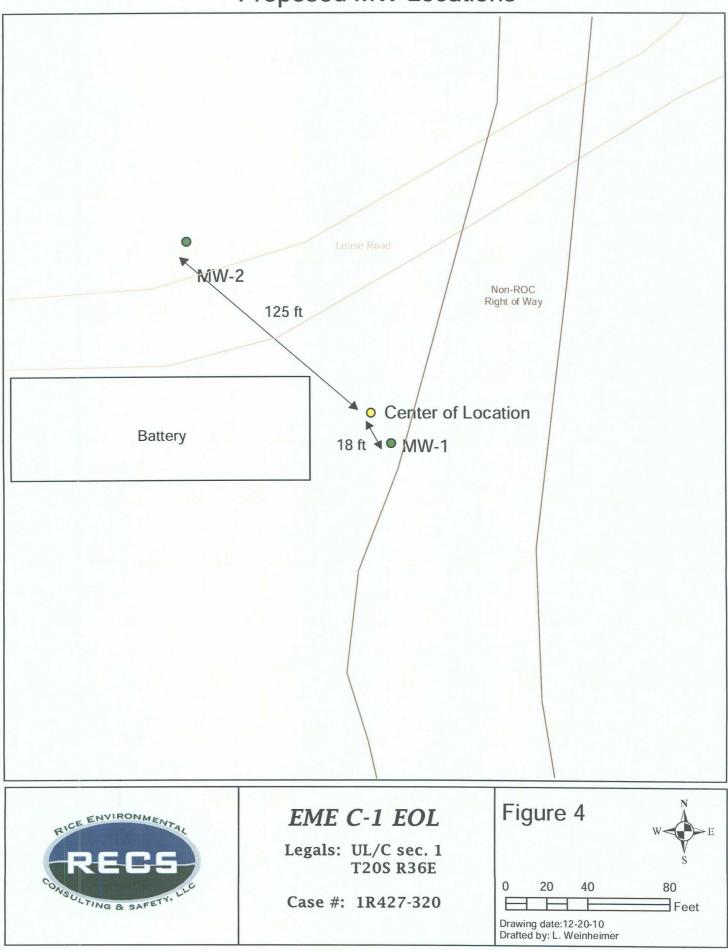
Figure 1 W S Miles 0 0.25 0.5 1 Drawing date:11-1-10 Drafted by: L. Weinheimer

Soil bore information

SB-		SB-5	
Depth CI- PID LAB CI- GRO	DRO B T E X ROAD		х
20 394 567 480 138 9 25 347 333	973 <0.05 0.368 1.95 6.01	10 690 4.3 1300 <10 <10 <0.05 <0.05 <0.05 <	:0.15
30 348 180		15 772 450 20 428 501	
35 466 127 40 373 111 464 <10 1	03 <0.05 0.053 <0.05 0.15	25 420 597 480 <10 384 <0.05 0.109 0.535 1	1.89
		30 257 501 35 249 197	
SB-		40 465 198 592 <10 268 <0.05 0.099 0.321 0.	.929
Depth CI- PID LAB CI- GRO D 5 600 4.8	ROBTEX	SB-6	
10 675 0.1 15 456 304		Depth CI- PID LAB CI- GRO DRO B T E 5 148 17.2	х
20 363 600 560 100 11	20 <0.05 0.207 1.05 3.71	10 503 11.5	
25 733 339 30 863 334 1230 34.5 74	30 <0.05 0.125 0.436 1.23	15 636 12.8 656 <10 43.2 20 440 709	
35 443 290 40 596 163 880 65 14	160 <0.05 0.135 0.445 1.3	25 344 777 416 16.8 427 30 427 674	
40 596 163 880 65 14	00 (0.03 0.133 0.443 1.3	35 495 336	
		40 320 107 480 <10 12.4 <0.05 <0.05 <0.05	5 0.15
		/	
		/	
		/	
	SB-8		
	Ś	/	
	SB-2		
	S	Non-ROC pipeline ROW	
Battery	SB-7SB-4 SB-1 SB	-5 /	
	S S		
	SB-3 ©		
	O		/
	SB-6	/	
	Ś	Depth CI- PID CI- LAB GRO DRO B T E 5 177 0	x /
Depth CI- PID CI-LAB GRO D	PROBTEX	10 179 0	
5 340 5 10 837 1.2		15 184 687 20 181 710	
15 1151 40.3 1800 <10 <1 20 813 329	0	25 178 905 30 180 1219 64 64.1 455 <0.05 0.334 1.36 3.	1 1
25 613 153		35 156 195	.22
30 610 876 736 139 15 35 604 323	30 <0.2 0.595 2.92 7.68	40 304 110 336 <10 105 <0.05 <0.05 <0.05 <0	0.15
40 381 209 624 <10 2	66 <0.05 0.1 0.322 0.924	SB-8	
SB-4	ROВТЕХ	Depth CI-PID CI-LAB GRODROB T E	x
Depth CI- PID CI-LAB GRO D 5 361 1.2	ROBTEX	5 717 0 800 <10 <10 10 660 0	
10 287 1.2 15 206 327	/	15 550 204 20 543 523	
20 212 589	/	25 449 157	
25 267 385 30 286 707 352 <10 45	59 <0.05 0.208 1.12 2.7	30 317 637 384 97.4 598 <0.05 0.24 1.29 35 307 287	3.1
35 260 183 40 487 173 544 <10 28	30 <0.05 <0.05 0.075 0.288	40 376 100 512 <10 174 <0.05 0.163 0.41	12 0.9
		FOI Figure 2	
RICE ENVIRONMENT	EME C-1	EOL ''guie 2 A	
E		W A	ÞЕ
DEPE	Legals: UL/C	() () () () () () () () () ()	
		S R36E	
CONSULTING & SAFETY,	Case #: 1R4	27-320	
''NG & SAFE'			et
		Drawing date:12-20-10	
		Drafted by: L. Weinheimer	



Proposed MW Locations



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

				<u>BOX LOCAT</u>	<u>10N</u>					
SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DI	MENSION	S - FEET	
EME	Amerada St.	с	1	205	36E	1	Length	Width	Depth	
EIVIE	'D' boot EOL	C C		203	305	Lea	no	box-elimin	atod	
LAND TYPE: B Depth to Groun			_FEE LAND			SSMENT R	OTHER	CORE:	20	
Date Started	6/23/20	05	_ Date Co	mpleted	7/14/2005		D Witness		no	
Soil Excavated	44	CUDIC Y	ards Exc	cavation Len	gth <u>10</u>	Width	10	Depth	12	fee
Soil Disposed	0	cubic ya	ards Of	fsite Facility	n	/a	Location		n/a	

7/6/2005

Sample Date

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.

FINAL ANALYTICAL RESULTS:

CHLORIDE FIELD TESTS

12 ft

Sample Depth

					LOCATION	DEPTH (R)	ppm
Sample	PID	GRO	DRO	Chloride		3	1634
Location	ppm	mg/kg	mg/kg	mg/kg] [4	1554
4-WALL COMP.	54.8	251	784	1690		5	1447
BOTTOM COMP.	28.1	821	2010	1960		6	1159
REMED. BACKFILL	20.7	230	2260	1610	delineation trench at	7	1072
					junction	8	734
					,	9	1621
General Description of	Remedial Actic	n: This End	1-Of-Line (EOL) j	unction box		10	2430
contained a boot. The jun	tion was eliminal	ed as part of the p	ipeline replacem	ent program. The		1.1	2999
junction and box was remo	ved and the local		12	2979			
was used to conduct deline	eation trenches al		1	786			
at regular intervals and we	e field tested for	chloride and scree	ned using a PID.	Chloride	[2:	962
concentrations did not rele	nt with depth thra		3	1425			
exhibited signs of hydrocar	bon impact and la	ab analysis on the	final excavation s	samples confirmed		4	1238
that NMOCD TPH guidelin	es were not met.	The excavated so	il was blended or	n site and then		5.	1825
backfilled into the excavation	n. The disturbed	l surface was seed	led with a blend o	of native vegetation	5ft SOUTH	6	2532
An identification plate has i	peen placed on th	ne surface of the fo	ormer junction site	e to mark the	of junction	7	2313
site for future environmenta	I considerations.	NMOCD has bee	n notified of pote	ntial groundwater		8	2001
impact at this site.						9.	1882
						10	2005
						11	2909
						12	2138
ADDITIO	NAL EVALU	JATION IS H	IGH PRIOR	ΙΤΥ	4-wall comp.	n/a	1619
					bottom comp.	12	1785
enclosures: chloride graph	s, photos, lab res	ults, PID field scre	enings		backfill comp.	n/a	1082

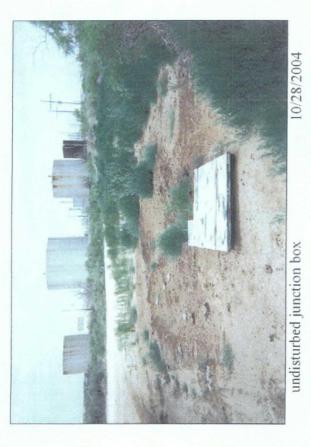
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SITE SUPERVISOR	Hemandez SIGNATURE	not evailable	COMPAN1RICE Operating Company
REPORT ASSEMBLED BY	Kristin Farris Pope	SIGNATURE	Fairin Jamis Pape
DATE	12/8/2005	TITLE	Project Scientist

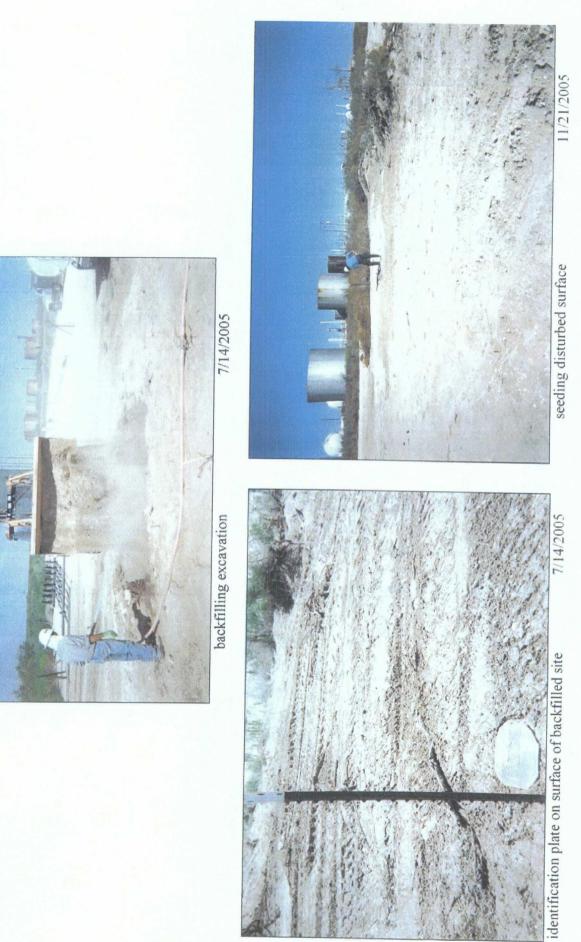
* This site is a "DISCLOSURE." It will be placed on a prioritized list of similar sites for further consideration.

EME Amerada St. 'D' boot EOL

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









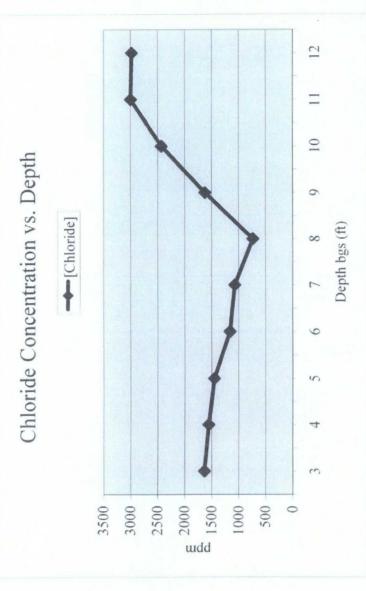
EME Amerada St. 'D' boot EOL

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

Vertical Delineation at Junction

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

Groundwater = 40 ft



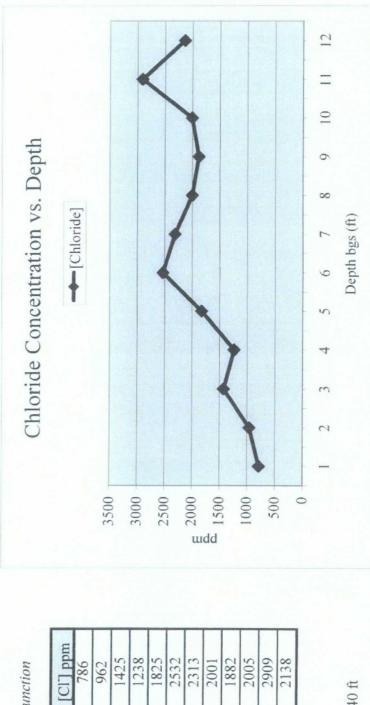
EME Amerada St. 'D' boot EOL

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

5 ft SOUTH of junction

786

Depth bgs (ft)



962 1425 1238 1238 1825 2532 2532 2531 2001 1882

4 5 9 2005 2909

10

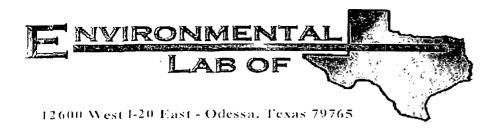
8 6

-

2138

12 Π

Groundwater = 40 ft





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.	Project: EME Amerada St. D Boot	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Roy Rascon	07/11/05 09:14

ANALYTICAL REPORT FOR SAMPLES

Sample 1D	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	07/05/05 17:20
4-Wall Compsite	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 Ŝt. D Boot Project Number: None Given Project Manager: Roy Rascon						Repor	Fax: (505) 397-1471 Reported: 07/11/05-09:14	
		Or	ganics b	y GC					
		Environr	nental L	ab of I	fexas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Bottom @ 12' (5G07002-01) Soil									
Gasofine 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	•1	**		11	1.	\$r	
Total Hydrocarbon C6-C35	2830	10.0	-11	*3		h	**	и	
Surrogate: 1-Chlorooctane		120%	70-1	30	1 1	•/			
Surrogate: 1-Chloroociadecane		106 %	70-1	30	"	"	μ	и	
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	"	19		*	ч		
Total Hydrocarbon C6-C35	2490	10.0	57		"	U		**	
Surrogate: 1-Chlorooctane	-	103 %	70-1	3()		н	19	**	
Surrogate: 1-Chlorooctadecane		122 %	70-1	30	n		"	11	
4-Wall Compsite (5G07002-03) Soil									
Gasoline Range Organics C6-C12	251	10,0	ıng/kg dry	1	EG50709	07/07/05	07/08/05	EPA.8015M	
Diesel Range Organics >C12-C35	784	10.0	н	++	"	u.	n	••	
Total Hydrocarbon C6-C35	1040	10,0	11 	"	41		'n	**	
Surrogate: 1-Chlorooctane		96.8 %	70-1	30	.11	"		"	
Surrogate: 1-Chlorooctadecane		105 %	70-1	30	"	"	"	÷44	

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.

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

Annlyie:	Result	Reporting: {Limit	Units	Ĵ.Ďilution,	Bàtch	Prepared	Analyzed,	Meihod	Noie
Bottom @ 12' (5C07002-01):Soil					<pre>% ••• ••••• * • • * • * • * • * • * • * •</pre>			• . • • • •	
Chloride	1960	.25.0	'mg/kg'	50	EG51104	07/08/05	07/08/05	EPA7300.0	
% Moisture	19.0	0,1	*	el X	ÊQS080Û	07/07/05	07/08/05;-	%jcalculation	
Remedinte Bäckfill (5G07002-02) Soil	!				_ ====				
Chloride	1610	12,5:0`~	mg/kg	:50	.EÇ51104	07/08/05	407/08/05	EPA 300.0	
% Moisture	18.5	0și	%	Ĵ.:	ĒĢ5080];	07/07/05	07/08/05	% calculation	
4-Wall Compsite (5G07002-03) Soil.		<u>.</u>							<u> </u>
Chloride	.1690	25,0	'ımg/kg	50	EG51104	107/08/05	07/08/05	EPA 300.0	-
% Moisture	11.0	1 0.1	%	Ì,	EG50801	07/07/05	07/08/05	%cálculation	

Environmental Lab of Texas

The results in this report apply to the samples phalyzed in accordance with the samples, received in the laboratory. This analytical report must be reproduced in its centrety. with writien approval of Environmental Labor Texas. Page 3:01:6

Rice Operating Co.	Project: 1	EME Amerada St. D'Boot	Fax: (505) 397-1471
122 W. Taylor	Project Number: 1	None Given	Reported:
Hobbs NM, 88240	Project Manager: 1	Roy Rascon	07/11/05 09: F4

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limît	Notes
Batch EG50709 - Solvent Extraction									Linut	ivoics
									<u> </u>	
Blank (EG50709-BLK1)	· · · · · · -			Prepared	& Analyze	:d: 07/07/0	05			
Gasoline Range Organics C6-C12	ND		mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0								
Potal Hydrocarbon C6-C35	ND	10.0		·						
Surrogate; 1-Chlorooctane	39.4		mg/kg	50,0		78.8	70-130			
Surrogute: 1-Chlorooctadecane	38.9		*	50.0		77.8	70-130			
LCS (EG50709-BS1)				Prepared	& Ańałyze	:d: 07/07/0)5			
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			
Fotal Hydrocarbon C6-C35	857	10.0	**	1000		85.7	75-125			
Surragate: 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			
Jasofine Range Organics C6-C12	497		mg/kg	500		99,4	80-120			.
Diesel Range Organics >C12-C35	556			500		111	80-120			
Fotal Hydrocarbon C6-C35	1050		n	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)	So	urce: 5G070	01-01	Prepared:	07/07/05	Analyzed	: 07/08/05			
Gasoline Range Organics C6-C12	557		mg/kg dry	570	ND	97 7	75-125			
Diesel Range Organics >C12-C35	648	10.0		570	ND	114	75-125			
Fotal Hydrocarbon C6-C35	1210	10.0	•	1140	ND	106	75-125			
Surrogate: I-Chlorooctane	64.2	n nista un diffica Stationale	mg/kg	50.0		128	70-130	· · · · · ·	·· -	- •
Surrogate: 1-Chlorooctadecane	58.6		"	50.0		117	70-130			
Matrix Spike Dup (EG50709-MSD1)	So	urce: 5G070	01-01	Prepared:	07/07/05	Analyzed	: 07/08/05			
Gasoline Range Organics C6-C12	558	- 3244	mg/kg dry	570	ND	97.9	75-125	0.179	20	
Diesel Range Organics >C12-C35	662	10.0	n	570	ND	116	75-125	2.14	20 20	
'otal Hydrocarbon C6-C35	1220	10.0	n	1140	ND	107	75-125	0,823	20	
Surrogate: 1-Chlorooctane	64.3		mg/kg	50,0	•	129	70-130			
Surragate: 1-Chlorooctadecane	5.9,2		"	50.0		118	70-130			

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12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Rice Operating Co.	Project: EME Amerida St. D Boot	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Roy Rascon	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) % Moisture	ND	0.1	%	Prepared:	07/07/05	Analyzed	: 07/08/05	-	-	
Duplicate (EG50801-DUP1) % Moisture	<u>Sou</u> 14.2	rce: 5G0700 0.1	1 <u>-01</u> %	Prepared:	07/07/05 12.3	Analyzed	: 07/08/05	14.3	2Ô	
Batch EG51104 - Water Extraction Blank (EG51104-BLK1)				Prepared	& Analyz	ed: 07/08/0)5			· · · · · · · · · · · · · · · · · · ·
Chloride	ND	0.500	mg/kg			• •••	. <u>.</u>		•	
LCS (EC51104-BS1) Chloride	10.7		mg/L	Prepared 10.0	& Analyz	ed: 07/08/0 107)5 80-120	-		
Calibration Check (EG51104-CCV1) Chloride	10.9	,	mg/L	Prepared 1	& Analyza	ed: 07/08/0 109)5 80-120			
Duplicate (EG51104-DUP1) Chloride	85.2	rce: 5G0700 5.00	1-01 mg/kg	Prepared	& Analyze 85.4	ed: 07/08/0)5	0.234	20	

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 entirely, with written approval of Environmental Lab of Texas.

Rice Or	erating Co.	Project: : ÉME: Amérada St. D'Bool	Fax: (505) 397-1471
122 W.		Project Number, None Given	Reparted:
Hobbs 1	NM; 88240	Project Manager: Roy Rascon	07/1:1/05-095124
		and the second and the	
		Notes: and Definitions	1997 - Andrew Contraction (* 1997) 1997 - Contraction (* 1997)
DET	Analyte DETECTED:	Notes and Definitions	11

'NR Not Reported.

- Sample results reported on a dry weight basis dry
- Relative Percent Difference RPD
- Laboratory Control Spike LCS
- MS-Matrix Spike:
- Duplicate Dup'

Report Approved By Date 7-11-05

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

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

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If you have received this material in error, please notify us immediately at 432-563 800!

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Page 6 of 6

REQUEST	st & But									alubario2-eng) TAT HSL TAT bisbris								CO N CO N OF	.5/		
CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST	R.J Barrieda						Analyze For:		-	Addas: As Ag Ba Cd Cr Pb Hg (olaties bemivotaties cr CEC, SAR, ESP cr calionstrates cr calionstrations, TDS								Sample Containers Intact? Temperature Upon Receipt: Laboratory Comments:	Reco.C°C	۲۵٬۶۱۱ می محمد ک	
HAIN OF CUSTODY RE	Project Name: <u>Erver</u>	Project #:	Project Loc:	 ;# Od			TCI B	TOTAL	Matrix	שא 2012 ער פעט 2013 ער 2013 ע		XXX	X X X			•		1	Time 1		
ŭ			-		171				Preservative N	nach Nhar (Spedity) Nhar (Spedity) Valei Nach	A C C C C C C C C C C C C C C C C C C C								Date	1/0/1	7.06-02
					Fax No: 505-397-147				Ē	Гіте Sampled 40. of Containers те гсі	<u>-</u> - <u>-</u>	-	ح [i]X						ſ		240
lnc.					u.					bəlqms2 əlsQ	is L		- 9:/						Received by:	Received by ELDT:	Kole dE
Environmental Lab of Texas, Inc. 12600 West 1-20 East Phone: 915-563-1713 Odessa, Texas 79763 Fax: 915-563-1713		ng Company)L	38240	4	Marca de	ł)			CODE	7.11	L						Date Time	- ヒ・Cシ Date Time	
ental Lab	Project Manager: Roy Rascon	company Name Rice Operating Company	Company Address: 122 W Taylor	clty/state/Zip: Hobbs, NM 88240	Telephone No: 505-393-9174	ture: $Z_{F_1F_2}$					Porthern @ 12	Å ,	41-wall Countesit	,					, ,		1
Environmo 12600 West I-20 East Odessa, Texas 79763	Project Man	Company A	Company Add	Clty/State	Telephone	Sampler Signature:				2001005			x 20					Special Instructions:	ž N	/ /r (1 / / 1/2	CO har

,

Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client:	frice	Operation	Co.

Date/Time: 07-06-05 @ 1720

Order #: 5007002

Initials: JMM

Sample Receipt Checklist

and the second	
(Yes) No	0.0 C
(Yes) No	
(es) No	Not present
(res No	Not present
(es) No	
(es) No	
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(Yeš) No	
(es) No	
Yes) No I	
(Yes) No	
Nes No	
I Tas I No I	
(Tes) No	
Vas No I	
Yes No	
(Yes) No	
I (Yes) No	Not Apolicable
	(?es) No (?es) No

Other observations:

Contact Person: Regarding:	Variance Documentation: Date/Time:	_Contacted by:
Corrective Action Taken:		
······································		

	10	X /0	X	12	[]	excavation
		Rice Ope HOBES, E: (505) 393-917 VOC FIELD	NEV 4 FA	V MEXICO X: (505) 39	88240 97-1471	-
	MODEL NO: PGM 76IS CALIBRATION GAS GAS COMPOSITION: ISC LOT NO: <u>ng - 2747</u> EXP. DATE: <u>\$-7-¢6</u> METER READING ACCURACY:					SERIAL NO: 104412 100 PPM BALANCE FILL DATE: <u>2-1-65</u> ACCURACY: <u>2-76</u>
	SYSTEM	JUNCION UN	ΠÖΤ	SEC	CTION	TOWNSHIP RANGE
All composite somples	EME AMERANA	st O'But C		1		265 36E
)	SAMPLE	PID RESULT	 -	54	MPLE	PIDRESULT
	Bothozy Constrat @12-8					
5'	North would	46.9	,		······································	
5'		11.4	İ			
5'	East wall	252				
5	blest well	20.8				
	Panacelecte Bet 7:11					
نت است.	- yo will I am posit	54.8-				
				<u></u>		

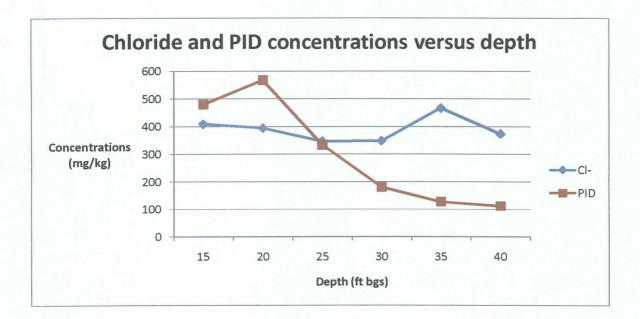
I certify that I have calibrated the above instrument in accordance to the manufacture operation manual.

Signature Arr. Missandr Date 7.6.05

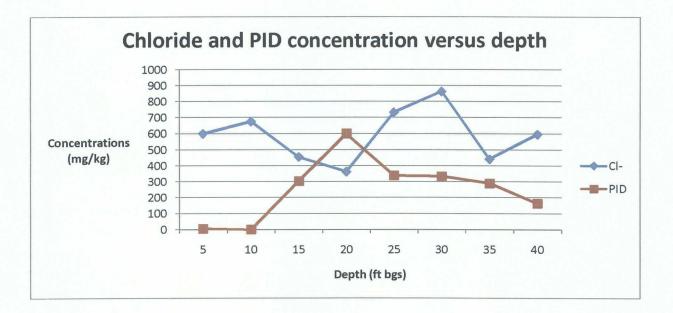
Appendix A Soil bore installation per ICP

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

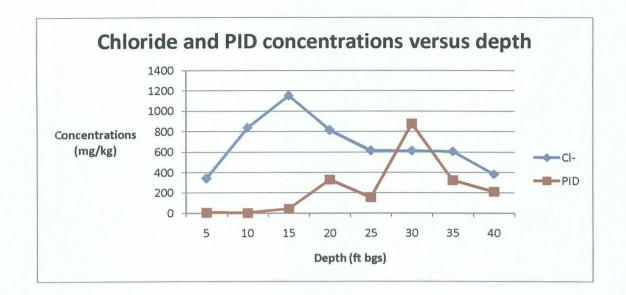
Logger: Driller: Drilling M Start Date End Date: Commen	ethod: : nts: Locat	DRAF	per, Inc. y 0 0 ource o	SB-8 SB-2 SB-7 SB-4 SB-1 SB-5 SB-3 SB-6 f the former junction box site.	Project Name: EME C-1 EC Project Consulta Location: UL/C s Lat: 32°36'23.399	Int: RECS Sec. 1 T20S R36E I''N County: LEA
Depth (feet)	TD = chlorid field tes		PID	GW = 40 ft Description	Long: 103°18'38	.252"W State: NM Well Construction
	409 394 5 T = 0.366 95 X = 6.01 347	DRO	479 567 333	Black silty sand with small caliche fragments (hydrocarbon odor)		
30 ft 35 ft	348		180	Gray silty sand with small caliche fragments (hydrocarbon odor)		bentonite seal
	373 5 T = 0.05 05 X <0.15	DRO	111	Red coarse sand with gravel mixture (hydrocarbon odor)		



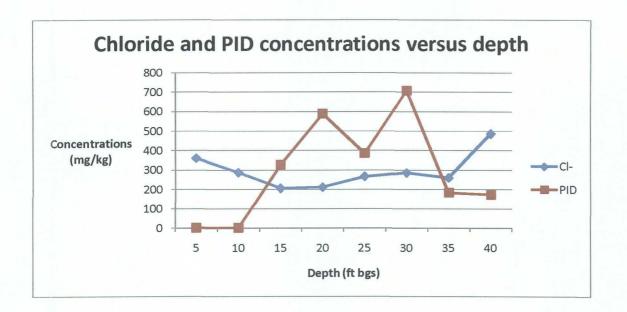
Logger: Driller:			rdan Woo	per, Inc.	SB-2 SB-7 SB-4 SB-1 SB-5		SONEULTING	ECS				
Drilling N			Air rotan		SB-3	Pro	oject Name:		Vell ID:			
Start Dat			12/7/201	~	SB-6		EME C-1 E					
End Date			12/7/201				oject Consulta		: RECS 2. 1 T20S R36E			
Comme	ents: Loc	ated	5 IL NOIL	n or the	former junction box site.			sec. 1 120	S R36E			
	TD	= 40		TED BY:	L. Weinheimer GW = 40 ft		t: 32°36'23.485 ng: 103°18'38		County: LEA State: NM			
Depth (feet)	chlori field te		LAB	PID	Description		Lithology	Well C	Construction			
					Light brown silty sand							
5 ft	600			4.8								
					Yellowish tan silty sand with caliche fragments							
10 ft	675			0.1	nagments							
15 ft	456			304								
					Light brown silty sand with caliche fragments (hydrocarbon odor)							
20 ft	363		CI- 560 GRO	600								
	05 T = 0.2		100 DRO	-					bentontie			
	.05 X = 3.		1120						seal			
25 ft	733			339								
			CI-									
30 ft	863		1230 GRO	334								
B <0.0	T = 0.1 436 X = 1		34.5 DRO 730									
35 ft	443			290								
					Gray coarse sand and silt with caliche fragments (hydrocarbon							
40 ft	596		CI- 880	163	odor)							
B <0.0	05 T = 0.1	135	GRO 65.0									
E = 0.4	445 X = 1	.30	DRO 1460									



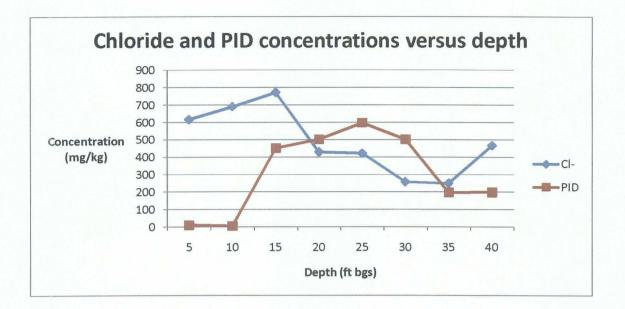
Logger: Driller:		Jordar Iarrison 8	& Coop	ber, Inc.	SB-8 SB-2 SB-7 SB-4 SB-1 SB-5		R	ECS			
Drilling N	lethod:	Air	rotary	,	SB-3	Pro	ject Name:	V	Vell ID:		
Start Date	e:	12/	7/2010	D	SB-6		EME C-1 E		SB-3		
End Date			7/2010		©	Pro	ject Consulta	Int: RECS	ECS		
Comme	ents: Loca	ted 8 ft	sout	h of the	e former junction box site.	Lo	cation: UL/C	sec. 1 T20	S R36E		
1.11				ED BY	L. Weinheimer		: 32°36'23.31"	NI			
	TD	= 40 ft	JNAF		GW = 40 ft		ng: 103°18'38		County: LEA State: NM		
	10=	= 40 11			GW = 40 It		ig: 103 18 36	.205 VV	State. INIVI		
Depth	chlorid		AB	PID	Description		Lithology	Well C	Construction		
(feet)	field tes	sts -									
									1)		
					Brown very fine sand						
				_							
5 ft	340	_		5							
	1.1								1 - 1 - 1 - 1 - 1		
					Brown very fine silty sand						
10 ft	837			1.2							
2					Light brown silty sand with small		and the second second				
					caliche fragments (hydrocarbon						
		(CI-		odor)						
15 ft	1,151		800	40.3	,						
			RO								
			RO								
			<10		Black silty sand (hydrocarbon odor)						
20 ft	813			329							
2011	015			525					1000		
		_			Brownish yellow silty sand				bentonite		
					(hydrocarbon odor)		and the second sec		seal		
	0.1.0			450							
25 ft	613			153							
	· · · -								1.000		
		(CI-								
30 ft	610		736	876							
P.O.	0 T 0 F0		aRO 139	-							
B <0.	2 T = 0.59	-	RO		Brownish grey medium sand with						
E = 2.	.92 X = 7.6		530		small caliche fragments (hydrocarbon odor)						
35 ft	604			323	(nyarocarbon odor)						
0011	004			020							
			CI-								
40 ft	381		624	209							
B <0.	05 T = 0.		RO <10								
5 10.	00 1 - 0.	D	RO		2						
E = 0.3	322 X =0.9	24 2	266						D		



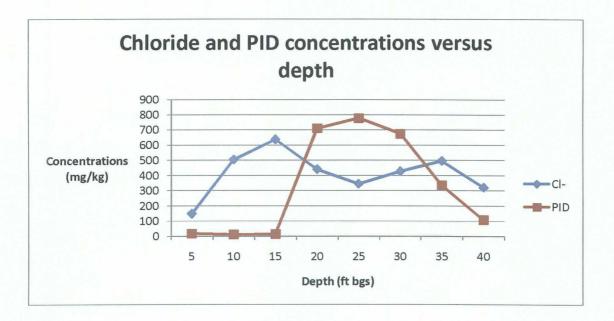
Logger: Driller: Drilling M Start Dat			ordan Woo on & Coop Air rotan 12/8/201	oer, Inc. /	SB-8 SB-2 SB-7 SB-4 SB-1 SB-5 SB-3	Pro	R		Vell ID: SB-4			
End Date			12/8/201		SB-6 ®	Pro	oject Consulta		RECS			
Comme	ents: Loc	ated '	10 ft we	st of the	e former junction box site.	Lo	cation: UL/C	sec. 1 T20	S R36E			
	TD	= 40		TED BY:	L. Weinheimer $GW = 40 \text{ ft}$		t: 32°36'23.404 ng: 103°18'38		County: LEA State: NM			
Depth (feet)	chlori field te		LAB	PID	Description		Lithology	Well C	Construction			
					Light brown very fine sand							
5 ft	361			1.2								
					Tannish to yellow silty sand							
10 ft	287	,		1.2	rannish to yellow sitty sand							
		-			Gray fine sand with small caliche							
15 ft	206	;		327	fragments (hydrocarbon odor)							
					Light black silty sand with small caliche fragments (hydrocarbon							
20 ft	212	2		589	odor)							
									seal			
25 ft	267	,		385								
					Light brown very fine silty sand (hydrocarbon odor)							
30 ft	286	;	CI- 352	707								
B <0.0	05 T = 0.2	208	GRO <10									
E = 1	.12 X = 2	2.7	DRO 459		Gray silt with some very fine sand (hydrocarbon odor)							
35 ft	260)		183								
					Light brown very fine silty sand (hydrocarbon odor)							
40 ft	487	,	CI- 544 GRO	173								
<mark>B <</mark> 0	0.05 T <0.	05	<10 DRO									
E = 0.0	75 X = 0	.288	280									



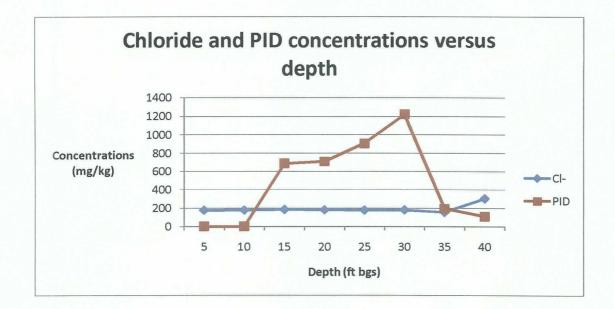
Logger: Driller: Drilling M Start Date End Date	e: :	Harriso	rdan Woo on & Coop Air rotan 12/8/201 12/8/201	per, Inc. V 0 0	SB-8 SB-2 SB-7 SB-4 SB-1 SB-5 SB-3 SB-6 ormer junction box site.	Project Name: Well ID: EME C-1 EOL SB-5 Project Consultant: RECS Location: UL/C sec. 1 T20S R36E					
Comme		= 40 f	DRAF		L. Weinheimer GW = 40 ft	Lat	:: 32°36'23.382 ng: 103°18'38	2"N	County: LEA State: NM		
Depth (feet)	chlori field te		LAB	PID	Description		Lithology	Well C	onstruction		
				10	Light brown very fine sand						
5 ft	615		CI-	10	Tan silty sand with large caliche fragments						
10 ft B <0 E <0.)5	1300 GRO <10 DRO <10	4.3	Tan silty sand with small caliche fragments (hydrocarbon odor)						
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				> bentonite		
25 ft	420		CI- 480 GRO	597	fragments (hydrocarbon odor)				seal		
	05 T = 0.1		<10 DRO 384		Light brown to grey sitly sand with small caliche fragments						
30 ft	257			501							
35 ft	249			197							
40 ft	465		CI- 592 GRO	198	Gray silty sand (hydrocarbon odor)						
B <0.0	05 $T = 0.0$ 321 $X = 0.0$		<10 DRO 268								



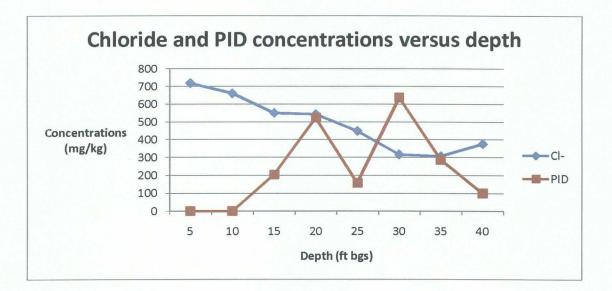
Logger: Driller:		Jordan Woodfin Harrison & Cooper, Inc.			SB-8 SB-2 SB-7 SB-4 SB-1 SB-5	RECS CONSULTING & SAFETY. LLC			
Drilling Method:			Air rotar	1	SB-3	Project Name: Well ID:		Well ID:	
Start Date:		12/8/2010			SB-6 EME C-1 EC Project Consultat		DL SB-6		
End Date:		12/8/2010					oject Consulta	ant: RECS	
Comme	ents: Loca	ated 1	17 ft sou	uth of th	ne former junction box site.	Lo	cation: UL/C s	sec. 1 T20	S R36E
			DDAF		L. Weinheimer		: 32°36'23.208	UN I	
TD = 40 ft					GW = 40 ft		Long: 103°18'38.263"W		County: LEA State: NM
		The Property of	L		GW = 40 It		ng: 103 18 38.	.263 W	State. NW
Depth (feet)	chlori field te		LAB	PID	Description		Lithology	Well (Construction
			-	-			13、17日1月		
					Tan very fine sand				
				170					
5 ft	148		_	17.2					
					-				
					Tan silty sand with a lot of medium sized caliche fragments				
	500				sized calicité fragments				
10 ft	503			11.5					
					Light brown very fine silty sand				
			CI-						
15 ft	636		656	12.8					
			GRO <10						
		-	DRO		Light brown very fine silty sand				
			43.2		(hydrocarbon odor)				
20 ft	440			709					
2011	++0			100					
					Light brown very fine silty sand with				> bentonite
			1.1		small caliche fragments				seal
			CI-	_	(hydrocarbon odor)				
25 ft	344		416 GRO	777					
		-	16.8						
			DRO 427		Tan silty sand with small caliche				
			721		fragments (hydrocarbon odor)				
30 ft	427	_	-	674					
					Gray medium sand with small				
					caliche fragments (hydrocarbon				
					odor)				
35 ft	495	1.1	-	336					
					Red silty sand (moist) (hydrocarbon				
			CI-		odor)		a la serie de la		
40 ft	320		480	107					
			GRO						
B <0.	.05 T <0.0)5	<10 DRO	-					
E < 0.	.05 X < 0.	15	12.4						



Logger: Driller: Drilling N	lothod	1	rdan Woo on & Coop	oer, Inc.	SB-8 SB-2 SB-7 SB-4 SB-1 SB-5	Dre	CONSULTIN	ECS					
Start Date			Air rotary		SB-3	Pro	pject Name: EME C-1 E0		Vell ID:				
End Date			12/8/201	-	SB-6	Pro	pject Consulta		SB-7 RECS				
		ated 1	9 ft wes	st of the	e former junction box site.		cation: UL/C						
	TD	= 40 1		TED BY:	L. Weinheimer $GW = 40 \text{ ft}$		t: 32°36'23.4"N ng: 103°18'38		County: LEA State: NM				
Depth (feet)	chlori field te	10100000000	LAB	PID	Description		Lithology	Well C	Il Construction				
					Light brown very fine sand with small caliche rubble								
5 ft	177			0									
					Tan very fine silty sand								
							24.30%						
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									
									bentonite				
					Tan to grey fine silty sand (hydrocarbon odor)				seal				
25 ft	178			905	(nydrocarbon odor)				Seal				
2311	170			- 505									
					Tan silty sand with medium sized caliche fragments (hydrocarbon								
	100		CI-	1010	odor)								
30 ft	180		64 GRO	1219									
B <0.0			64.1 DRO		Gray coarse sand with small caliche								
E = 1.			455	a personal	fragments (hydrocarbon odor)								
35 ft	156	;		195									
				-	Red and grey fine silty sand with small caliche fragments								
40 ft	304	ļ	CI- 336	110	(hydrocarbon odor)								
B <0	.05 T <0.	05	GRO <10										
E < 0.	.05 X < 0		DRO 105										



Logger: Driller: Drilling Ma Start Date End Date: Commer	ethod: :		Cooper, li otary 2010 2010 it north	c. SB-7 SB-4 SB-1 SB-5 SB-3 SB-6 of the former junction box site. BY: L. Weinheimer	Pr	oject Name: EME C-1 oject Consul ocation: UL/C	EOL tant: RECS Sec. 1 T20	Well ID: SB-8 SDS R36E	
	TD =	40 ft		GW = 40 ft		Lat: 32°36'23.574"N County: LE/ Long: 103°18'38.224"W State: NM			
Depth (feet)	chloride field test		B PI	Description		Lithology	Well	Construction	
5 ft	717	CI- 800 GR <11	0 0	Tan very fine sand					
10 ft	660	DR <1							
15 ft	550		20	Gray very fine sand with small caliche fragments (hydrocarbon odor)					
20 ft	543		52	Light brown fine silty sand	-			bentonite seal	
25 ft	449		15	(hydrocarbon odor)					
30 ft	317	Cl- 384 GR	4 63 0	,					
E = 1.2	T = 0.24 Y X = 3.1	97. DR 598	O B	Gray coarse sand with small calich fragments (hydrocarbon odor)	e				
35 ft	307		28	Light brown coarse sand with sma caliche fragments (hydrocarbon					
40 ft B <0.05	376 T = 0.16	Cl- 512 GR 3 <10	2 10	odor)					
	2 X = 0.9	DR	0						



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 Hydorcarbons

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

Cardinal Laboratories is accreditated 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. Keine

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 (PIL	103 %	5 70-130)						
Chloride, SM4500Cl-B	mg/l	cg	Analyze	d 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	9 73	10.0	12/09/2010	ND	204	102	200	8.69	
Surrogate: 1-Chlorooctane	77.2	% 70-130)						

70-130

Surrogate: 1-Chlorooctadecane 43.8 %

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Likelity and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or bort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any ofter cause whistower shall be deemed waived unless made in writing and received by client limitability (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitabion, business interruptions, loss of use, or loss of profits incidental by client, its subsidiaries, affiliates or successors arbiting out of or related to the performance of the services hereinder by Cardinal, regardless of whether such claim is based upon any of the above stabet reasons or otherwise.

Celey D.Kune

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: Reported:	12/08/2010 12/13/2010 EME C-1 EOL	Sampling Date: Sampling Type: Sampling Condition:	12/07/2010 Soil
Project Name: Project Number: Project Location:	NONE GIVEN NOT GIVEN	Sample Received By:	Cool & Intact Jodi Henson

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

BTEX 8021B	mg/kg		Analyzed By: CK		<u></u>				
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	

Analyzed By: HM mg/kg Chloride, SM4500Cl-B Analyte Result **Reporting Limit** Analyzed Method Blank BS % Recovery True Value QC RPD Qualifier 464 16.0 12/08/2010 ND 432 Chloride 108 400 0.00 mg/kg Analyzed By: AB **TPH 8015M** S-04 **Reporting Limit** Result Analyzed Method Blank Analyte 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 58.5 % 70-130 Surrogate: 1-Chlorooctadecane

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*=Accredited Analyte

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Celey D.1 une

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, SM4500Cl-B	mg ,	/kg	Analyze	d 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.Kune

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: Project Location:	NONE GIVEN NOT GIVEN	Sample Received By:	Jodi Henson

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

BTEX 80218	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	
		. <u> </u>							

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

Chloride, SM4500Cl-B	mg/	′kg	Analyze	d 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	Analyze	d 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 9	% 70-130							
Surrogate: 1-Chlorooctadecane	95.3	% 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:	12/08/2010	Sampling Date:	12/07/2010
Reported:	12/13/2010	Sampling Type:	Soil
Project Name: Project Number: Project Location:	EME C-1 EOL NONE GIVEN NOT GIVEN	Sampling Condition: Sample Received By:	Cool & Intact 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 (PIL 97.6 % 70-130

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d 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	
IPH 8015M	mg,	/kg	Analyze	d 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; Reported:	12/08/2010 12/13/2010	Sampling Date: Sampling Type:	12/07/2010 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 #3 @ 15' (H021473-06)

V

Chloride, SM4500Cl-B	mg /	/kg	Analyze	d 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	
ТРН 8015М	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	Sampling Date:	12/07/2010
Reported:	12/13/2010	Sampling Type:	Soil
Project Name:	EME C-1 EQL	Sampling Condition:	Cool & Intact
Project Number: Project Location:	NONE GIVEN NOT GIVEN	Sample Received By:	Jodi Henson

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

BTEX 8021B	mg/kg		Analyze	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	Analyze	d By: HM	-		<u></u>		
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	
ТРН 8015М	mg	/kg	Analyze	d 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: I-Chlorooctadecane	72.2	% 70-130							

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Celey D.Kune

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 #3 @ 40' (H021473-08)

BTEX 8021B	mg /	′kg	Analyze	d 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	
Ethylbenzen¢*	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 (PIL 102 % 70-130

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d 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	Analyze	d By: AB		<u></u>			
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	1						
Surrogate: 1-Chlorooctadecane	72.5	% 70-130							

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Celuy D.Kune

Celey D. Keene, Lab Director/Quality Manager

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

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. Kune

Celey D. Keene, Lab Director/Quality Manager

Page 11 of 11

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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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 Hydorcarbons

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

Cardinal Laboratories is accreditated 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. Keine

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	Sampling Date:	12/08/2010
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 #4 @ 30' (H021479-01)

BTEX 8021B	mg ,	/kg	Analyze	d 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	
Toluen@*	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	Analyze	d 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	Analyze	d 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	

ND

163

81.3

200

2.60

12/09/2010

Surrogate: 1-Chlorooctane 81.8 % Surrogate: 1-Chlorooctadecane 86.6 %

459

10.0

70-130

70-130

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DRO >C10-C28

*=Accredited Analyte

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Celey D. Kune

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	Sampling Date:	12/08/2010
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 #4 @ 40' (H021479-02)

BTEX 8021B	mg/	kg	Analyze	d By: CK		4			
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 (PIL	106 9	% 70-130)		_				<u></u>
Chloride, SM4500Cl-8	mg/	kg	Analyze	d By: HM					

Chloride, SM4500Cl-B	mg	/kg	Analyze	d 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	Analyze	d 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. Kune

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	Sampling Date:	12/08/2010
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 #5 @ 10' (H021479-03)

BTEX 8021B	mg	/kg	Analyze	d 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	

Chloride, SM4500Cl-B	mg	/kg	Analyze	d 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	Апајуze	d 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. Kune

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	Sampling Date:	12/08/2010
Reported:	12/13/2010	Sampling Type:	Soil
Project Name:	EME C-1 EOL	Sampling Condition;	Cool & Intact
Project Number: Project Location:	NONE GIVEN NOT GIVEN	Sample Received By:	Jodi Henson

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

BTEX 8021B	mg /	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 (PIL 102 % 70-130

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d 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	Analyze	d By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/10/2 010	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	1						

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Celuy D. 1 Tune

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	Sampling Date:	12/08/2010
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 #5 @ 40' (H021479-05)

BTEX 8021B	mg /	'kg	Analyze	d 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 (PIL 101 % 70-130

Chloride, SM4500CI-B	mg	/kg	Analyze	d 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	
трн 8015м	mg	/kg	Analyze	d 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.Kune

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	Sampling Date:	12/08/2010
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 #6 @ 15' (H021479-06)

Chloride, SM4500Cl-B	mg ,	/kg	Analyze	d 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	Analyze	d 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	Analyze	d 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	
ТРН 8015М	mg,	/kg	Analyze	d 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.Kune

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	Sampling Date:	12/08/2010
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 #6 @ 40' (H021479-08)

ØTEX 80218	mg ,	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 (PIL 101 % 70-130

Chloride, SM4500CI-B	mg	/kg	Analyze	d 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	Analyze	d 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	1						

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Celup D.+ Tune

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	Sampling Date:	12/08/2010
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 #7 @ 30' (H021479-09)

mg/kg		Analyzed By: CMS						
Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<0.050	0.050	12/13/2010	ND	2.00	99.9	2.00	5.09	
0.334	0.050	12/13/2010	ND	2.12	106	2.00	4.20	
1.36	0.050	12/13/2010	ND	2.13	107	2.00	3.85	
3.22	0.150	12/13/2010	ND	6.33	106	6.00	3.65	
•	Result <0.050 0.334 1.36	Result Reporting Limit <0.050	Result Reporting Limit Analyzed <0.050	Result Reporting Limit Analyzed Method Blank <0.050	Result Reporting Limit Analyzed Method Blank BS <0.050	Result Reporting Limit Analyzed Method Blank BS % Recovery <0.050	Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC <0.050	Result Reporting Limit Analyzed Method Blank BS % Recovery True Value QC RPD <0.050

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

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d 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	
трн 8015м	mg	/kg	Analyze	d 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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PLEXE NOTE: Likblity and Damages. Cardnal's likblity and client's exclusive remedy for any claim arising, whether based in contract or bort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whitever strait be institude to the amount paid by client for analyses. All claims, including those for negligence and other cause whitever strait be available and received by client for analysis. All claims, including those for negligence and any other cause whitever strait associated and the liable for incidental or consequential damages, including, without finitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors asking out of or related to the performance of the services ingressing the time service is.

Celey D.Kune

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	Sampling Date:	12/08/2010
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 #7 @ 40' (H021479-10)

BTEX 8021B	mg/	kg	Analyze	d 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 (PIL	110 %	% 70-130							
Chloride, SM4500Cl-B	mg/	kg	Analyze	d 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	
трн 8015м	mg/	kg	Analyze	d 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 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:	12/09/2010	Sampling Date:	12/08/2010
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 #8 @ 5' (H021479-11)

Chloride, SM4500CI-B	mg,	/kg	Analyze	d 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	Analyze	d 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		% 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: Reported: Project Name: Project Number: Project Location:	12/09/2010 12/13/2010 EME C-1 EOL NONE GIVEN NOT GIVEN	Sampling Date: Sampling Type: Sampling Condition: Sample Received By:	12/08/2010 Soil Cool & Intact Jodi Henson
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Sample ID: SB #8 @ 30' (H021479-12)

BTEX 8021B	mg/	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	Analyze	d 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	Analyze	d 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	1						

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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	Sampling Date:	12/08/2010
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 #8 @ 40' (H021479-13)

BTEX 8021B	mg /	/kg	Analyze	d 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 (PIL 76.8 % 70-130

Chloride, SM4500Cl-B	mg	/kg	Analyze	d 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	Analyze	d 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.Kune

Celey D. Keene, Lab Director/Quality Manager



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

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 SM4500CI-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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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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ARDINAL LABORATORIES 101 East Mariland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603

	(505) 393-2326 FAX (505) 393-2476	393-2476		5) 61	(325) 673-7001		VX (32	FAX (325)673-7020	-7020							1					
Company Name	ie: Rice Operating Company	:						8	BILL TO		55 B				ANALYSIS	YSIS.	· ·	REQUEST			_
Project Manage	Project Manager: Hack Conder						P.O. #:								:	01					•
Address: 122	122 West Taylor						Company:	any:							S	7J					
city: Hobbs	State: NM	NM Zir	ip: 88240	240		•	Attn:								uò	ณ					
Phone #: 575-393-9174		Fax #: 575-397-1	1471				Address:	:SS:							iuγ	ЧL					
Project #:	Project Owner:	Owner:					City:				<u>۽</u>			H	//S	pa					
Project Name:	Project Name: EME C-1 EOL	1					State:		Zip:		səl			ld.	üC	эрі					
Project Locatio	Project Location: EME C-1 EOL						Phone	e #:			, Lio	108	(<u></u>].	l s	oite	ter					
Sampler Name	Sampler Name: Jordan Woodfin			,			Fax #:				olr			ex	S	хЭ					
FOR LAB USE ONLY			: : .		MATRIX	ž	Ĕ	PRESERV.	/ SAMPLING	- ING	Cl			(ə_	9j	M					
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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST