1R - 427 - 37

REPORTS

DATE:

12-24-2003

IRO427-37

FINAL

REPORT

RICE OPERATING COMPANY JUNCTION BOX FINAL REPORT

				BOX LOC					
SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY		IMENSIONS - F	
EME	M-10-1	M	10	21 S	36 E	Lea	Length 7	Width 5	Depth 10
LAND TYPE:	BLM S	STATE	FEE LA	ANDOWNER	Milla	ard Deck	OTHER		
Depth to Groui									0
Date Started	9/11/2	2003	Date Co	mpleted	10/30/2003	OCD	Witness	No	,
Soil Excavated	266	cubic ya	rds Ex	cavation Le	ngth 25	Widt	n <u>24</u>	Depth	12 feet
Soil Disposed	0	cubic ya	rds Of	ffsite Facility	n	/a	Location	n	<u>'</u> a
	TICAL RE ocure 5-point BTEX and CI	t composite	e sample of oratory test	f bottom and	4-point con	nposite sar sing an app	nple of sidew		l2 ft bgs
Sample	PID		RO	DRO	Chloride				
Location	ppm		/kg	mg/kg	mg/kg				
SIDEWALLS	18.5		0.0	<10.0	240				
BOTTOM	17.1		0.0	<10.0	688				
REMEDIATED	21.7		0.0	<10.0	464				
Bore 10 ft east @ 22 f Bore 15 ft south @ 22			XX XX	XXX	142 <20				
		,			· · · · · · · · · · · · · · · · · · ·		CHLORI	IDE FIELD	ESIS
General Description	on of Remedia	al Action:	Delineation	with a backhoe	did not		OCATION	DEPTH (ft)	ppm
yield a sufficient declir	ne in chloride co	oncentrations	with depth.	PID readings v	vere minimal		Vertical	8	880
and lab results confirm	ned that TPH co	oncentrations	are well belo	ow NMOCD gu	idelines.			9	1280
The location was bore	d to determine	the vertical e	xtent of chlor	ride impact and	I tests of the			10	964
returns conclusively in	ndicate that chlo	ride ceases	well above gr	oundwater der	oth (see graph	s).		11	807
A 1.5 ft compacted cla	ay barrier was in	stalled at the	bottom of th	ne 25 x 24 x 12	-ft-deep excav	ration		12	940
to inhibit further down	ward migration	of chloride.	The excavate	d soil was land	lfarmed at the	4	-wall comp.	n/a	611
location and then back	kfilled into the h	ole and leve	led. The dist	urbed surface	has been	b	ottom comp.	12	534
re-seeded with a blen	d of native vege	etation and w	ill be monitor	ed for growth.	A new waterti	ght r	emed. comp.	n/a	745
junction box has been	built over this s	site.				b	ore 15 ft south	22	201
enclosed: lab results,	chloride graphs	, diagram, p	notos, clay co	ompaction test		t	ore 10 ft east	22	222
I HEREB	Y CERTIFY 1	THAT THE		TION ABOV			PLETE TO T	HE BEST OF	MY
DATE		24/2003	.		INTED NAME		Kris	tin Farris	
SIGNATURE	nutin &	Jan			TITLE		Proje	ct Scientist	

EME jct. M-10-1



Old wooden box prior to excavation



Density & compaction test of clay

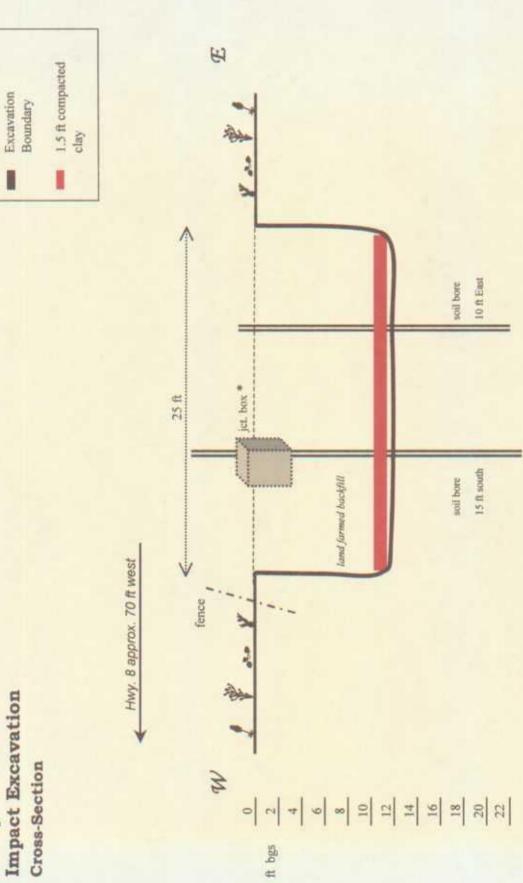


Backhoe excavation & delineation



Seeding disturbed area; new plastic junction box in background

Impact Excavation EME jct. M-10-1 Cross-Section



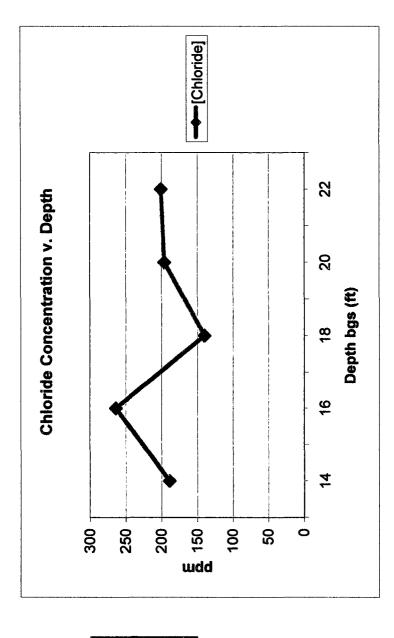
* New water-tight junction box is re-built in the same location.

EME jct. M-10-1 T21S, R36E

Soil Bore 15 ft South

[CI] ppm	189	264	140	196	201
Depth bgs (ft)	14	16	18	20	22





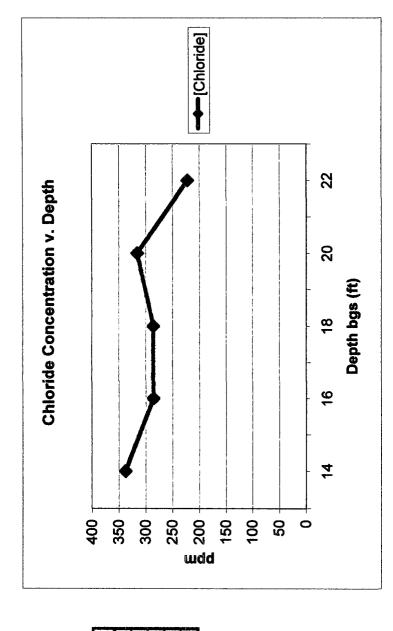
EME jct. M-10-1 T21S, R36E

Soil Bore 10 ft East

[Ci] ppm	338	286	286	316	222
Depth bgs (ft)	14	91	18	20	22

338	286	286	316	222	
14	16	18	20	22	

Groundwater = 200 ft



ETGI Composite Jut Bon Finial report 24X25'X12' dec SITE EXCAVATION INFORMATION EME miles CLPID TPH DATE DEPTH SOIL COMPOSITION 9-3003 Bottom 12' 534 17.1 441016 611 18.5° Remediated 745 21.7 Backfill 311 14.6 N.W.LL12' 5.4.4 12' 256 111 W.W.12 10' 796 102 E.Cusch15" 613 10.9

July Han

ANALYTICAL REPORT

Prepared for:

Kristin Farris Rice Operating 122 W. Taylor Hobbs, NM 88240

Project:

EME M 10-1

PO#:

Order#:

G0307652

Report Date: 10/08/2003

Certificates

US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

Rice Operating 122 W. Taylor Hobbs, NM 88240

505-397-1471

Order#:

G0307652

Project:

Bore Samples

Project Name: EME M 10-1

Location:

None Given

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

			Date / Time	Date / Time		
Lab ID:	Sample:	Matrix:	<u>Collected</u>	Received	Container	Preservative
0307652-01	10' E. Source @ 22'	SOIL	9/19/03 10:30	10/6/03 8:00	Plastic Bag	ice
<u>La</u>	b Testing: Chloride	Rejected: No	Ten	np: 4.0 C		
0307652-02	15' S. Source @ 22'	SOIL	9/19/03 14:30	10/6/03 8:00	Plastic Bag	ice
<u>La</u>	b Testing:	Rejected: No	Ten	np: 4.0 C		
	Chloride					

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Kristin Farris **Rice Operating** 122 W. Taylor Hobbs, NM 88240 Order#:

G0307652

Project:

Bore Samples

Project Name: Location:

EME M 10-1 None Given

Lab ID:

0307652-01

Sample ID:

10' E. Source @ 22'

Test Parameters

Parameter Chloride

Result

142

Dilution Units **Factor**

 \mathbf{RL}

20

Method 9253

Date Analyzed 10/7/03

<u>Analyst</u> SB

Lab ID:

0307652-02

Sample ID:

15' S. Source @ 22'

Test Parameters

Parameter Chloride

Result <20

Units mg/kg

mg/kg

Dilution **Factor** 1

1

<u>RL</u> 20

Method 9253

Date Analyzed **Analyst** 10/7/03

SB

Approval:

Raland K. Tuttle, Lab Director, QA Officer

Celey D. Keene, Org. Tech. Director Jeanne McMurrey, Inorg. Tech. Director Sandra Biezugbe, Lab Tech.

Sara Molina, Lab Tech.

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0307652

BLANK	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	· · · · · · · · · · · · · · · · · · ·	0007064-01			<20		
MS	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0307648-01	1030	500	1540	102.%	
MSD	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0307648-01	1030	500	1560	106.%	1.3%
SRM	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0007064-04		5000	4960	99.2%	

Environmental Lab of Texas, Inc.

Odessa, Texas 79763 12600 West I-20 East

Phone: 915-563-1800 Fax: 915-563-1713

Project Manager: KRISTIN FARRIS

COMPANY NAME KICE OPER, CO,

Project #: BORE SAM PIES

Project Name: $\overline{\mathcal{EME}}\,\,\mathcal{M}$ /0 - ,

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Company Address: 133 W. TAYLOR

City/State/Zip: Hbbbs, NM. 88240

Telephone No: 505 - 393-9 / 74

Sampler Signature:

Fax No: 505-397-1471

PO #:

Project Loc:

				 -			т			- -	-1 -	_
			TAT brabnate	_	↓_	 		-		_	+	+
			(Pre-Schedule)	4	-	╀-	+-	-	-		-	4
				-	_	╀-	┼	4	+-	-	_	+
				-	-	┿	+-	+-		4-		+
				┼-	+	╀	+-	+-		+-	+-	\dashv
				┼	+-	+-	+-	+-	╁	+	╫	+
			-17	\vdash		┿	┼-		╁	+	+	+
_			BTEX 8021B/5030		-	-	+-	+-	+	+-	+-	+
-	_	-	Selitslovime2	+-	┼┈	\vdash	+-	╁┈	+	+	+	+
		-	zelitsloV	-	+-	十	+-	+	+	 	+-	\dagger
7	_	əs	Metals: As Ag Ba Cd Cr Pb Hg :	+-		1	+-	+	\dagger	+-	\dagger	\dagger
i.	Ę.		ORO/ORO MEI 08 H9T	1	1	 	†-	+	\dagger	1	+-	\dagger
2	TOTAL		1PH TX 1005/1006			1	†	+-	+		+-	\dagger
		-	1.81h H9T	<u> </u>	1	-	† -	1-	+	1	+-	†
		┢	108/CL/SAR/EC	 		1	1	十	1	1	1	†
			Огрег (specify):				1				†	
		ķ	lios		>		1			1	T	T
		Matrix	Siudge				\vdash				\top	†
			VelsW									T
	1		(Specify)								\prod	
	ı		enoM									
		Preservative	*os*H									
		serva	HOEN									
		Pre	HCI					ļ				L
			^f ONH						<u> </u>			
			901	\geq	\geq		<u> </u>	_	<u> </u>	<u> </u>		\perp
			No. of Containers	-	-	-						
					_						Γ	Τ
		ı	bəlqms2 əmiT	030	230							
		١		9	a						1	
										<u> </u>	-	\vdash
		l		1-03	8							
		- 1	belgms2 sisQ	6	-6.							
				9-19	-61-6							
		ł			-		-	 	-		├-	┞
		-		`~	<u>ک</u>							
		1	·	3	જ]	
				(A)	α		ļ					
			FIELD CODE	9	9]		
			a	7	ee							
				a	8							ĺ
		Ì		νŽ	Ŕ							
		ĺ										
		}		14	Ś							
				10' E. Source @ 22	15'5. SURREE @ AZ'							
		17.77										
			SUTUSA									
			<u> 2</u>	Ö	8							
			207652									
			₹ #									
		- 18		####								

Temperature Upon Recept Sample Containers Intact?

Time

Date

Received by:

Time

Date

Relinquished by:

Relinquished by:

Special Instructions:





PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR RICE OPERATING CO. ATTN: ROY RASCON 122 W. TAYLOR HOBBS, NM 88240 FAX TO: (505) 393-1471

Receiving Date: 09/30/03

Reporting Date: 10/01/03

Project Number: NOT GIVEN Project Name: EME M-10-1

Project Location: LEA CO., NM

Sampling Date: 09/30/03

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: BC Analyzed By: BC/AH

ANALYSIS	DATE	09/30/03	09/30/03	10/01/03
H8051-1	BOTTOM 12'	<10.0	<10.0	688
H8051-2	4 WALLS	<10.0	<10.0	240
H8051-3	REMEDIATED BACKFILL	<10.0	<10.0	464
Quality Con	trol	806	792	1050
True Value	QC	800	800	1000
% Recovery	/	101	90.0	105
Relative Pe	rcent Difference	1.4	11.3	6.7

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl⁻: Std. Methods 4500-Cl⁻B *Analyses performed on 1:4 w:v aqueous extracts.

Chemist Chemist

Date

H8051.XLS

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

١٥

Page

	101 Fast Mari
A ARDINAL LABORATORIES, INC.	2111 Beachwood, Abliane TX 79803 - 101 Fast Mari

13 101 East Marland, Hobbs, NM 68240	(015) A73_7004 Fax (046) A73_7030
2111 Beechwood, Abilene, TX 79603	(015) 873-7001 Fax (015) 673-703(

Company Mame:	Company Hame: 1875 C Ocean Ties Co	5	Ŋ				_									Y	ANALYSIS		REC	REQUEST	_	Ì	Ì	-	į
Project Marager.	Project Nurager:						77.5		#		BOO 👸	:: :2:	_						-						
Addrass: 122	Toulor						Ű	Company:	BITY.	•	, v.	Ŋ													
CHY: Nobbs	CHY: Nobles Stade: N-21p: 882	α	α	7.	05		₹	Auth:					-		-							 -			
Phone #. 500	Phone # 507 - 207 # shorter						₹	Address					í				·	·-		-	_				
Faxit: CO.	Fux#: 597 - 797			1			ठ	S.					ر ب												
Project #:	Project Owner.	-					ક	Starte:		- {	Z/p:														
Project Name:	Project Name: Engle 10	\					3	Phone II.	ij.				(.,								_				
Project Location:	× × ×						-	Fax 6:					4												
FOR LAB USE ONLY			-		MATRO	ă		_	PRES.	Н	SAMPLAND	NG.		7											
LAB I.O.	Sample I.D.	. GMO(3) RO BAR(8)	B CONTAINERS RECOUNDMETER	MASTEWATER	POIL	8F∩D@E OIF	RENCOS	VCID:	1000 / 30	: A3HTO	DATE	TIME	1401	1977											
HXXH	Bottom 12	7		•—-	-			_			K 20.01.9	10:11	×	X											
7	y wells	7	3		Z		-			<u>ز</u> ح	30.05	9.30.05 10.29	*	Y		ĺ				_			1	!	
Tylemes	Alemedated beckfill C6	2	10	-	¥	+	-		1	0	5.30.03	10:01	4	7			-				-	-	Ť	!	
		1	+	-		+-	+	1	\dagger	+					1	+	+-	+	-	+	 			İ	!
						-																		}	
										-									-	-				1	
		+	+	\bot		+	T	1	+	4			\downarrow		+		+	-	+		\uparrow			}	
		+-	+-1	\Box		+			+	+						-	+	+		$\forall I$					
P. BASS MOTE: Lability and Decision	P. B.L.S. HOTE. LINES DO Demagne. Contracts lastly and devia modular natural for extending absent about the contract of the first for the contract of the cont	To America		10 10		me la	o u	Dagu.	or lart	3 6	Defredto the	o middeg whether has seed in construct for that, and be destrobe the property for the effect for the construction of the const	February 1	£1.0m			TAINE OF	Terrus and Constitions, District all in charges on it excludes that it is not the second of the seco	Ores: Dife	The Section	bellands a	ya ag ar a	Last the second	The state of	
manchine for no expert sebust Contribut to	mana de la managara a managa de managa de managa de la managa de la managa de managa de la managa de la managa Benefora de no no enyell entello de la manda de la ciclosental de descenquental despeta, brahading autorial	and and	o Million	4	4		100	, E	70 **		a of profes	Wherever comment careful is well and recommend by transfer action of agents produced the management of the dis An agents that needs international, has all uses, of those of profits incursed by affect, the unlimited and	To today	Seden.				the second of control of the factor of the second of the s	Adore, 1	ackeng se	II I MANUC	É			

P. EASS NOTS: Linking and December Contents Larding and clocks a modular commit for the distance between the season in contents of the design and an experimental and the season of the Sampler Reinquisher

copy to rich Phone Result | Ves | 10 No Additional Fax F. Fax Result | 10 Yes | 10 No Yes | 1 1 4 Received By. (Lab Staff) Date: 50.02 - ane: Sampler - UP8 - Bus - Other: Delivered By: (Circle One) Retingulation By.

† Cardinal cannot accept verbal changes. Please fax written changes to 915-873-7020.

0) 47555000



LABORATORY TEST REPORT

PETTIGREW and ASSOCIATES, P.A.

1110 N. GRIMES HOBBS, NM 88240 (505) 393-9827



DEBRA P. HICKS, P.E./L.S.I. WILLIAM M. HICKS. III, P.E./P.S.

To:

Rice Operating Corporation

Attn: Carolyn Haynes

122 W. Taylor

Hobbs, NM 88240

Material:

Red Clay

Test Method:

ASTM: D 2922

Project:

M 10-1

Date of Test:

October 13, 2003

Depth:

Finished Subgrade

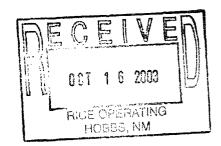
Dry Density Test No. Location % Maximum % Moisture Depth

SG-1

SW Corner of Pit

101.7

19.4



Control Density:

104.2

ASTM: D 698

Optimum Moisture:

23.1%

Required Compaction:

95%

Lab No.:

03 6302-6303

Copies To:

Rice Operating

PETTIGREW and ASSOCIATES