1R- 424

REPORTS

DATE:

3/7/2005

RICE Operating Company

122 West Taylor • Hobbs, New Mexico 88240 Phone: (505)393-9174 • Fax: (505) 397-1471

CERTIFIED MAIL RETURN RECEIPT NO. 7002 2410 0000 4940 1893

March 7, 2005

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OIL CONSTRUCTION DIVISION

· 1: 773

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

RE: 2004 MONITOR WELL REPORT/SAMPLING SUMMARY M-5 SWD, EME SWD SYSTEM UNIT 'M', SEC. 5, T20S, R37E

Mr. Price:

Rice Operating Company (ROC) takes this opportunity to submit the 2004 Monitor Well Report for the <u>EME M-5 SWD site</u> located in the EME Salt Water Disposal (SWD) System. Two monitoring wells were installed in one borehole on 11/4/2003 during the delineation of the redwood tanks. The shallow well is about 40 ft deep and the deep is 55 ft (measured from the ground surface). The well is sampled quarterly pursuant to NMOCD guidelines. In 2004, Trident Environmental (Trident) of Midland, Texas sampled the well. In 2005, Trident will sample the well and Environmental Lab of Texas of Odessa will continue to analyze the water samples.

R. T. Hicks Consultants of Albuquerque is retained by ROC to address groundwater concerns at this site. A Corrective Action Plan was submitted on 9/6/2004. NMOCD requested more information in an email on 11/8/2004. This information was addressed in a response to NMOCD by Hicks on 1/25/2005.

ROC is the service provider (operator) for the EME Salt Water Disposal System and has no ownership of any portion of pipeline, well, or facility. The EME SWD System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis.

Thank you for your consideration concerning this annual summary of groundwater monitoring information. If you have any questions, do not hesitate to contact me.

RICE OPERATING COMAPANY

Knistin Famis Tope

Kristin Farris Pope Project Scientist

enclosures: Summary table & graph Analytical results Survey map

cc: LBG, CDH, R. T. Hicks, Gil Van Deventer, file, Rob Roy Industries,

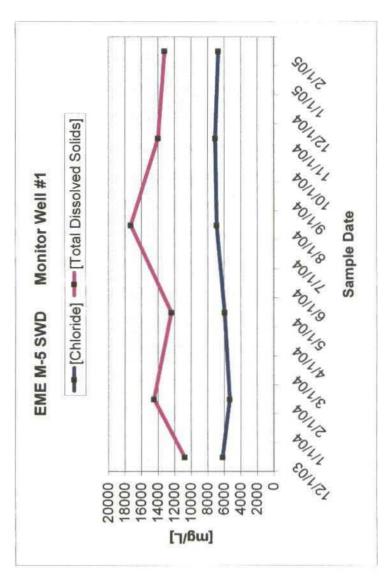
Chris Williams NMOCD, District I Office 1625 N. French Drive Hobbs, NM 88240

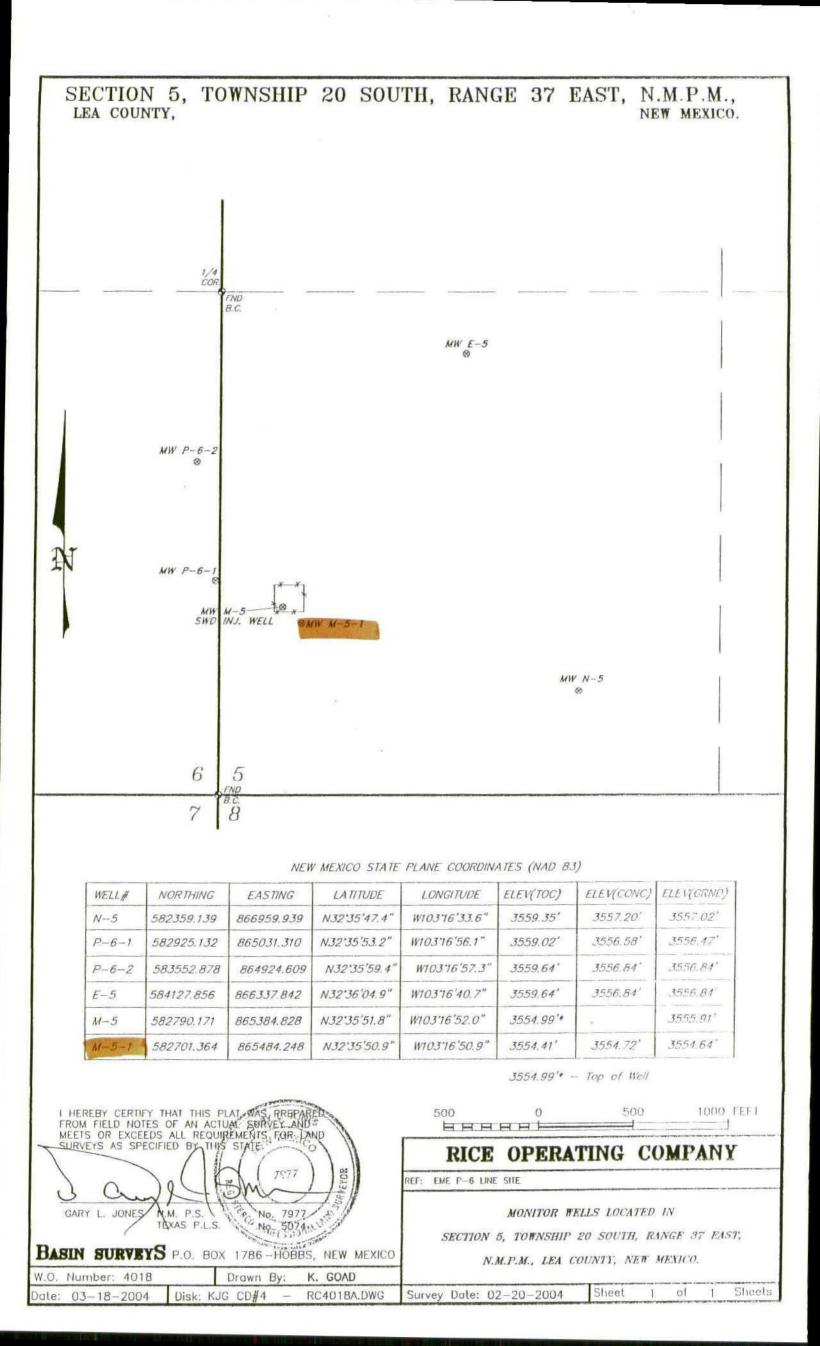
EME M-5 SWD unit 'M', Sec. 5, T20S, R37E

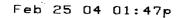
2 wells intalled in 1 borehole

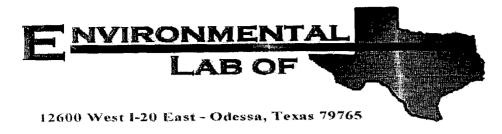
RICE Operating Company Monitor Well Data Sheet

	COMMENTS	CUMINICIALS	Deep	Shallow	Shallow	Shallow	Shallow	Shallow	Shallow
	TOTAL	BENZENE XYLENES	<0.006	<0.006	<0.001	<0.001	<0.001	<0.001	<0.001
mg/L	ETHYL	BENZENE	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
All concentrations are in mg/L	BENIZENIE TOLI LIENIE	IOFOFINE	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
All concentra	BENIZENIE	DEINEENE	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001
1	TDC	011	11736	10784	14500	12400	17300	14000	13200
	.10	CI	6198	6198	5320	5940	6910	7090	6710
	SAMPLE	DATE	12/11/03	12/11/03	02/20/04	05/06/04	08/10/04	11/10/04	2/8/05
(]	VOLUME	PURGED	10.61	3.33	4.00	XXX	XXX	XXX	XXX
(gal)	WELL	VOLUME	3.530	1.110	1.07	XXX	XXX	XXX	XXX
()	TOTAL	DEPTH	55.10	40.11	39.85	XXX	XXX	XXX	XXX
(Ħ)	DEPTH TO	WATER	33.40	33.28	33.37	32.79	32.52	31.63	28.85
	# INVE	# M MI	PI	Is	IS	ls	IS	ls	ls









EME M-5 SWD MW-1

Analytical Report

Prepared for:

Gilbert Vandeventer Trident Environmental P.O. Box 7624 Midland, TX 79708

Project: Rice Operating Company Project Number: V-117 Location: EME P-6 Line Leak Site

Lab Order Number: 4B20002

Report Date: 02/24/04

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Trident Environmental	Project:	Rice Operating Company	Fax: 682-0727
P.O. Box 7624	Project Number:	V-117	Reported:
Midland TX, 79708	Project Manager:	Gilbert Vandeventer	02/24/04 15:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
P6-1	4B20002-01	Water	02/19/04 09:20	02/19/04 16:35
P6-2	4B20002-02	Water	02/19/04 10:10	02/19/04 16:35
M5-1 (S)	4B20002-03	Water	02/19/04 12:50	02/19/04 16:35

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

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Trident Environmental P.O. Box 7624 Midland TX, 79708		Pro Project Nun Project Man	iber: V-	117	g Company eventer	/		Fax: 682 Report 02/24/04	led:
	<u></u>	Org	anics b	y GC					
	F	Environm	ental L	ab of T	exas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
P6-1 (4B20002-01)								······································	
Benzene	ND	0.00100	mg/L	1	EB42310	02/23/04	02/23/04	EPA 8021B	
Toluene	ND	0.00100	n	6	n		n	n	
Ethylbenzene	ND	0.00100	и	м		41	11	11	
Xylene (p/m)	ND	0.00100	ti ti	11	*	"	0	и	
Xylene (o)	ND	0.00100	п	"	"	*	94	U	
Surrogate: a,a,a-Trifluorotoluene		102 %	80-	120					
Surrogate: 4-Bromofluorobenzene		91.5 %		120	"	μ	"	"	
P6-2 (4B20002-02)									
Benzene	ND	0.00100	mg/L		EB42310	02/23/04	02/23/04	EPA 8021B	
Toluene	ND	0.00100	и	u	n	91	n	"	
Ethylbenzene	ND	0.00100.0	и		"	u	н	4	
Xylene (p/m)	ND	0.00100	и	11		11	н	9	
Xylene (0)	ND	0.00100	9	U	IJ	ч	u	n	
Surrogate: a,a,a-Trifluorotoluene				120					
Surrogate: 4-Bromofluorobenzene		108 %		120	11	"	"	"	
M5-1 (S) (4B20002-03)									
Benzene	ND	0.00100	mg/L	1	EB42310	02/23/04	02/23/04	EPA 8021B	
Toluene	ND	0.00100	"	ĸ	"	"	"	"	
Ethylbenzene	ND	0.00100		'n	*	"	H	11	
Xylene (p/m)	ND	0.00100	u	"	n	0	н		
Xylene (o)	ND	0.00100	11	u	υ	81	87	а	
Surrogate: a,a,a-Trifluorotoluene		97.0 %		120				"	
Surrogate: 4-Bromofluorobenzene		81.0 %	80-	120	n	"	n	"	

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Trident Environmental	5	Rice Operating Company	Fax: 682-0727				
P.O. Box 7624	Project Number:	V-117	Reported:				
Midland TX, 79708	Project Manager:	Gilbert Vandeventer	02/24/04 15:02				
Gene	eral Chemistry Parameter	rs by EPA / Standard Method	S				
	Environmental Lab of Texas						

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
P6-1 (4B20002-01)					·				
Carbonate Alkalinity	ND	0.100	mg/L	1	EB42104	02/20/04	02/20/04	EPA 310.2M	
Bicarbonate Alkalinity	194	2.00	P	"		"	*	и	
Hydroxide Alkalinity	ND	0.100	н	u	IT	"	Ш	•	
Chloride	8510	5.00	a	н	EB42102	02/21/04	02/21/04	EPA 325.3	
Total Dissolved Solids	16600	5.00	н	P	EB42404	02/24/04	02/24/04	EPA 160.1	
Sulfate	830	6.25	h	12.5	EB42103	02/21/04	02/21/04	EPA 375.4	
P6-2 (4B20002-02)									
Carbonate Alkalinity	ND	0.100	mg/L	1	EB42104	02/20/04	02/20/04	EPA 310.2M	
Bicarbonate Alkalinity	227	2,00	n		**	н	It	**	
Hydroxide Alkalinity	ND	0.100	Ħ	4	n	8	n	11	
Chloride	9040	5.00	*1	u	EB42102	02/21/04	02/21/04	EPA 325.3	
Total Dissolved Solids	19700	5.00	11	n	EB42404	02/24/04	02/24/04	EPA 160.1	
Sulfate	1260	12.5	u	25	EB42103	02/21/04	02/21/04	EPA 375.4	
M5-1 (S) (4B20002-03)									
Carbonate Alkalinity	ND	0.100	mg/L	1	EB42104	02/20/04	02/20/04	EPA 310.2M	
Bicarbonate Alkalinity	186	2.00	н	u	82	"	n	19	
Hydroxide Alkalinity	ND	0.100	u	11	"	0	D	н	
Chloride	5320	5.00	It	п	EB42102	02/21/04	02/21/04	EPA 325.3	
Total Dissolved Solids	14500	5.00	n	н	EB42404	02/24/04	02/24/04	EPA 160.1	
Sulfate	454	6.25	u	12.5	EB42103	02/21/04	02/21/04	EPA 375.4	

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Trident Environmental	Project: Rice Operating Company	Fax: 682-0727				
P.O. Box 7624	Project Number: V-117	Reported:				
Midland TX, 79708	Project Manager: Gilbert Vandeventer	02/24/04 15:02				
	Total Metals by EPA / Standard Methods					
Environmental Lab of Texas						

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
P6-1 (4B20002-01)			· · · · · · · · · · · · · · · · · · ·						
Calcium	1800	10.0	mg/L	1000	EB42311	02/23/04	02/23/04	EPA 6010B	
Magnesium	482	0.100		100	"	u	02/23/04		
Potassium	65.3	0.500	IT	10	u	*1	02/23/04	n	
Sodium	3720	10.0	4	1000	Ħ	u	02/23/04	9	
P6-2 (4B20002-02)									
Calcium	1590	10.0	mg/L	1000	EB42311	02/23/04	02/23/04	EPA 6010B	
Magnesium	451	0.100	11	100		*	02/23/04	n	
Potassium	75.9	0.500	11	10	*	u	02/23/04	**	
Sodium	3900	10.0	ů.	1000	u	11	02/23/04	в	
M5-1 (S) (4B20002-03)									
Calcium	1630	10.0	mg/L	1000	EB42311	02/23/04	02/23/04	EPA 6010B	
Magnesium	352	0.100	н	100	**	а	02/23/04	u	
Potassium	48,4	0.500	n	10	u	11	02/23/04	11	
Sodium	1970	10.0	**	1000	*	a	02/23/04	11	

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Trident Environmental P.O. Box 7624		Pro Project Nur		ce Operatin	g Compan	у			Fax: 68 Repo	
Midland TX, 79708		Project Man			eventer				02/24/0	
		ganics by								
]	Environm	ental I	Lab of T	exas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB42310 - EPA 5030C (GC)										
Blank (EB42310-BLK1)	_			Prepared	& Analyze	d: 02/23/	04			
Benzene	ND	0.00100	mg/L					· · · · · · · · · · · · · · · · · · ·		
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	u							
Xylene (p/m)	ND	0.00100	u							
Xylene (0)	ND	0.00100	н							
Surrogate: a,a,a-Trifluorotoluene	23.5		ug/l	20.0		778	80-120			
Surrogate: 4-Bromofluorobenzene	16.8		"	20.0		84.0	80-120			
LCS (EB42310-BS1)				Prepared	& Analyze	ed: 02/23/	04			
Benzene	97.9		ug/l	100		97.9	80-120			
Toluene	100		11	100		100	80-120			
Ethylbenzene	100			100		100	80-120			
Xylene (p/m)	216		n	200		108	80-120			
Xylene (o)	112		н	100		112	80-120			
Surrogate: a,a,a-Trifluorotoluene	21.8		·	20.0	· · ·	109	80-120			
Surrogate: 4-Bromofluorobenzene	22.7		и	20.0		114	80-120			
Calibration Check (EB42310-CCV1)				Prepared	& Analyze	ed: 02/23/	04			
Benzene	89.1		ug/l	100		89.1	80-120			
Toluene	92.0		ų	100		92.0	80-120			
Ethylbenzene	93.8		H	100		93.8	80-120			
Xylene (p/m)	197		N	200		98.5	80-120			
Xylene (o)	102		n	100		102	80-120			
Surrogate: a,a,a-Trifluorotoluene	18.9			20.0		94.5	80-120			· · · · · · · · · · · · · · · · · · ·
Surrogate: 4-Bromofluorobenzene	23.9		"	20.0		120	80-120			
Duplicate (EB42310-DUP1)	So	urce: 4B2000	14-02	Prepared	& Analyze	ed: 02/23/	04			
Benzene	0.0163	0.00100	mg/L		0.0142			13.8	20	
Toluene	0.00542	0.00100	"		0.00457			17.0	20	
Ethylbenzene	0.00483	00100.0	"		0.00422			13.5	20	
Xylene (p/m)	0.00235	0.00100	u		0.00201			15.6	20	
Xylene (0)	0.00108	0.00100	n		0.000961			11.7	20	
Surrogate: a,a,a-Trifluorotoluene	29.9		ug/l	20.0		150	80-120			<u>S-0</u>
Surrogate: 4-Bromofluorobenzene	28.9		"	20.0		144	80-120			S-0

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Trident Environmental P.O. Box 7624 Midland TX, 79708		Project Nur Project Man	nber: V-			у			Fax: 68 Repo 02/24/04	rted:
General Chemis	-	eters by nvironm				ods - Q	Juality	Contro	1	
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB42102 - General Preparation	n (WetChem))								
Blank (EB42102-BLK1)	<u> </u>			Prepared	& Analyze	ed: 02/21/0	04			
Chloride	ND	5.00	mg/L	•						
Blank (EB42102-BLK2)				Prepared	& Analyze	ed: 02/21/0	04			
Chloride	ND	5.00	mg/L	·	<u>·</u>					
Calibration Check (EB42102-CCV1)				Prepared	& Analyze	d: 02/21/0	04			
Chloride	4960	<u> </u>	mg/L	5000		99.2	80-120			
Calibration Check (EB42102-CCV2)				Prepared	& Analyze	:d: 02/21/0)4			
Chloride	4960		mg/L	5000		99.2	80-120			
Matrix Spike (EB42102-MS1)	Sou	rce: 4B1801	5-01	Prepared	& Analyze	ed: 02/21/0	04			
Chloride	134	5.00	mg/L	100	35.4	98.6	80-120			· ·
Matrix Spike (EB42102-MS2)	Soui	rce: 4B2001	4-01	Prepared	& Analyze	d: 02/21/	04			
Chloride	833	5.00	mg/L	500	337	99.2	80-120			
Matrix Spike Dup (EB42102-MSD1)	Sou	rce: 4B1801	5-01	Prepared	& Analyze	ed: 02/21/0	04			
Chloride	133	5.00	mg/L	100	35.4	97.6	80-120	0.749	20	·····
Matrix Spike Dup (EB42102-MSD2)	Sour	rce: 4B2001	4-01	Prepared	& Analyze	d: 02/21/0	04			
Chloride	842	5.00	mg/L	500	337	101	80-120	1.07	20	
Batch EB42103 - General Preparation	n (WetChem)	•								
Blank (EB42103-BLK1)				Prepared	& Analvze	d: 02/21/	04			
Sulfate	ND	0.500	mg/L	<u> </u>			·····			<u> </u>

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Trident Environmental P.O. Box 7624 Midland TX, 79708		Pro Project Nur Project Man	nber: V			y			Fax: 68 Repo 02/24/0	rted:
General Chemi	-	eters by nvironm				iods - Q	Quality (Contro	1	
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB42103 - General Preparation	n (WetChem))								
Blank (EB42103-BLK2)		·		Prepared	& Analyze	ed: 02/21/0	04			
Sulfate	ND	0.500	mg/L							
Calibration Check (EB42103-CCV1)				Prepared	& Analyza	ed: 02/21/	04			
Sulfate	49.2		mg/L	50.0		98.4	80-120			
Calibration Check (EB42103-CCV2)				Prenared	& Analyza	ed: 02/21/	04			
Sulfate	48.5		mg/L	50.0		97.0	80-120			
Duplicate (EB42103-DUP1)	Sou	rce: 4B1801	5-01	Prepared a	& Analyze	ed: 02/21/	04			
Sulfate	195	0.500	mg/L		195			0.00	20	
Duplicate (EB42103-DUP2)	Sou	rce: 4B2001	4-01	Prepared	& Analyze	ed: 02/21/0	04			
Sulfate	476	0.500	mg/L		468			1.69	20	
Batch EB42104 - General Preparatio	n (WetChem`)								
Blank (EB42104-BLK1)				Prepared	& Analyza	ed: 02/20/	04			
Carbonate Alkalinity	ND	0.100	mg/L							
Bicarbonate Alkalinity	ND	2.00	11							
Hydroxide Alkalinity	ND	0.100	п							
Calibration Check (EB42104-CCV1)				Prepared	& Analyze	ed: 02/20/	04			
Carbonate Alkalinity	0.0496		mg/L	0.0500		99.2	80-120			
Duplicate (EB42104-DUP1)	Sou	rce: 4B2000)1-01	Prepared	& Analyz	ed: 02/20/	04			
Carbonate Alkalinity	6.00	0.100	mg/L		6.00			0.00	20	
Bicarbonate Alkalinity	284	2.00	Ħ		280			1.42	20	
Hydroxide Alkalinity	0.00	0.100	u		0.00				20	

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Project: Rice	e Operating Company	Fax: 682-0727
Project Number: V-1	17	Reported:
Project Manager: Gill	oert Vandeventer	02/24/04 15:02
	Project Number: V-1	Project: Rice Operating Company Project Number: V-117 Project Manager: Gilbert Vandeventer

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB42404 - General Prepar	ation (WetChen	1)								
Blank (EB42404-BLK1)	<u> </u>			Prepared	& Analyze	ed: 02/24/	04			
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EB42404-DUP1)	So	urce: 4B200()1-01	Prepared	& Analyze	ed: 02/24/	04			
Total Dissolved Solids	1680	5.00	mg/L		1630			3.02	20	

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Trident Environmental P.O. Box 7624 Midland TX, 79708 Total	v	Project: Rice Operating Company Project Number: V-117 Project Manager: Gilbert Vandeventer etals by EPA / Standard Methods - Quality Control Environmental Lab of Texas								
]	Environm Reporting	ental l	Lab of T Spike	exas Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EB42311 - General Preparatio	n (Metals)									
Blank (EB42311-BLK1)				Prepared	& Analyze	ed: 02/23/	04			
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	u.							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	μ							
Calibration Check (EB42311-CCV1)				Prepared	& Analyze	ed: 02/23/	04			
Calcium	2.10		mg/L	2.00		105	85-115			
Magnesium	2.00		N	2.00		100	85-115			
Potassium	1.74		н	2.00		87.0	85-115			
Sodium	1.89		4	2.00		94.5	85-115			
Duplicate (EB42311-DUP1)	So	urce: 4B2000	01-01	Prepared	& Analyze	ed: 02/23/	04			
Calcium	23.3	0.100	mg/L	······	23.5			0.855	20	
Magnesium	4.58	0.00100	11		4.60			0.436	20	

15.8

450

3.12

0.222

20

20

16.3

451

0.500

1.00

Environmental Lab of Texas

Potassium

Sodium

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Quality Assurance Review

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

1	Trident Environmental	Project:	Rice Operating Company	Fax: 682-0727
	P.O. Box 7624	Project Number:	V-117	Reported:
	Midland TX, 79708	Project Manager:	Gilbert Vandeventer	02/24/04 15:02

Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- 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

Environmental Lab of Texas

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Quality Assurance Review

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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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P.O. Box 7624 Midland, Texas 79708 (915) 682-0808 (915) 682-0727 (Fax) (505) 397-1471 (Fax)	6 0 0				
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	Environmental Lab of Texas 12600 W I-20 East Odessa, Texas 79765 (915) 563-1800 (915) 563-18000		t Information Rice Operating Company EME P-6 Line Leak Site Gil Van Deventer	V-117 Hand delivered Rice Operating Co. Attn: Carolyn Haynes	122 W. Taylor, HODDS NM 8824U (Fax: 505-397-1471)
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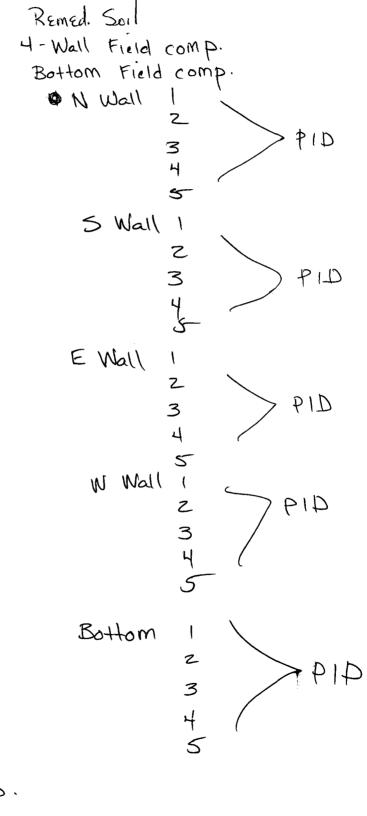
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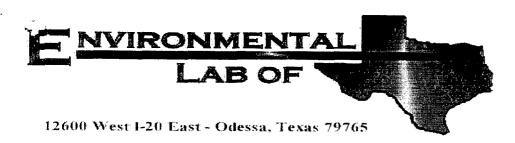
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Report : 4-Wall Lab Comp. Bottom Lab Comp





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Analytical Report

Prepared for:

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

Project: EME System M-5 SWD Site Project Number: None Given Location: T20S, R37E, Sec 5, Unit Letter M

Lab Order Number: 4E07004

Report Date: 05/12/04

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

Project: EME System M-5 SWD Site Project Number: None Given Project Manager: Kristin Farris

Fax: (505) 397-1471 Reported: 05/12/04 15:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
M5-1	4E07004-01	Water	05/06/04 13:20	05/07/04 08:05

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· Rice Operating Co.	Project: EME System M-5 SWD Site	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Kristin Farris	05/12/04 15:04

Organics by GC **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M5-1 (4E07004-01) Water			·						
Benzene	ND	0.00100	mg/L	1	EE41103	05/07/04	05/07/04	EPA 8021B	
Toluene	ND	0.00100	H	"	"	0	11	u	
Ethylbenzene	ND	0.00100	н	"		"	**	н	
Xylene (p/m)	ND	0.00100	11	11	u	11		н	
Xylene (0)	ND	0.00100	н		п		tt	n	
Surrogate: a,a,a-Trifluorotoluene		110 %	80-12	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.0 %	80-12	20	"	"	"	"	

Environmental Lab of Texas

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

Project: EME System M-5 SWD Site Project Number: None Given Project Manager: Kristin Farris

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M5-1 (4E07004-01) Water	······································				<u>u atazan</u>			<u></u>	
Carbonate Alkalinity	ND	0.100	mg/L	1	EE40710	05/07/04	05/07/04	EPA 310.2M	
Bicarbonate Alkalinity	210	2.00	11		н	"	н	н	
Hydroxide Alkalinity	ND	0.100	"	11	"	11	"	"	
Chloride	5940	5.00	**	n	EE40709	05/07/04	05/07/04	EPA 325.3M	
Total Dissolved Solids	12400	5.00	11		EE41102	05/07/04	05/11/04	EPA 160.1	
Sulfate	420	5.00	н	10	EE41114	05/11/04	05/11/04	EPA 375.4	

Environmental Lab of Texas

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Quality Assurance Review

Page 3 of 10

•	Rice Operating Co.	Project:	EME System M-5 SWD Site	Fax: (505) 397-1471
	122 W. Taylor	Project Number:	None Given	Reported:
	Hobbs NM, 88240	Project Manager:	Kristin Farris	05/12/04 15:04

Total Metals by EPA / Standard Methods **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M5-1 (4E07004-01) Water									
Calcium	2110	10.0	mg/L	1000	EE41104	05/10/04	05/11/04	EPA 6010B	
Magnesium	565	0.100	11	100		11		11	
Potassium	56.0	0.500	11	10	"	"	"		
Sodium	2520	10.0	"	1000	u	н		"	

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Quality Assurance Review

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Hobbs NM, 88240	Project Manager: Kristin Farris								05/12/04 15:04		
		ganics by		- ·							
	Environmental Lab of Texas									- · · · · · · · · · · · · · · · · · · ·	
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch EE41103 - EPA 5030C (GC)											
Blank (EE41103-BLK1)				Prepared	& Analyze	ed: 05/07/	04				
Benzene	ND	0.00100	mg/L								
Foluene	ND	0.00100	n								
Ethylbenzene	ND	0.00100	u								
Xylene (p/m)	ND	0.00100	**								
Xylene (o)	ND	0.00100	11	,							
Surrogate: a,a,a-Trifluorotoluene	23.2		ug/l	20.0		116	80-120				
Surrogate: 4-Bromofluorobenzene	19.7		"	20.0		98.5	80-120				
LCS (EE41103-BS1)				Prepared	& Analyz	ed: 05/07/	04				
Benzene	91.9		ug/l	100		91.9	80-120				
Foluene	101		11	100		101	80-120				
Ethylbenzene	102		11	100		102	80-120				
Xylene (p/m)	210		"	200		105	80-120				
Xylene (o)	106		11	100		106	80-120				
Surrogate: a,a,a-Trifluorotoluene	20.6		"	20.0		103	80-120				
Surrogate: 4-Bromofluorobenzene	23.5		"	20.0		118	80-120				
Calibration Check (EE41103-CCV1)				Prepared	& Analyze	ed: 05/07/	04				
Benzene	85.5		ug/l	100		85.5	80-120				
Foluene	95.5		н	100		95.5	80-120				
Ethylbenzene	91.2		"	100		91.2	80-120				
Xylene (p/m)	194		n	200		97.0	80-120				
Xylene (o)	96.5		11	100		96.5	80-120				
Surrogate: a,a,a-Trifluorotoluene	17.3		"	20.0		86.5	80-120				
Surrogate: 4-Bromofluorobenzene	23.7		"	20.0		118	80-120				
Duplicate (EE41103-DUP1)	So	urce: 4E0700	01-01	Prepared	& Analyz	ed: 05/07/	'04				
Benzene	ND	0.00100	mg/L		ND				20		
Foluene	ND	0.00100	н		ND				20		
Ethylbenzene	ND	0.00100	н		ND				20		
Xylene (p/m)	ND	0.00100	11		ND				20		
Xylene (o)	ND	0.00100	"		ND				20		
Surrogate: a,a,a-Trifluorotoluene	23.5		ug/l	20.0		118	80-120		· · · · · · · · · · · ·		
	<u> </u>		"	20.0		105	00 100				

Project: EME System M-5 SWD Site

Project Number: None Given

Environmental Lab of Texas

Surrogate: 4-Bromofluorobenzene

Rice Operating Co.

122 W. Taylor

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Quality Assurance Review

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Fax: (505) 397-1471

Reported:

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

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Project: EME System M-5 SWD Site Project Number: None Given Project Manager: Kristin Farris

Organics by GC - Quality Control

Environmental Lab of Texas

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

Batch EE41103 - EPA 5030C (GC)

Matrix Spike (EE41103-MS1)		Source:	4E07001-02	Prepared a	& Analyz	ed: 05/07/	/04
Benzene		86.2	ug/l	100	ND	86.2	80-120
Toluene		96.9	11	100	ND	96.9	80-120
Ethylbenzene		92.9	11	100	ND	92.9	80-120
Xylene (p/m)		196	11	200	ND	98.0	80-120
Xylene (o)	1	96.7	11	100	ND	96.7	80-120
Surrogate: a,a,a-Trifluorotoluene		20.8	"	20.0		104	80-120
Surrogate: 4-Bromofluorobenzene		23.3	"	20.0		116	80-120

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

Reported: 05/12/04 15:04

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EE40709 - General Preparatio	on (WetChem)									
Blank (EE40709-BLK1)				Prepared	& Analyze	ed: 05/07/	04			
Chloride	ND	5.00	mg/L				-			
Matrix Spike (EE40709-MS1)	Sour	-ce: 4E0600	7-02	Prepared	& Analyze	ed: 05/07/	04			
Chloride	514	5.00	mg/L	250	270	97.6	80-120			
Matrix Spike Dup (EE40709-MSD1)	Sour	rce: 4E0600	7-02	Prepared	& Analyze	ed: 05/07/	04			
Chloride	514	5.00	mg/L	250	270	97.6	80-120	0.00	20	
Reference (EE40709-SRM1)				Prepared	& Analyze	ed: 05/07/	04			
Chloride	4780		mg/L	5000		95.6	80-120			
Batch EE40710 - General Preparatio	on (WetChem))								
Blank (EE40710-BLK1)				Prepared	& Analyze	ed: 05/07/	04			
Carbonate Alkalinity	ND	0.100	mg/L							
Bicarbonate Alkalinity	ND	2.00	n							
Hydroxide Alkalinity	ND	0.100	"							
Calibration Check (EE40710-CCV1)				Prepared	& Analyze	ed: 05/07/	04			
Carbonate Alkalinity	0.0454		mg/L	0.0500		90.8	80-120			
Duplicate (EE40710-DUP1)	Sour	rce: 4E0600	07-02	Prepared	& Analyzo	ed: 05/07/	04			
Carbonate Alkalinity	0.00	0.100	mg/L		0.00				20	
		0.00			173			0.576	20	
Bicarbonate Alkalinity	174	2.00			1/3			0.570	20	

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Quality Assurance Review

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Rice Operating Co.		Pro	oject: EN	AE System	M-5 SWD	Site			Fax: (505)	397-1471	
122 W. Taylor		Project Nur	nber: No	one Given					Repo	rted:	
Hobbs NM, 88240	Project Manager: Kristin Farris								05/12/04 15:04		
General Chemi		-				iods - Q	Quality	Contro	ol		
		Environm	ental l	lab of T	exas						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch EE41102 - General Preparatio	n (WetChen	n)									
Blank (EE41102-BLK1)				Prepared:	05/07/04	Analyzed	1: 05/11/04				
Total Dissolved Solids	ND	5.00	mg/L								
Duplicate (EE41102-DUP1)	So	urce: 4E0700	1-01	Prepared:	05/07/04	Analyzed	1: 05/11/04	ļ			
Total Dissolved Solids	1450	5.00	mg/L		1440			0.692	20		
Batch EE41114 - General Preparatio	n (WetChen	n)									
Blank (EE41114-BLK1)	· · · · · · · · · · · · · · · · · · ·			Prepared	& Analyze	ed: 05/11/	04				
Sulfate	ND	0.500	mg/L								
Calibration Check (EE41114-CCV1)				Prepared	& Analyz	ed: 05/11/	04				
Sulfate	50.9		mg/L	50.0		102	80-120		~		

Duplicate (EE41114-DUP1)	Source	: 4E0600	7-02	Prepared & Analyzed: 05/11/04			
Sulfate	270	2.50	mg/L	274	1.47	20	

Environmental Lab of Texas

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Quality Assurance Review

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•	Rice Operating Co.	Project: E	EME System M-5 SWD Site	Fax: (505) 397-1471
	122 W. Taylor	Project Number: N	None Given	Reported:
	Hobbs NM, 88240	Project Manager: K	Kristin Farris	05/12/04 15:04

Total Metals 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 EE41104 - General Preparatio	n (Metals)									
Blank (EE41104-BLK1)				Prepared:	05/10/04	Analyzed	1: 05/11/04			
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100								
Potassium	ND	0.0500	"							
Sodium	ND	0.0100								
Calibration Check (EE41104-CCV1)				Prepared:	: 05/10/04	Analyzed	1: 05/11/04			
Calcium	1.98		mg/L	2.00		99.0	85-115			
Magnesium	2.12		н	2.00		106	85-115			
Potassium	1.83		**	2.00		91.5	85-115			
Sodium	1.72		11	2.00		86.0	85-115			
Duplicate (EE41104-DUP1)	So	urce: 4E0700	01-01	Prepared	: 05/10/04	Analyzec	1: 05/11/04			
Calcium	24.4	0.100	mg/L		24.5			0.409	20	
Magnesium	4.18	0.00100	н		4.18			0.00	20	
Potassium	18.7	0.500	11		18.4			1.62	20	
Sodium	557	1.00	11		557			0.00	20	

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Quality Assurance Review

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•	Rice Operating Co.	Project: EME System M-5 SWD Site	Fax: (505) 397-1471
	122 W. Taylor	Project Number: None Given	Reported:
	Hobbs NM, 88240	Project Manager: Kristin Farris	05/12/04 15:04

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

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.

Quality Assurance Review

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Environmental Lab of 12600 West I-20 East Phone: 43 Odessa, Texas 79765 Fax: 43	Project Manager: Kristin Farris	company Name Rice Operating Company	company Address: 122 West Taylor	city/state/zip: Hobbs, New Mexico 88240	Telephone No: 505-393-9174	sampler signature:	t		-	1	1			isuc		$\langle \mathcal{L} \rangle$		Drop Bux
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Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client:	Rice Operating
Date/Time	e: <u>05-07-04@0900</u>
Order #:	4207064
Initials:	JMM

Sample Receipt Checklist

Temperature of container/cooler?	Tes	No	2.5 C
Shipping container/cooler in good condition?	(Yes)	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Xes-	No	
Chain of Custody signed when relinquished and received?	Tes	No	
Chain of custody agrees with sample label(s)	(es)	No	
Container labels legible and intact?	Tes	No	
Sample Matrix and properties same as on chain of custody?	Tes	No	
Samples in proper container/bottle?	(Yes)	No	
Samples properly preserved?	Tes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Tes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Contact Person: Regarding:	Variance Documentation: Date/Time:	_ Contacted by:
Corrective Action Taken:		



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OIL CONSERVATION DIVISION

5

Analytical Report

Prepared for:

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

Project: EME System M-5 SWD Site Project Number: None Given Location: T20S, R37E, Sec 5, Unit Letter M

Lab Order Number: 4H13001

Report Date: 08/20/04

-	Rice Operating Co.	Project:	EME System M-5 SWD Site	Fax: (505) 397-1471
İ	122 W. Taylor	Project Number:	None Given	Reported:
	Hobbs NM, 88240	Project Manager:	Kristin Farris	08/20/04 17:59
1				

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
M 5-1	4H13001-01	Water	08/11/04 10:41	08/12/04 16:45

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

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Rice Operating Co.	Project:	EME System M-5 SWD Site	Fax: (505) 397-1471
122 W. Taylor	Project Number:	None Given	Reported:
Hobbs NM, 88240	Project Manager:	Kristin Farris	08/20/04 17:59

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M 5-1 (4H13001-01) Water	······································								l
Benzene	ND	0.00100	mg/L	1	EH41804	08/17/04	08/17/04	EPA 8021B	·····
Toluene	ND	0.00100	11	"	**	"	"	u	
Ethylbenzene	ND	0.00100	н	11		"	**		
Xylene (p/m)	ND	0.00100	н	u		*	н	11	
Xylene (0)	ND	0.00100	n	"		**	н	"	
Surrogate: a,a,a-Trifluorotoluene	·	. 117 %	80-12	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.5 %	80-12	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 entirety, with written approval of Environmental Lab of Texas.

Page 2 of 10

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-	Rice Operating Co.	Project: EME System M-5 SWD Site	Fax: (505) 397-1471
	122 W. Taylor	Project Number: None Given	Reported:
	Hobbs NM, 88240	Project Manager: Kristin Farris	08/20/04 17:59

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M 5-1 (4H13001-01) Water				· · · · · · · · · · · · · · ·					
Carbonate Alkalinity	ND	0.100	mg/L	1	EH41610	08/13/04	08/13/04	EPA 310.2M	
Bicarbonate Alkalinity	222	2.00	н		. 11		11	"	
Hydroxide Alkalinity	ND	0.100	"			"	"	"	
Chloride	6910	5.00	"	u	EH41702	08/16/04	08/16/04	EPA 325.3M	
Total Dissolved Solids	17300	5.00	11	11	EH41801	08/17/04	08/18/04	EPA 160.1	
Sulfate	470	0.500	н	**	EH41701	08/16/04	08/16/04	EPA 375.4	

Environmental Lab of Texas

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Page 3 of 10

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

Project: EME System M-5 SWD Site Project Number: None Given Project Manager: Kristin Farris

Reported: 08/20/04 17:59

Total Metals by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M 5-1 (4H13001-01) Water									
Calcium	2360	10.0	mg/L	1000	EH41719	08/17/04	08/17/04	EPA 6010B	
Magnesium	530	0.100	"	100	н	**	"	"	
Potassium	44.2	0.500	"	10		11	н	"	
Sodium	2580	10.0		1000		"	"	"	

Environmental Lab of Texas

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

Page 4 of 10

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240		Project Nur Project Man	nber: No		M-5 SWD) Site			Fax: (505) Repo 08/20/0	rted:
		ganics by Environm		- •						
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH41804 - EPA 5030C (GC)		· · ·								
Blank (EH41804-BLK1)	·····			Prepared	& Analyze	ed: 08/14/	04			
Benzene	ND	< 0.00100	mg/L							
Foluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	11							
Xylene (o)	ND	0.00100	"						e-	
Surrogate: a,a,a-Trifluorotoluene	22.7	<u> </u>	ug/l	20.0		114	80-120			
Surrogate: 4-Bromofluorobenzene	20.2		"	20.0		101	80-120			
LCS (EH41804-BS1)				Prepared	& Analyzo	ed: 08/14/	04			
Benzene	89.5		ug/l	100		89.5	80-120			
Foluene	102		"	100		102	80-120			
Ethylbenzene	98.1		я	100		98.1	80-120			
Xylene (p/m)	205		и	200		102	80-120			
Xylene (o)	101		It	100		101	80-120			
Surrogate: a,a,a-Trifluorotoluene	22.5		<i>n</i>	20.0		112	80-120			· · · .
Surrogate: 4-Bromofluorobenzene	22.5		"	20.0		112	80-120			
Calibration Check (EH41804-CCV1)				Prepared	& Analyz	ed: 08/14/	04			
Benzene	83.5		ug/l	100		83.5	80-120			
Toluene	91.4		**	100		91.4	80-120			
Ethylbenzene	90.5		11	100		90.5	80-120			
Xylene (p/m)	195		11	200		97.5	80-120			
Xylene (o)	91.8		"	100		91.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	18.5		н	20.0		92.5	80-120			
Surrogate: 4-Bromofluorobenzene	20.6		"	20.0		103	80-120			
Matrix Spike (EH41804-MS1)	So	ource: 4H130	13-02	-	& Analyz					
Benzene	82.2		ug/l	100	ND	82.2	80-120			
Toluene	93.1		"	100	ND	93.1	80-120			
Ethylbenzene	89.4		**	100	ND	89.4	80-120			
Xylene (p/m)	188		"	200	ND	94.0	80-120			
Xylene (o)	94.5		"	100	ND	94.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	18.5		<i>I</i> I	20.0		92.5	80-120			
Surrogate: 4-Bromofluorobenzene	19.9		"	20.0		99.5	80-120			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas. Page 5 of

Page 5 of 10

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

-	Rice Operating Co.	Project:	EME System M-5 SWD Site	Fax: (505) 397-1471
	122 W. Taylor	Project Number:	None Given	Reported:
	Hobbs NM, 88240	Project Manager:	Kristin Farris	08/20/04 17:59

Organics by GC - Quality Control

Environmental Lab of Texas

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

Batch EH41804 - EPA 5030C (GC)

Matrix Spike Dup (EH41804-MSD1)	Source: 4	4H13013-02	Prepared a	& Analyz	'04			
Benzene	81.3	ug/l	100	ND	81.3	80-120	1.10	20
Foluene	95.0	н	100	ND	95.0	80-120	2.02	20
Ethylbenzene	90.3	u	100	ND	90.3	80-120	1.00	20
Xylene (p/m)	189	It	200	ND	94.5	80-120	0.531	20
Xylene (0)	89.4	H	100	ND	89.4	80-120	5.55	20
Surrogate: a,a,a-Trifluorotoluene	19.9	n	20.0		99.5	80-120		
Surrogate: 4-Bromofluorobenzene	20.0	"	20.0		100	80-120		

Environmental Lab of Texas

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Page 6 of 10

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

Rice Operating Co.			•	ME System	M-5 SWD	Site			Fax: (505)	397-1471
122 W. Taylor		Project Nur							Repo	rted:
Hobbs NM, 88240		Project Man	ager: Ki	istin Farris					08/20/0	4 17:59
General Chemi	•	•				ods - Q	uality (Contro	ol	
	E	nvironm	ental I		exas					····
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH41610 - General Preparatio	n (WetChem)								
Blank (EH41610-BLK1)				Prepared	& Analyze	d: 08/13/0	04			
Carbonate Alkalinity	ND	0.100	mg/L							
Bicarbonate Alkalinity	ND	2.00	n							
lydroxide Alkalinity	ND	0.100	и							
Duplicate (EH41610-DUP1)	Sou	rce: 4H1201	15-01	Prepared	& Analyze	ed: 08/13/0	04		200 C	
Carbonate Alkalinity	0.00	0.100	mg/L		0.00				20	
Bicarbonate Alkalinity	232	2.00	"		232			0.00	20	
Hydroxide Alkalinity	0.00	0.100	11		0.00				20	
Reference (EH41610-SRM1)				Prepared	& Analyze	d: 08/13/0	04			
Carbonate Alkalinity	0.0530		mg/L	0.0500		106	80-120			
Batch EH41701 - General Preparatio	n (WetChem)								
Blank (EH41701-BLK1)				Prepared	& Analyze	ed: 08/16/0	04			
Sulfate	ND	0.500	mg/L		<u> </u>					
Calibration Check (EH41701-CCV1)				Prepared	& Analyze	ed: 08/16/0	04			
Sulfate	51.0	······	mg/L	50.0		102	80-120			
Duplicate (EH41701-DUP1)	Sou	rce: 4H120	14-01	Prepared	& Analyze	ed: 08/16/	04			
Sulfate	358	0.500	mg/L		322			10.6	20	- <u>-</u>
Batch EH41702 - General Preparatio	n (WetChem)								
Blank (EH41702-BLK1)	····			Prepared	& Analyze	ed: 08/16/	04			
Chloride	ND	5.00	mg/L	• 	· · · · · · · · · · · · · · · · · · ·					

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The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas. Page 7 of 10

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·	Rice Operating Co.	Project: EME	E System M-5 SWD Site	Fax: (505) 397-1471
	122 W. Taylor	Project Number: None	Given	Reported:
	Hobbs NM, 88240	Project Manager: Krist	in Farris	08/20/04 17:59

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 EH41702 - General Preparatio	on (WetChem)								
Matrix Spike (EH41702-MS1)	Sou	rce: 4H1201	2-21	Prepared	& Analyz	ed: 08/16/	04			
Chloride	160	5.00	mg/L	100	65.6	94.4	80-120			
Matrix Spike Dup (EH41702-MSD1)	Sou	rce: 4H1201	2-21	Prepared	& Analyz	ed: 08/16/	04			
Chloride	160	5.00	mg/L	100	65.6	94.4	80-120	0.00	20	
Reference (EH41702-SRM1)	~			Prepared	& Analyz	ed: 08/16/	'04			
Chloride	4960		mg/L	5000		99.2	80-120			
Batch EH41801 - Filtration Preparat	tion									
Blank (EH41801-BLK1)				Prepared	: 08/17/04	Analyzed	d: 08/18/04			
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EH41801-DUP1)	Sou	rce: 4H1700)9-01	Prepared	: 08/17/04	Analyzed	d: 08/18/04	ļ		
Total Dissolved Solids	3900	5.00	mg/L		3910			0.256	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 entirety, with written approval of Environmental Lab of Texas.

Page 8 of 10

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

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Rice Operating Co.	Project: EMI	E System M-5 SWD Site	Fax: (505) 397-1471
122 W. Taylor	Project Number: Non	e Given	Reported:
Hobbs NM, 88240	Project Manager: Kris	tin Farris	08/20/04 17:59

Total Metals 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 EH41719 - 6010B/No Digestion										
Blank (EH41719-BLK1)				Prepared	& Analyze	ed: 08/17/0	04			
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	**							
Sodium	ND	0.0100	H							
Calibration Check (EH41719-CCV1)				Prepared	& Analyze	ed: 08/17/	04		**	
Calcium	2.02		mg/L	2.00		101	85-115			
Magnesium	2.12		н	2.00		106	85-115			
Potassium	1.79		11	2.00		89.5	85-115			
Sodium	1.89		н	2.00		94.5	85-115			
Duplicate (EH41719-DUP1)	So	urce: 4H130	13-04	Prepared	& Analyze	ed: 08/17/	04			
Calcium	36.1	0.100	mg/L		35.2			2.52	20	
Magnesium	11.3	0.0100	"		10.9			3.60	20	
Potassium	34.3	0.500	"		33.2			3.26	20	
Sodium	405	1.00	н		415			2.44	20	

Environmental Lab of Texas

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

•	Rice Operating Co.	Project: EME System M-5 SWD Site	Fax: (505) 397-1471
	122 W. Taylor	Project Number: None Given	Reported:
	Hobbs NM, 88240	Project Manager: Kristin Farris	08/20/04 17:59

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

adand K. Iwil Report Approved By: Date: 8-20-04

Raland K. Tuttle, QA Officer Celey D. Keene, Lab Director, Org. Tech Director Jeanne Mc Murrey, Inorg. Tech Director

James L. Hawkins, Chemist/Geologist Sara Molina, Chemist Sandra Biezugbe, Lab Tech.

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

Environmental Lab of Texas

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CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST	Project Name: EME System M-5 SWD Site	t #:	Project Location: T20S, R37E, Sec 5, Unit Letter M	b0 #:	Analyze	Anions (Cl, SO4, CO3, HCO3) SAR / ESP / CEC Metals: As Ag 8a Cd Cr Pb Hg Semivolatiles BTEX 80218/503001 BTEX 82 RCI N.O.R.M. Total Dissolved Solids				Sample Containers Intact? Y Temperature Upon Receipt: Laboratory Comments:	-1.0'C	
F CUSTO	roject Na	Project #:	ect Locati	P	00	Cther (Specify): TPH: 418.1 8015M 1005 Cations (Ca, Mg, Na, K)					Time	Time 1645
CHAIN O	Ē		Proj		Matrix	Soil Siudge Water (Specify)	2			let	Date	Date B 12 Cl
					Fax No: 505-397-1471 いい いい の の の の の の の の の の の の の の の の	Time Sampled No. of Containers HO3 H2 H2 H2 H2 H2 H2 H2 H2 H2 H2 H2 H2 H2	iou 3 / /			Please email results to both gil@trident-environmental.com and to enviro@leaco.net		menne
					A	bəlqms2 əjsQ	1 10-11-2			lent-environm	Received by:	Received by ELOT:
432-563-1713		pany		88240	en La					oth gil@trid	Time 2.45	Time
Fax: 432-563-1713 Fax: 432-563-1713	Farris	company Name Rice Operating Company	est Taylor	city/State/zip: Hobbs, New Mexico 88240	13-9174	FIELD CODE				ail results to b	R/ Date	Date
st 5	Project Manager: Kristin Farris	Name Rice OF	company Address: 122 West Taylor	e/zip: Hobbs,	Telephone No: <u>505-393-9174</u> oler Sianature:		M5-1				+C	
12600 West I-20 East Odessa, Texas 79765	Project Mai	Company	Company Ad	City/Stat	Telephone No: Samoler Signature:	100 EIH H H HI JOOL	10-			Special Instructions:	Relinquished by/	Relinquished by:

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

Client:	Rice Operating
Date/Time:	08-13-04 @0800

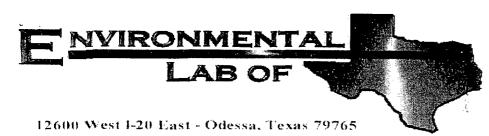
Order #: <u>HHIBOOI</u> Initials: <u>JMM</u>

Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	-1.0 C
Shipping container/cooler in good condition?	(es)	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present.
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Tes	No	
Chain of custody agrees with sample label(s)	res	No	
Container labels legible and intact?	Tes	No	
Sample Matrix and properties same as on chain of custody?	Ves	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	Ves	No	
Containers documented on Chain of Custody?	(Tes)	No	
Sufficient sample amount for indicated test?	(Tes)	No	
All samples received within sufficient hold time?	res	No	
VOC samples have zero headspace?	Tes	No	Not Applicable

Other observations:

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



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OIL CONSERVATION

Analytical Report

Prepared for:

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

Project: EME System M-5 SWD Site Project Number: None Given Location: T20S, R37E, Sec 5, Unit Letter M

Lab Order Number: 4K11005

Report Date: 11/22/04

Rice Operating Co.	Project: EME System M-5 SWD Site	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Kristin Farris	11/22/04 11:44

ANALYTICAL REPORT FOR SAMPLES

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Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
M5-1	4K11005-01	Water	11/10/04 10:30	11/11/04 11:00

TE E

Rice Operating Co.	Project: EME System M-5 SWD Site	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Kristin Farris	11/22/04 11:44

Organics by GC **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M5-1 (4K11005-01) Water				,					
Benzene	ND	0.00100	mg/L	1	EK41502	11/12/04	11/12/04	EPA 8021B	
Toluene	ND	0.00100	0	n	11	11	Π	n	
Ethylbenzene	ND	0.00100	н	"	н	n		н	
Xylene (p/m)	ND	0.00100	*1	"	**	11			
Xylene (0)	ND	0.00100	"	н	"	11	11 201	11	
Surrogate: a,a,a-Trifluorotoluene		96.0 %	80-12	20	"	"	"	- "	
Surrogate: 4-Bromofluorobenzene		104 %	80-12	20	"	"	11	"	

Environmental Lab of Texas

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Page 2 of 11

Rice Operating Co.	Project:	EME System M-5 SWD Site	Fax: (505) 397-1471
122 W. Taylor	Project Number:	None Given	Reported:
Hobbs NM, 88240	Project Manager:	Kristin Farris	11/22/04 11:44

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M5-1 (4K11005-01) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EK41814	11/11/04	11/11/04	EPA 310.2M	
Bicarbonate Alkalinity	256	2.00	н	μ	u.			11	
Hydroxide Alkalinity	ND	0.100	н	11	н	н	н	11	
Chloride	7090	5.00	н	п	EK41809	11/17/04	11/17/04	EPA 325.3M	
Total Dissolved Solids	14000	5.00	**	"	EK41206	11/11/04	11/11/04	EPA 160.1	
Sulfate	614	6.25	п	12.5	EK41904	11/11/04	11/11/04	EPA 375.4	

Environmental Lab of Texas

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ļ	Rice Operating Co.	Project: EME System M-5 SWD Site	Fax: (505) 397-1471
	122 W. Taylor	Project Number: None Given	Reported:
	Hobbs NM, 882 40	Project Manager: Kristin Farris	11/22/04 11:44

Total Metals by EPA / Standard Methods

Environmental Lab of Texas

Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1600	10.0	mg/L	1000	EK42201	11/15/04	11/19/04	EPA 6010B	
428	0.100		100	n	n		*1	
39.2	0.500	11	10	н		"	"	
1940	10.0	н	1000	"	н	н	"	
	1600 428 39.2	Result Limit 1600 10.0 428 0.100 39.2 0.500	Result Limit Units 1600 10.0 mg/L 428 0.100 " 39.2 0.500 "	Result Limit Units Dilution 1600 10.0 mg/L 1000 428 0.100 " 100 39.2 0.500 " 10	Result Limit Units Dilution Batch 1600 10.0 mg/L 1000 EK42201 428 0.100 " 100 " 39.2 0.500 " 10 "	Result Limit Units Dilution Batch Prepared 1600 10.0 mg/L 1000 EK42201 11/15/04 428 0.100 " " " 39.2 0.500 " 10 " "	Result Limit Units Dilution Batch Prepared Analyzed 1600 10.0 mg/L 1000 EK42201 11/15/04 11/19/04 428 0.100 " 100 " " " 39.2 0.500 " 10 " " "	Result Limit Units Dilution Batch Prepared Analyzed Method 1600 10.0 mg/L 1000 EK42201 11/15/04 11/19/04 EPA 6010B 428 0.100 " 100 " " " " 39.2 0.500 " 10 " " " "

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Page 4 of 11

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

Rice Operating Co.	Project: EME System M-5 SWD Site	Fax: (505) 397-1471				
122 W. Taylor	Project Number: None Given	Reported:				
Hobbs NM. 88240	Project Manager: Kristin Farris	11/22/04 11:44				
Organics by GC - Quality Control						

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK41502 - EPA 5030C (GC)				20101						
Blank (EK41502-BLK1)				Prepared	& Analyze	ad: 11/12/	 14			
Benzene	ND	0.00100	mg/L	Trepared	& Analyza					
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100								
Xylene (p/m)	ND	0.00100	11							
Xylene (o)	ND	0.00100	11							
Surrogate: a,a,a-Trifluorotoluene	17.8		ug/l	20.0		89.0	80-120			
Surrogate: 4-Bromofluorobenzene	19.9		"	20.0		99.5	80-120			
					0. At					
LCS (EK41502-BS1)	106				& Analyze					
Benzene Toluene	106 107		ug/l	100 100		106 107	80-120 80-120			
Ethylbenzene	113		п	100		107	80-120 80-120			
Xylene (p/m)	237		n	200		113	80-120 80-120			
Xylene (p) Xylene (o)	107		11	100		107	80-120 80-120			
Surrogate: a,a,a-Trifluorotoluene	20.3			20,0		107	80-120			
Surrogate: 4.a.a-111/100701010000 Surrogate: 4-Bromofluorobenzene	20.3		п	20.0 20.0		102	80-120 80-120			
	20.4									
LCS Dup (EK41502-BSD1)					& Analyz					
Benzene	105		ug/l	100		105	80-120	0.948	20	
Toluene	106		n	100		106	80-120	0.939	20	
Ethylbenzene	113		"	100		113	80-120	0.00	20	
Xylene (p/m)	223		"	200		112	80-120	5.22	20	
Xylene (o)	106		h	100		106	80-120	0.939	20	
Surrogate: a,a,a-Trifluorotoluene	19.3		"	20.0		96.5	80-120			
Surrogate: 4-Bromofluorobenzene	22.2		"	20.0		111	80-120			
Calibration Check (EK41502-CCV1)				Prepared	& Analyz	ed: 11/12/	/04			
Benzene	102		ug/l	100		102	80-120			
Toluene	101		н	100		101	80-120			
Ethylbenzene	109		n	100		109	80-120			
Xylene (p/m)	213		**	200		106	80-120			
Xylene (o)	112		'n	100		112	80-120			
Surrogate: a,a,a-Trifluorotoluene	17.8		"	20.0		89.0	80-120			
Surrogate: 4-Bromofluorobenzene	21.7		"	20.0		108	80-120			

Environmental Lab of Texas

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Rice Operating Co.	Project:	EME System M-5 SWD Site	Fax: (505) 397-1471
122 W. Taylor	Project Number:	None Given	Reported:
Hobbs NM, 88240	Project Manager:	Kristin Farris	11/22/04 11:44

Organics by GC - Quality Control

Environmental Lab of Texas

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

Batch EK41502 - EPA 5030C (GC)

Matrix Spike (EK41502-MS1)	Source: 4	Prepared	& Analyze	ed: 11/12/	'04		
Benzene	116	ug/l	100	ND	116	80-120	
Toluene	115	II.	100	ND	115	80-120	
Ethylbenzene	107	н	100	ND	107	80-120	
Xylene (p/m)	227	н	200	ND	114	80-120	
Xylene (o)	115	н	100	ND	115	80-120	e-
Surrogate: a,a,a-Trifluorotoluene	21.2	"	20.0		106	80-120	
Surrogate: 4-Bromofluorobenzene	21.9	"	20.0		110	80-120	

Environmental Lab of Texas

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

Rice Operating Co.		Fax: (505)	397-1471							
122 W. Taylor		Project Nun	nber: No	ne Given					Repo	rted:
Hobbs NM, 88240	ł	Project Man	ager: Kr	istin Farris					11/22/04	4 11:44
General Chemi	e	eters by nvironm				ods - Q	uality (Contro	1	
							ALDEC.		700	
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK41206 - Filtration Preparat	ion									
				Prepared	& Analyze	ed: 11/11/	04			
Fotal Dissolved Solids	ND	5.00	mg/L							
Duplicate (EK41206-DUP1)	206-DUP1) Source: 4K11004-01 Prepared & Analyzed: 11/11/04									
Total Dissolved Solids	2000	5.00	mg/L		1910			4.60	20	
Batch EK41809 - General Preparatio	on (WetChem)				1-					
Blank (EK41809-BLK1)				Prepared	& Analyze	ed: 11/17/	04			
Chloride	ND	5.00	mg/L	·····						
Matrix Spike (EK41809-MS1)	Sour	·ce: 4K110	04-01	Prepared	& Analyze	ed: 11/17/	04			
Chloride	1220	5.00	mg/L	500	727	98.6	80-120			
Matrix Spike Dup (EK41809-MSD1)	Sou	·ce: 4K110	04-01	Prepared	& Analyz	ed: 11/17/	04			
Chloride	1230	5.00	mg/L	500	727	101	80-120	0.816	20	
Reference (EK41809-SRM1)				Prepared	& Analyz					
Chloride	4960		mg/L	5000		99.2	80-120			
Batch EK41814 - General Preparatio	on (WetChem))								
	on (WetChem))		Prepared	& Analyz	ed: 11/11/	/04			
Batch EK41814 - General Preparation Blank (EK41814-BLK1) Carbonate Alkalinity	on (WetChem) ND	0.100	mg/L	Prepared	& Analyz	ed: 11/11/	/04			
Blank (EK41814-BLK1)			mg/L "	Prepared	& Analyz	ed: 11/11/	/04			

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.

Rice Operating Co.		Fax: (505) 397-1471								
122 W. Taylor		Project Nur	mber: No	one Given					Repo	rted:
Hobbs NM, 88240	·	Project Mar	nager: Kr	istin Farris					11/22/04	4 11:44
General Chemi	•	·		Standar Lab of T		ods - Q	uality (Contro	1	
	E				···					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK41814 - General Preparatio	on (WetChem)						-		
Duplicate (EK41814-DUP1)	Source: 4K11004-01 Prepared & Analyzed: 11/11/04									
Carbonate Alkalinity	0.00	0.100	mg/L		0.00				20	
Bicarbonate Alkalinity	161	2.00	"		160				20	
Hydroxide Alkalinity	0.00	0.100	n		0.00				20	
Reference (EK41814-SRM1)		~		Prepared	& Analyz	ed: 11/11/	04			
Carbonate Alkalinity	0.0500		· mg/L	0.0500		100	80-120			
Batch EK41904 - General Preparatio	on (WetChem)	-							
Blank (EK41904-BLK1)				Prepared	& Analyz	ed: 11/11/	04			
Sulfate	ND	0.500	mg/L							
Calibration Check (EK41904-CCV1)				Prepared	& Analyz					
Sulfate	49.3		mg/L	50.0 98.6 80-120						
Duplicate (EK41904-DUP1)	Sou	rce: 4K110	04-01	Prepared	& Analyz	ed: 11/11/	04			_
Sulfate	241	2.50	mg/L		238	1.25	20			

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Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME System M-5 SWD Site Project Number: None Given Project Manager: Kristin Farris									397-1471 rted: 4 11:44
Total I	-	EPA / Sta Environm			-	ality Co	ntrol			
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EK42201 - 6010B/No Digestion										
Blank (EK42201-BLK1)				Prepared:	11/15/04	Analyzed	: 11/19/04			
Calcium	ND	0.0100	mg/L	i						
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	0							
Sodium	ND	0.0100								
Blank (EK42201-BLK2)				Prepared:	11/15/04	Analyzed	: 11/19/04			
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Calibration Check (EK42201-CCV1)				Prepared:	11/15/04	Analyzed	: 11/19/04			
Calcium	2.15		mg/L	2.00		108	85-115			
Magnesium	2.10		н	2.00		105	85-115			
Potassium	2.08		н	2.00		104	85-115			
Sodium	1.88		11	2.00		94.0	85-115			
Calibration Check (EK42201-CCV2)				Prepared	: 11/15/04	Analyzed	: 11/22/04			
Calcium	1.83		mg/L	2.00		91.5	85-115			
Magnesium	1.96		*1	2.00		98.0	85-115			
Potassium	1.78		н	2.00		89.0	85-115			
Sodium	1.72			2.00		86.0	85-115			
Duplicate (EK42201-DUP1)	Sa	urce: 4K110	13-01RE	1 Prepared	: 11/15/04	Analyzed	: 11/19/04			
Calcium	34.6	0.100	mg/L		ND				20	
Magnesium	25.6	0.0100			ND				20	
Potassium	4.08	0.500	**		ND				20	
Sodium	77.4	1.00			ND				20	

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Rice Operating Co.	Project:	EME System M-5 SWD Site	Fax: (505) 397-1471
122 W. Taylor	Project Number:	None Given	Reported:
Hobbs NM, 88240	Project Manager:	Kristin Farris	11/22/04 11:44

Total Metals by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Result	Reporting Result Limit Units			Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
n									
Sou	rce: 4K1100	04-01	Prepared:	11/15/04	Analyzed	: 11/19/04			
180	1.00	mg/L		179			0.557	20	
48.9	0.0100	н		47.2			3.54	20	
11.7 0.500 " 9.88					16.9	20			
283	1.00	11		268			5.44	20	
	n Sou 180 48.9 11.7	Result Limit n Source: 4K1100 180 1.00 48.9 0.0100 11.7 0.500	Result Limit Units n Source: 4K11004-01 180 1.00 mg/L 180 1.00 mg/L 48.9 0.0100 " 11.7 0.500 " 1 1 1	Result Limit Units Level n Source: 4K11004-01 Prepared: 180 1.00 mg/L 48.9 0.0100 " 11.7 0.500 " 11.7 0.500 "	Result Limit Units Level Result n Source: 4K11004-01 Prepared: 11/15/04 180 1.00 mg/L 179 48.9 0.0100 " 47.2 11.7 0.500 " 9.88	Result Limit Units Level Result %REC n Source: 4K11004-01 Prepared: 11/15/04 Analyzed 180 1.00 mg/L 179 179 48.9 0.0100 47.2 11.7 0.500 9.88	Result Limit Units Level Result %REC Limits n	Result Limit Units Level Result %REC Limits RPD n	Result Limit Units Level Result %REC Limits RPD Limit n Source: 4K11004-01 Prepared: 11/15/04 Analyzed: 11/19/04 180 1.00 mg/L 179 0.557 20 48.9 0.0100 47.2 3.54 20 11.7 0.500 9.88 16.9 20

Environmental Lab of Texas

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Rice Operating Co.	Project: EME System M-5 SWD Site	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Kristin Farris	11/22/04 11:44

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

Ralandt Just 11-22-04 Report Approved By: Date:

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Sanchez, Lab Tech.

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

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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CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST	Project Name: EME		Project Location: T205				TOTAL:	-	Anions (Ct, 504, CO3, HCO3)	$\overline{}$					 		Sample Containers Intact? Temperature Upon Receipt: Laboratory Comments:	Lic		
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Environmental 12600 west I-20 East Odessa, Texas 79765	Project Manager: Kristin Farris	company Name Rice Operating Company	Company Address: 122 West Taylor	city/state/zip: Hobbs, New Mexico 88240	Telephone No: 505-393-9174	Samoler Signature:				-	4	 1		1			us:	5	+	
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Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client: <u>Ric</u>	e Operating Co.
	11-11-04@ 1200
Order #:	4K 11 0 05
Initials	· JMM

Initials:

Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	2.5-	С
Shipping container/cooler in good condition?	Yes	No		
Custody Seals intact on shipping container/cooler?	Yes	No	Not present.	, ,
Custody Seals intact on sample bottles?	Yes	No	Not present	<u> </u>
Chain of custody present?	Yes	No		_
Sample Instructions complete on Chain of Custody?	Yes	> No		
Chain of Custody signed when relinquished and received?	(Yes)	No		
Chain of custody agrees with sample label(s)	Nes	No		
Container labels legible and intact?	Yes)	No		
Sample Matrix and properties same as on chain of custody?	(TES	No		
Samples in proper container/bottle?	(es)	No		
Samples properly preserved?	(es)	No	[
Sample bottles intact?	(es)	No		
Preservations documented on Chain of Custody?	(es)	No	[
Containers documented on Chain of Custody?	(Kes)	No	1	
Sufficient sample amount for indicated test?	Tes	No		
All samples received within sufficient hold time?	(es)	No		
VOC samples have zero headspace?	(es/	No	Not Applicable	3

Other observations:

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





174R 0 4 5 3

OIL CONST LIVIS

Analytical Report

Prepared for:

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

Project: EME System M-5 SWD Site Project Number: None Given Location: T2OS, R36E, Sec 5, Unit Letter M

Lab Order Number: 5B09007

Report Date: 02/20/05

Rice Operating Co.	Project:	EME System M-5 SWD Site	Fax: (505) 397-1471
122 W. Taylor	Project Number: 1	None Given	Reported:
Hobbs NM, 88240	Project Manager:	Kristin Farris	02/20/05 14:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
M5-1	5B09007-01	Water	02/08/05 09:40	02/09/05 07:00

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Rice Operating Co.	Project:	EME System M-5 SWD Site	Fax: (505) 397-1471
122 W. Taylor	Project Number:	None Given	Reported:
Hobbs NM, 88240	Project Manager:	Kristin Farris	02/20/05 14:23

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M5-1 (5B09007-01) Water	·								
Benzene	ND	0.00100	mg/L	1	EB51807	02/14/05	02/15/05	EPA 8021B	
Toluene	ND	0.00100	11	"	"	"	"	"	
Ethylbenzene	ND	0.00100	н	"	"	н	"	"	
Xylene (p/m)	ND	0.00100	n	n	"	н	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		110 %	80-12)	"	"	"	n	
Surrogate: 4-Bromofluorobenzene		95.5 %	80-12	0	n	"	"	"	

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Page 2 of 10

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

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Rice Operating Co.	Project:	EME System M-5 SWD Site	Fax: (505) 397-1471
122 W. Taylor	Project Number:	None Given	Reported:
Hobbs NM, 88240	Project Manager:	Kristin Farris	02/20/05 14:23

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M5-1 (5B09007-01) Water									
Total Alkalinity	238	2.00	mg/L	1	EB51404	02/15/05	02/15/05	EPA 310,2M	
Chloride	6710	500	n	1000	EB51713	02/10/05	02/10/05	EPA 300.0	
Total Dissolved Solids	13200	5.00	"	1	EB51004	02/09/05	02/10/05	EPA 160.1	
Sulfate	1450	500	"	1000	EB51713	02/10/05	02/10/05	EPA 300.0	

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	Rice Operating Co.	Project:	EME System M-5 SWD Site	Fax: (505) 397-1471
	122 W. Taylor	Project Number:	None Given	Reported:
Ì	Hobbs NM, 88240	Project Manager:	Kristin Farris	02/20/05 14:23

Total Metals by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M5-1 (5B09007-01) Water									
Calcium	1800	10.0	mg/L	1000	EB51702	02/14/05	02/16/05	EPA 6010B	
Magnesium	431	0.100	"	100	"	"	"	"	
Potassium	40.4	0.500		10	"			"	
Sodium	2420	10.0	**	1000	n	u	n	"	

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IF DIN

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

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Project: EME System M-5 SWD Site Project Number: None Given Project Manager: Kristin Farris Fax: (505) 397-1471

Reported: 02/20/05 14:23

Organics by GC - Quality Control

Environmental Lab of Texas

					~		0/0=0			
Analyte	Result	Reporting _ Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB51807 - EPA 5030C (GC)			<i></i>							
Blank (EB51807-BLK1)				Prepared &	Analyzed:	02/14/05			_	
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100								
Xylene (p/m)	ND	0.00100								
Xylene (0)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	16.5		ug/l	20.0		82.5	80-120			
Surrogate: 4-Bromofluorobenzene	17.4		"	20.0		87.0	80-120			
LCS (EB51807-BS1)				Prepared &	z Analyzed:	02/14/05				
Benzene	105		ug/l	100		105	80-120			
Toluene	105		"	100		105	80-120			
Ethylbenzene	95.9		"	100		95.9	80-120			
Xylene (p/m)	196		"	200		98.0	80-120			
Xylene (0)	95.7		"	100		95.7	80-120			
Surrogate: a,a,a-Trifluorotoluene	16.5		"	20.0		82.5	80-120			
Surrogate: 4-Bromofluorobenzene	16.8		"	20.0		84.0	80-120			
LCS Dup (EB51807-BSD1)				Prepared &	Analyzed:	02/14/05				
Benzene	113		ug/l	100		113	80-120	7.34	20	
Toluene	112		"	100		112	80-120	6.45	20	
Ethylbenzene	107		"	100		107	80-120	10.9	20	
Xylene (p/m)	224		"	200		112	80-120	13.3	20	
Xylene (0)	111		"	100		111	80-120	14.8	20	
Surrogate: a,a,a-Trifluorotoluene	18.6		"	20.0		93.0	80-120			
Surrogate: 4-Bromofluorobenzene	20.2		"	20.0		101	80-120			
Calibration Check (EB51807-CCV1)				Prepared: ()2/14/05 A	nalyzed: 02	/16/05			
Benzene	97.5		ug/l	100		97.5	80-120			
Toluene	104		n	100		104	80-120			
Ethylbenzene	93.1		11	100		93.1	80-120			
Xylene (p/m)	194		"	200		97.0	80-120			
Xylene (0)	97.9			100		97.9	80-120			
Surrogate: a,a,a-Trifluorotoluene	16.7		"	20.0		83.5	80-120			
Surrogate: 4-Bromofluorobenzene	17.8		"	20.0		89.0	80-120			

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Project: EME System M-5 SWD Site Project Number: None Given Project Manager: Kristin Farris

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80-120

Reported: 02/20/05 14:23

Organics by GC - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EB51807 - EPA 5030C (GC)		****								
Matrix Spike (EB51807-MS1)	Sour	ce: 5B09008-	01	Prepared: 02/14/05 Analyzed: 02/18/05						
Benzene	93.3		ug/l	100	ND	93.3	80-120			
Toluene	101		"	100	ND	101	80-120			
Ethylbenzene	102		n	100	ND	102	80-120			
Xylene (p/m)	206		17	200	ND	103	80-120			
Xylene (o)	97.3		**	100	ND	97.3	80-120			
Surrogate: a,a,a-Trifluorotoluene	23.3		"	20.0		116	80-120			

20.4

Surrogate: 4-Bromofluorobenzene

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Rice Operating Co.Project:EME System M-5 SWD Site122 W. TaylorProject Number:None GivenHobbs NM, 88240Project Manager:Kristin Farris											
Gener	ral Chemistry Para	•				ls - Qua	lity Cont	rol		<u></u>	
		Environm	entai La	ad of ley	as						

Blank (EB51004-BLK1)				Prepared: 02/09/0	05 Analyzed: 02	/10/05		
Total Dissolved Solids	ND	5.00	mg/L					
Duplicate (EB51004-DUP1)	Sourc	e: 5B09003-	01	Prepared: 02/09/	05 Analyzed: 02	2/10/05		
Total Dissolved Solids	16200	5.00	mg/L	146	500		10.4	20
Batch EB51404 - General Preparati	on (WetChem)		- 1444					
Blank (EB51404-BLK1)				Prepared & Anal	yzed: 02/15/05			
Total Alkalinity	ND	2.00	mg/L					
Duplicate (EB51404-DUP1)	Sourc	01	Prepared & Anal	yzed: 02/15/05				
Total Alkalinity	395	2.00	mg/L	39	96	0.253	20	
Reference (EB51404-SRM1)				Prepared & Anal	yzed: 02/15/05			
Carbonate Alkalinity	0.0510		mg/L	0.0500	102	80-120		
Batch EB51713 - General Preparati	on (WetChem)							
Blank (EB51713-BLK1)				Prepared & Anal	yzed: 02/10/05			
Sulfate	ND	0.500	mg/L					
Chloride	ND	0.500	н					
LCS (EB51713-BS1)				Prepared & Anal	yzed: 02/10/05			
Sulfate	9.66		mg/L	10.0	96.6	80-120		
Chloride	9.56		"	10.0	95.6	80-120		

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Rice Operating Co.	Project:	EME System M-5 SWD Site	Fax: (505) 397-1471
122 W. Taylor	Project Number:	None Given	Reported:
Hobbs NM, 88240	Project Manager:	Kristin Farris	02/20/05 14:23

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

D k	Reporting		~						
			Spike	Source		%REC		RPD	
Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
etChem)									
			Prepared &	Analyzed:	02/10/05				
9.64		mg/L	10.0		96.4	80-120	0.207	20	
9.51		n	10.0		95.1	80-120	0.524	20	
			Prepared &	Analyzed:	02/10/05				
9.73		mg/L	10.0		97.3	80-120			
9.88		"	10.0		98.8	80-120			
Source: 5B09004-01 Prepared & Analyzed: 02/10/05									
304	10.0	mg/L		304			0.00	20	
357	10.0	11		356			0.281	20	
	9.64 9.51 9.73 9.88 Sour 304	etChem) 9.64 9.51 9.73 9.88 Source: 5B09004- 304 10.0	etChem) 9.64 mg/L 9.51 " 9.73 mg/L 9.88 " Source: 5B09004-01 304 10.0 mg/L	etChem) Prepared & 9.64 mg/L 10.0 9.51 " 10.0 Prepared & 9.73 mg/L 10.0 9.88 " 10.0 Source: 5B09004-01 Prepared & 304 10.0 mg/L	Prepared & Analyzed: 9.64 mg/L 10.0 9.51 " 10.0 Prepared & Analyzed: 9.73 mg/L 10.0 9.73 mg/L 10.0 9.88 " 10.0 Source: 5B09004-01 Prepared & Analyzed: 304 10.0 mg/L 304	Prepared & Analyzed: 02/10/05 9.64 mg/L 10.0 96.4 9.51 " 10.0 95.1 Prepared & Analyzed: 02/10/05 9.73 mg/L 10.0 97.3 9.88 " 10.0 98.8 Source: 5B09004-01 Prepared & Analyzed: 02/10/05 304 10.0 mg/L 304	Prepared & Analyzed: 02/10/05 9.64 mg/L 10.0 96.4 80-120 9.51 " 10.0 95.1 80-120 9.51 " 10.0 95.1 80-120 Prepared & Analyzed: 02/10/05 9.73 mg/L 10.0 97.3 80-120 9.88 " 10.0 98.8 80-120 Source: 5B09004-01 Prepared & Analyzed: 02/10/05 304 10.0 mg/L 304	Prepared & Analyzed: 02/10/05 9.64 mg/L 10.0 96.4 80-120 0.207 9.51 " 10.0 95.1 80-120 0.524 Prepared & Analyzed: 02/10/05 9.73 mg/L 10.0 97.3 80-120 9.88 " 10.0 98.8 80-120 Source: 5B09004-01 Prepared & Analyzed: 02/10/05 304 10.0 mg/L 304 0.00	Prepared & Analyzed: 02/10/05 9.64 mg/L 10.0 96.4 80-120 0.207 20 9.51 " 10.0 95.1 80-120 0.524 20 Prepared & Analyzed: 02/10/05 9.73 mg/L 10.0 97.3 80-120 9.88 " 10.0 98.8 80-120 Source: 5B09004-01 Prepared & Analyzed: 02/10/05 304 10.0 mg/L 304 0.00 20

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Project: EME System M-5 SWD Site Project Number: None Given Project Manager: Kristin Farris

Reported: 02/20/05 14:23

Total Metals 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 EB51702 - 6010B/No Digestion										
Blank (EB51702-BLK1)				Prepared: 0)2/14/05 A	nalyzed: 02	2/16/05			
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	**							
Sodium	ND	0.0100	11							
Calibration Check (EB51702-CCV1)				Prepared: ()2/14/05 A	nalyzed: 02	2/16/05			
Calcium	2.22		mg/L	2.00		111	85-115			
Magnesium	2.08		п	2.00		104	85-115			
Potassium	1.75		"	2.00		87.5	85-115			
Sodium	1.94		11	2.00		97.0	85-115			
Duplicate (EB51702-DUP1)	Sou	rce: 5B09003-	01	Prepared: ()2/14/05 A	nalyzed: 02	2/16/05			
Calcium	905	1.00	mg/L		848			6.50	20	
Magnesium	254	0.100	"		239			6.09	20	
Potassium	88.3	2.50	"		90.7			2.68	20	
Sodium	5810	10.0	"		4840			18.2	20	

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122 W. TaylorProject Number: None GivenReported:Hobbs NM, 88240Project Manager: Kristin Farris02/20/05 14:23	Rice Operating Co.	Project:	EME System M-5 SWD Site	Fax: (505) 397-1471
Hobbs NM, 88240 Project Manager: Kristin Farris 02/20/05 14:23	122 W. Taylor	Project Number:	None Given	Reported:
Troject Manager, Tanoni Farito	Hobbs NM, 88240	Project Manager:	Kristin Farris	02/20/05 14:23

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 Junis

2/20/2005

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

Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Sanchez, Lab Tech.

Date:

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Page 10 of 10

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	ki		LA V		Please email result								M 5-1	FIELD CODE				une Lile	Telephone No: 505-395 9174	city/state/zip: Hobbs, New Mexico 88240	company Address: 122 West Taylor	company Name Rice Operating Company	Project Manager: Kristin Farris	Environmental Lab of Texas 12600 West I-20 East Phone: 432-563-1800 Fax: 432-563-1713
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Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client: <u>R</u> ;	ce Operating Co.
	02-09-05 @ 0700
Order #:	51309007
Initials:	JMM

Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	-1.0° C]
Shipping container/cooler in good condition?	(Tes)	No		
Custody Seals intact on shipping container/cooler?	(Yes)	No	Not present	Jon Black Boy
Custody Seals intact on sample bottles?	Yes	No	(Not present	
Chain of custody present?	Yes	No		+ notin dropbex
Sample Instructions complete on Chain of Custody?	(es)	No		ater
Chain of Custody signed when relinquished and received?	(Tes)	No		later
Chain of custody agrees with sample label(s)	des	> No]
Container labels legible and intact?	Yes	No		1
Sample Matrix and properties same as on chain of custody?	(es)	No		
Samples in proper container/bottle?	(res)	No		1
Samples properly preserved?	Ves	No]
Sample bottles intact?	(res)	No		1
Preservations documented on Chain of Custody?	Yes	No		Ì
Containers documented on Chain of Custody?	(Yes	No]
Sufficient sample amount for indicated test?	(Yes	No		
All samples received within sufficient hold time?	Xee	No]
VOC samples have zero headspace?	Yes	No	Not Applicable	

Other observations:

Variance Documentation:

Contact Person: - GI Van Deventr Date/Time: 02-09-05@0800 Contacted by: Jeanne Manung Regarding:

missing COC

Corrective Action Taken:

Client will bring CDC by later this processing

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