1R – 424

ANNUAL GW MONITOR REPORT

DATE: 2007

1R 424
Annual GW Mon. Report
2007

R. T. HICKS CONSULTANTS, LTD.

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901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

January 24, 2008

Wayne Price
Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

RE: 2007 Annual Ground Water Monitoring Report
M-5 SWD, Sec 05, T20S, R37E, Unit "M"
NMOCD Case #: 1R424

Dear Mr. Wayne Price:

R.T. Hicks Consultants, Ltd is pleased to submit the 2007 Annual Ground Water Monitoring Report for the M-5 SWD site located in the EME Salt Water Disposal System (SWD). This report consists of the following sections:

1. A table summarizing all laboratory results, depth to ground water and other pertinent data associated with ground water sampling at the site, including this past year.
2. Graphs showing chemical concentration over time for chloride, TDS, and sulfate.
3. Laboratory data sheets associated with the routine sampling for 2007.

A Corrective Action Plan was submitted to NMOCD on September 10, 2004. The CAP is pending NMOCD approval, which we respectively request in writing. We plan to continue quarterly ground water monitoring in 2008.

Thank you for your consideration of this annual summary information. The attached CD contains an electronic copy of this report. If you have any questions, please contact us at 505-266-5004, or Kristin Farris Pope at ROC, 505-393-9174.

Sincerely,
R.T. Hicks Consultants, Ltd.

Randall T. Hicks
Principal

Copy: Hobbs NMOCD office; Rice Operating Company

M-5 SWD

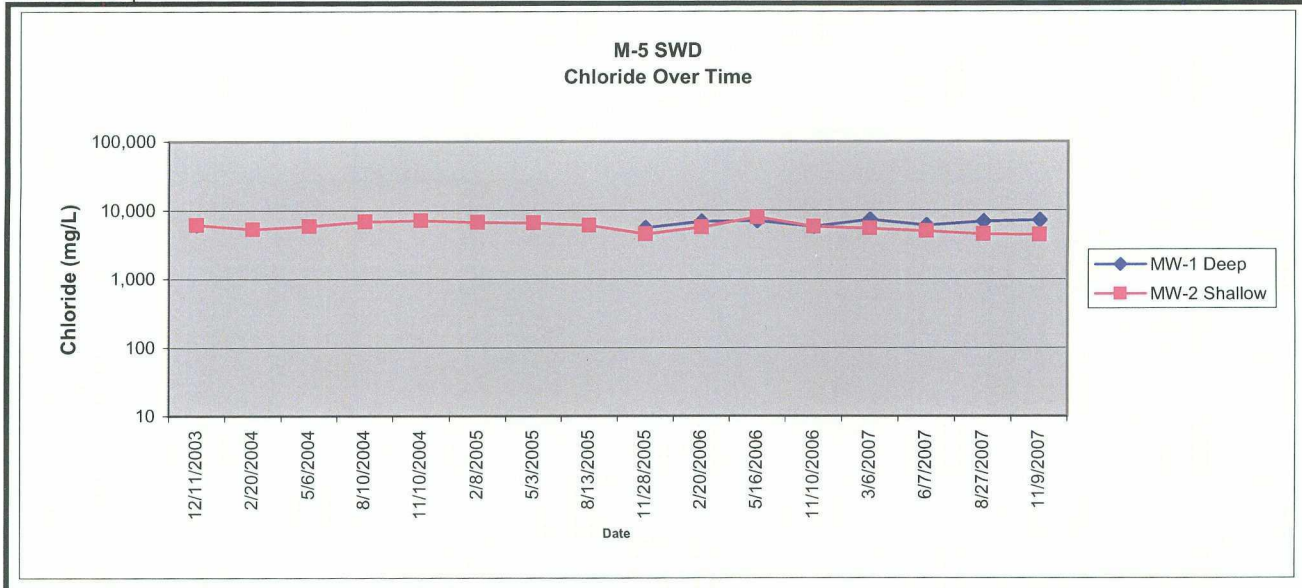
Table 1: chemistry over time

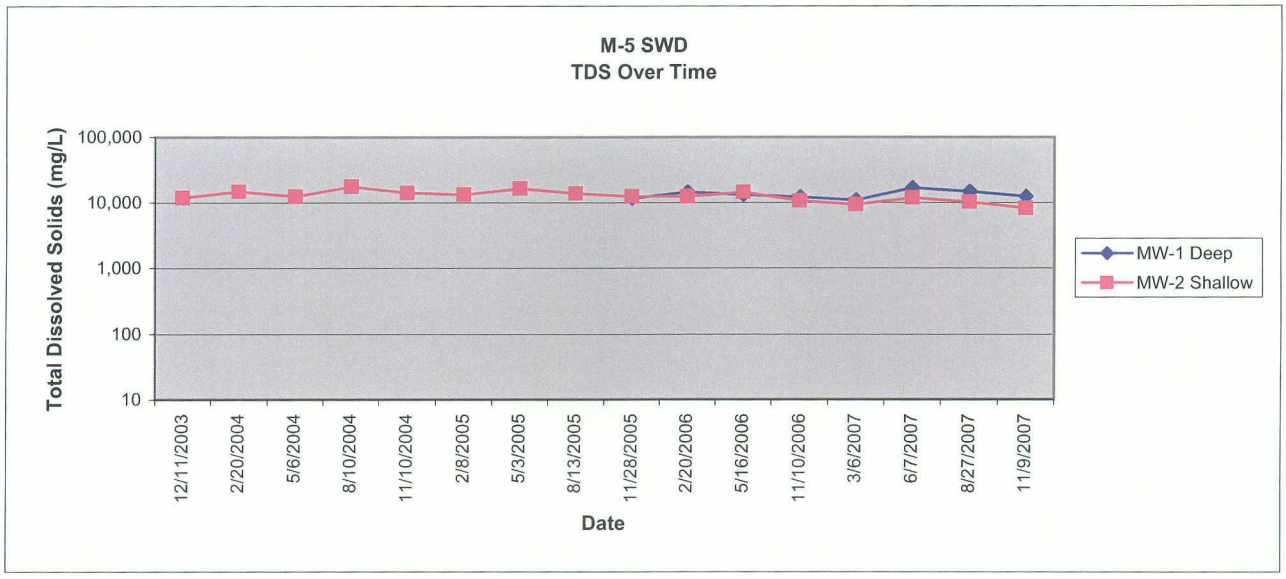
Well Name	Date	DTW (ft)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	EthylBenzene (mg/L)	Total Xylenes (mg/L)	Comments
MW-1 Deep	12/11/2003	33.40	6198	XXX	11736	<0.002	<0.002	<0.002	<0.006	Deep
MW-1 Deep	11/28/2005	28.1	5590	XXX	11400	<0.001	<0.001	<0001	<0.001	Deep
MW-1 Deep	2/20/2006		6830	503	14400	<0.001	<0.001	<0.001	<0.001	
MW-1 Deep	2/20/2006	27.87	6830	503	14400	<0.001	<0.001	<0.001	<0.001	Deep
MW-1 Deep	5/16/2006	27.81	7000	752	13100	<0.001	<0.001	<0.001	<0.001	Deep
MW-1 Deep	11/10/2006	27.49	5840	421	12000	<0.001	<0.001	<0.001	<0.001	Clear no odor
MW-1 Deep	3/6/2007	26.79	7300	595	10700	<0.001	<0.001	<0.001	<0.001	Clear/ No Odor
MW-1 Deep	6/7/2007	26.68	6110	371	16600	<0.001	<0.001	<0.001	<0.001	clear no odor
MW-1 Deep	8/27/2007	27.14	6898	394	14776	<0.002	<0.002	<0.002	<0.006	Clear No Odor
MW-1 Deep	11/9/2007	27.07	7100	435	12247	<0.001	<0.001	<0.001	<0.003	Clear No odor

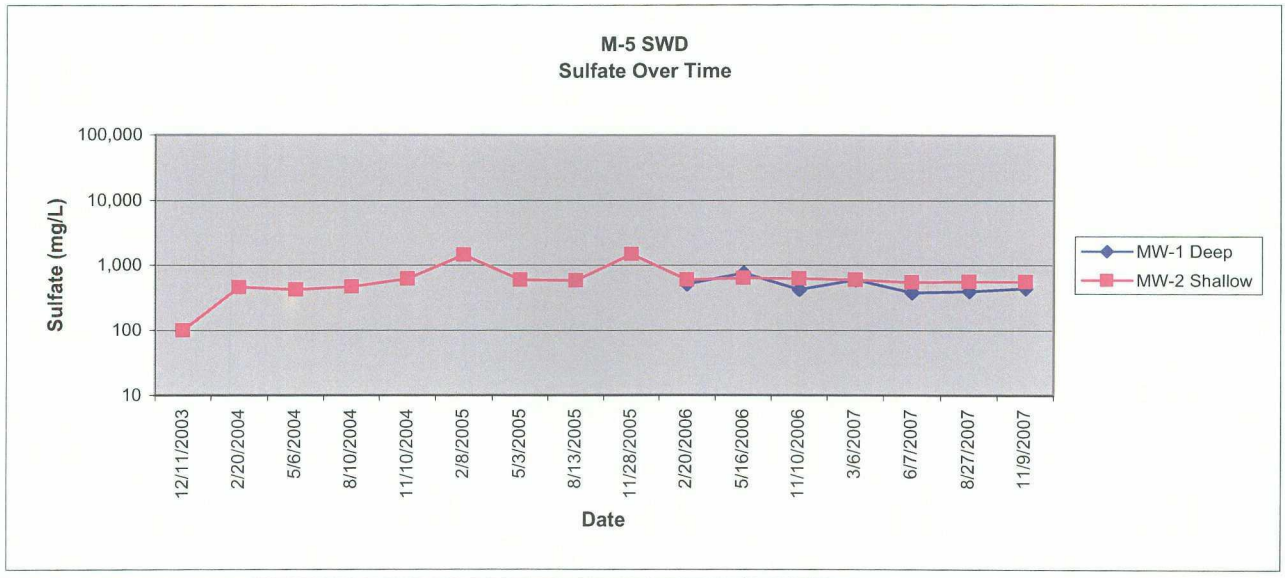
M-5 SWD

Table 1: chemistry over time

Well Name	Date	DTW (ft)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	EthylBenzene (mg/L)	Total Xylenes (mg/L)	Comments
MW-2 Shallow	12/11/2003	33.40	6198	90.5	11736	<0.002	<0.002	<0.002	<0.006	Deep
MW-2 Shallow	12/11/2003	33.28	6198	99.8	10784	<0.002	<0.002	<0.002	<0.006	Shallow
MW-2 Shallow	2/20/2004	33.37	5320	454	14500	<0.001	<0.001	<0.001	<0.001	Shallow
MW-2 Shallow	5/6/2004	32.79	5940	420	12400	<0.001	<0.001	<0.001	<0.001	Shallow
MW-2 Shallow	8/10/2004	32.52	6910	470	17300	<0.001	<0.001	<0.001	<0.001	Shallow
MW-2 Shallow	11/10/2004	31.63	7090	614	14000	<0.001	<0.001	<0.001	<0.001	Shallow
MW-2 Shallow	2/8/2005	28.85	6710	1450	13200	<0.001	<0.001	<0.001	<0.001	Shallow
MW-2 Shallow	5/3/2005	28.1	6560	595	16500	<0.001	<0.001	<0.001	<0.001	XXX
MW-2 Shallow	8/13/2005	XXX	6070	574	13800	<0.001	<0.001	<0.001	<0.001	XXX
MW-2 Shallow	11/28/2005	27.87	4500	1470	12300	<0.001	<0.001	<0.001	<0.001	Shallow
MW-2 Shallow	2/20/2006	27.25	5660	596	12400	<0.001	<0.001	<0.001	<0.001	Shallow
MW-2 Shallow	2/20/2006		5660	596	12400	<0.001	<0.001	<0.001	<0.001	
MW-2 Shallow	5/16/2006	27.81	7870	626	14300	<0.001	<0.001	<0.001	<0.001	Shallow
MW-2 Shallow	11/10/2006	27.39	5840	622	10500	<0.001	<0.001	<0.001	<0.001	Clear no odor
MW-2 Shallow	3/6/2007	26.67	5440	595	9190	<0.001	<0.001	<0.001	<0.001	Clear/
MW-2 Shallow	6/7/2007	26.53	4960	539	11700	<0.001	<0.001	<0.001	<0.001	clear no odor
MW-2 Shallow	8/27/2007	27.02	4499	554	10095	<0.002	<0.002	<0.002	<0.006	Clear No Odor
MW-2 Shallow	11/9/2007	26.92	4400	549	8193	<0.001	<0.001	<0.001	<0.003	Clear No odor







R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW, Suite F-142 Albuquerque, NM 87104 505-266-5004	Ground Water Chemistry	M-5 SWD
	Rice Operating Company 2007 Annual Report	1/24/2008

ENVIRONMENTAL LAB OF
12600 West I-20 East - Odessa, Texas 79765
A Xenco Laboratories Company

Analytical Report

Prepared for:

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

Project: EME M-5 SWD
Project Number: None Given
Location: T20S-R37E-Sec 5M- Lea County, NM

Lab Order Number: 7C09026

Report Date: 03/29/07

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #1 Shallow	7C09026-01	Water	03/06/07 12:50	03-09-2007 13:15
Monitor Well #1 Deep	7C09026-02	Water	03/06/07 13:55	03-09-2007 13:15

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

Rice Operating Co.	Project: EME M-5 SWD	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	
Hobbs NM, 88240	Project Manager: Kristin Farris-Pope	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 Shallow (7C09026-01) Water									
Benzene	ND	0.00100	mg/L	1	EC71307	03/13/07	03/13/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*92.0 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*91.2 %*	*80-120*		"	"	"	"	
Monitor Well #1 Deep (7C09026-02) Water									
Benzene	ND	0.00100	mg/L	1	EC71307	03/13/07	03/13/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*89.2 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.6 %*	*80-120*		"	"	"	"	

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 Shallow (7C09026-01) Water									
Total Alkalinity	**226**	2.00	mg/L	1	EC71304	03/13/07	03/13/07	EPA 310.1M	
Chloride	**5440**	100	"	200	EC71615	03/14/07	03/14/07	EPA 300.0	
Total Dissolved Solids	**9190**	10.0	"	1	EC71610	03/12/07	03/13/07	EPA 160.1	
Sulfate	**595**	100	"	200	EC71615	03/14/07	03/14/07	EPA 300.0	
Monitor Well #1 Deep (7C09026-02) Water									
Total Alkalinity	**206**	2.00	mg/L	1	EC71304	03/13/07	03/13/07	EPA 310.1M	
Chloride	**7300**	100	"	200	EC71615	03/14/07	03/14/07	EPA 300.0	
Total Dissolved Solids	**10700**	10.0	"	1	EC71610	03/12/07	03/13/07	EPA 160.1	
Sulfate	**474**	100	"	200	EC71615	03/14/07	03/14/07	EPA 300.0	

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. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

Total Metals by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 Shallow (7C09026-01) Water									
Calcium	**1110**	0.200	mg/L	1	EC72614	03/23/07	03/23/07	EPA 6020A	
Magnesium	**327**	0.500	"	"	"	"	"	"	
Potassium	**13.9**	0.500	"	"	"	"	"	"	
Sodium	**2380**	0.500	"	"	"	"	"	"	
Monitor Well #1 Deep (7C09026-02) Water									
Calcium	**1490**	0.200	mg/L	1	EC72614	03/23/07	03/23/07	EPA 6020A	
Magnesium	**419**	0.500	"	"	"	"	"	"	
Potassium	**12.2**	0.500	"	"	"	"	"	"	
Sodium	**1830**	0.500	"	"	"	"	"	"	

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

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

Fax: (505) 397-1471

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC71307 - EPA 5030C (GC)										
Blank (EC71307-BLK1)				Prepared & Analyzed: 03/13/07						
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	*40.0*		*ug/l*	*50.0*		*80.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*43.8*		*"*	*50.0*		*87.6*	*80-120*			
LCS (EC71307-BS1)				Prepared & Analyzed: 03/13/07						
Benzene	0.0438	0.00100	mg/L	0.0500		87.6	80-120			
Toluene	0.0413	0.00100	"	0.0500		82.6	80-120			
Ethylbenzene	0.0422	0.00100	"	0.0500		84.4	80-120			
Xylene (p/m)	0.0843	0.00100	"	0.100		84.3	80-120			
Xylene (o)	0.0406	0.00100	"	0.0500		81.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	*42.5*		*ug/l*	*50.0*		*85.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*47.6*		*"*	*50.0*		*95.2*	*80-120*			
Calibration Check (EC71307-CCV1)				Prepared: 03/13/07 Analyzed: 03/14/07						
Benzene	0.0450		mg/L	0.0500		90.0	80-120			
Toluene	0.0414		"	0.0500		82.8	80-120			
Ethylbenzene	0.0401		"	0.0500		80.2	80-120			
Xylene (p/m)	0.0802		"	0.100		80.2	80-120			
Xylene (o)	0.0401		"	0.0500		80.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	*41.5*		*ug/l*	*50.0*		*83.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*42.2*		*"*	*50.0*		*84.4*	*80-120*			
Matrix Spike (EC71307-MS1)		**Source: 7C09031-03**		Prepared: 03/13/07 Analyzed: 03/14/07						
Benzene	0.0423	0.00100	mg/L	0.0500	ND	84.6	80-120			
Toluene	0.0408	0.00100	"	0.0500	ND	81.6	80-120			
Ethylbenzene	0.0402	0.00100	"	0.0500	ND	80.4	80-120			
Xylene (p/m)	0.0809	0.00100	"	0.100	ND	80.9	80-120			
Xylene (o)	0.0401	0.00100	"	0.0500	ND	80.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	*44.0*		*ug/l*	*50.0*		*88.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*47.5*		*"*	*50.0*		*95.0*	*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.

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Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC71307 - EPA 5030C (GC)										
Matrix Spike Dup (EC71307-MSD1)		**Source: 7C09031-03**		Prepared: 03/13/07 Analyzed: 03/14/07						
Benzene	0.0421	0.00100	mg/L	0.0500	ND	84.2	80-120	0.474	20	
Toluene	0.0411	0.00100	"	0.0500	ND	82.2	80-120	0.733	20	
Ethylbenzene	0.0411	0.00100	"	0.0500	ND	82.2	80-120	2.21	20	
Xylene (p/m)	0.0815	0.00100	"	0.100	ND	81.5	80-120	0.739	20	
Xylene (o)	0.0403	0.00100	"	0.0500	ND	80.6	80-120	0.498	20	
Surrogate: a,a,a-Trifluorotoluene	*42.9*		*ug/l*	*50.0*		*85.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*43.0*		*"*	*50.0*		*86.0*	*80-120*			

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

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 EC71304 - General Preparation (WetChem)										
Blank (EC71304-BLK1)				Prepared & Analyzed: 03/13/07						
Total Alkalinity	2.00	2.00	mg/L							
LCS (EC71304-BS1)				Prepared & Analyzed: 03/13/07						
Bicarbonate Alkalinity	174	2.00	mg/L	200		87.0	85-115			
Duplicate (EC71304-DUP1)		**Source: 7C09025-01**		Prepared & Analyzed: 03/13/07						
Total Alkalinity	328	2.00	mg/L		336			2.41	20	
Reference (EC71304-SRM1)				Prepared & Analyzed: 03/13/07						
Total Alkalinity	246		mg/L	250		98.4	90-110			
Batch EC71610 - General Preparation (WetChem)										
Blank (EC71610-BLK1)				Prepared: 03/12/07 Analyzed: 03/13/07						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (EC71610-DUP1)		**Source: 7C09022-01**		Prepared: 03/12/07 Analyzed: 03/13/07						
Total Dissolved Solids	1690	10.0	mg/L		1550			8.64	20	
Duplicate (EC71610-DUP2)		**Source: 7C09026-02**		Prepared: 03/12/07 Analyzed: 03/13/07						
Total Dissolved Solids	11500	10.0	mg/L		10700			7.21	20	
Batch EC71615 - General Preparation (WetChem)										
Blank (EC71615-BLK1)				Prepared & Analyzed: 03/14/07						
Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	"							

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

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

Fax: (505) 397-1471

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 EC71615 - General Preparation (WetChem)										
LCS (EC71615-BS1)				Prepared & Analyzed: 03/14/07						
Chloride	9.19	0.500	mg/L	10.0		91.9	80-120			
Sulfate	9.74	0.500	"	10.0		97.4	80-120			
Calibration Check (EC71615-CCV1)				Prepared & Analyzed: 03/14/07						
Chloride	8.13		mg/L	10.0		81.3	80-120			
Sulfate	11.6		"	10.0		116	80-120			
Duplicate (EC71615-DUP1)		**Source: 7C09022-01**		Prepared & Analyzed: 03/14/07						
Chloride	326	10.0	mg/L		328			0.612	20	
Sulfate	393	10.0	"		397			1.01	20	
Duplicate (EC71615-DUP2)		**Source: 7C09027-01**		Prepared & Analyzed: 03/14/07						
Chloride	700	12.5	mg/L		704			0.570	20	
Sulfate	89.6	12.5	"		90.8			1.33	20	
Matrix Spike (EC71615-MS1)		**Source: 7C09022-01**		Prepared & Analyzed: 03/14/07						
Sulfate	621	10.0	mg/L	200	397	112	80-120			
Chloride	553	10.0	"	200	328	112	80-120			
Matrix Spike (EC71615-MS2)		**Source: 7C09027-01**		Prepared & Analyzed: 03/14/07						
Chloride	961	12.5	mg/L	250	704	103	80-120			
Sulfate	313	12.5	"	250	90.8	88.9	80-120			

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Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

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 EC72614 - General Preparation (Metals)										
Blank (EC72614-BLK1)				Prepared & Analyzed: 03/23/07						
Calcium	ND	0.200	mg/L							
Magnesium	ND	0.500	"							
Potassium	ND	0.500	"							
Sodium	ND	0.500	"							
LCS (EC72614-BS1)				Prepared & Analyzed: 03/23/07						
Calcium	2.46	0.200	mg/L	2.50		98.4	75-125			
Magnesium	2.22	0.500	"	2.50		88.8	75-125			
Potassium	1.98	0.500	"	2.50		79.2	75-125			
Sodium	2.58	0.500	"	2.50		103	75-125			
Duplicate (EC72614-DUP1)		**Source: 7C09022-01**		Prepared & Analyzed: 03/23/07						
Calcium	123	0.200	mg/L		125			1.61	25	
Magnesium	73.5	0.500	"		71.3			3.04	25	
Potassium	9.49	0.500	"		8.45			11.6	25	
Sodium	221	0.500	"		247			11.1	25	
Matrix Spike (EC72614-MS1)		**Source: 7C09022-01**		Prepared & Analyzed: 03/23/07						
Calcium	132	0.200	mg/L	2.50	125	280	75-125			MS-1
Magnesium	73.1	0.500	"	2.50	71.3	72.0	75-125			MS-1
Potassium	11.3	0.500	"	2.50	8.45	114	75-125			
Sodium	237	0.500	"	2.50	247	NR	75-125			MS-1
Matrix Spike Dup (EC72614-MSD1)		**Source: 7C09022-01**		Prepared & Analyzed: 03/23/07						
Calcium	132	0.200	mg/L	2.50	125	280	75-125	0.00	25	MS-1
Magnesium	74.2	0.500	"	2.50	71.3	116	75-125	1.49	25	
Potassium	11.1	0.500	"	2.50	8.45	106	75-125	1.79	25	
Sodium	243	0.500	"	2.50	247	NR	75-125	2.50	25	MS-1

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

Notes and Definitions

MS-1	Recovery of sample outside of historical limits due to matrix interference.
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: Brent Barron Date: 3/29/2007

Brent Barron, Laboratory Director/Corp. Technical Director
Celey D. Keene, Org. Tech Director
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer
Jeanne Mc Murrey, Inorg. Tech Director

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

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

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Kristin Farris Pope kpope@riceswd.com

Company Name: RICE Operating Company

Company Address: 122 W. Taylor Street

City/State/Zip: Hobbs, New Mexico 88240

Telephone No: (505) 393-9174 Fax No: (505) 397-1471

Sampler Signature: Rozanne Johnson (505)631-9310 e-mail: rozanne@valornet.com

Project Name: EME M-5 SWD

Project #:

Project Loc: T20S R37E Sec5 M ~ Lea County New Mexico

PO #:

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: N090216

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl (2) 40 ml glass vials	H_2SO_4	NaOH	$Na_2S_2O_3$	None (1) 1 Liter HDPE	Other (Specify)	Matrix (DW=Drinking Water SL=Sludge GW = Groundwater SS=Soil/Solid NP=Non-Potable Specify Other)	Analyze For: TCLP: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles (BTEX N 8260)	Semivolatiles	TOTAL: BTEX 8021B/5030	RCI	N.O.R.M.	Total Dissolved Solids			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	Monitor Well #1-Shallow			3/6/2007	12:50		3	X		2				1		GW			X	X					X			X				X
02	Monitor Well #1-Deep			3/6/2007	13:55		3	X		2				1		GW			X	X					X			X				X

Special Instructions:
Please email to : kpope@riceswd.com matt@riceswd.com rozanne@valornet.com
jpurvis@riceswd.com

Relinquished by:	Date	Time	Received by:	Date	Time
Rozanne Johnson	3/9/07	6:30	James Johnson	3/9/07	6:31
James Johnson	3/9/07	13:15			
			Received by ELOT:	3/9/07	13:15

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep.?	Y	N
by Courier? UPS DHL FedEx Lone Star		

Temperature Upon Receipt: 1.0 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Rice

Date/ Time: 3/9/07 1315

Lab ID # : 7C09026

Initials: Dm

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	1.0 °C	
#2	Shipping container in good condition?	Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken:

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

ENVIRONMENTAL LAB OF
12600 West I-20 East - Odessa, Texas 79765
A Xenco Laboratories Company

Analytical Report

Prepared for:

Kristin Farris-Pope

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: EME M-5 SWD

Project Number: None Given

Location: T20S R37E Sec5 M ~ Lea County New Mexico

Lab Order Number: 7F11013

Report Date: 06/27/07

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
M5-1s	7F11013-01	Water	06/07/07 13:55	06-11-2007 16:30
M5-1d	7F11013-02	Water	06/07/07 14:50	06-11-2007 16:30

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

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M5-1s (7F11013-01) Water									
Benzene	ND	0.00100	mg/L	1	EF71312	06/13/07	06/15/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*102 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*86.6 %*	*80-120*		"	"	"	"	
M5-1d (7F11013-02) Water									
Benzene	ND	0.00100	mg/L	1	EF71312	06/13/07	06/15/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*99.0 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*87.8 %*	*80-120*		"	"	"	"	

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M5-1s (7F11013-01) Water									
Total Alkalinity	**290**	2.00	mg/L	1	EF71403	06/14/07	06/14/07	EPA 310.1M	
Chloride	**4960**	100	"	200	EF71504	06/15/07	06/15/07	EPA 300.0	
Total Dissolved Solids	**11700**	10.0	"	1	EF71519	06/12/07	06/15/07	EPA 160.1	
Sulfate	**539**	100	"	200	EF71504	06/15/07	06/15/07	EPA 300.0	
M5-1d (7F11013-02) Water									
Total Alkalinity	**170**	2.00	mg/L	1	EF71403	06/14/07	06/14/07	EPA 310.1M	
Chloride	**6110**	100	"	200	EF71504	06/15/07	06/15/07	EPA 300.0	
Total Dissolved Solids	**16600**	10.0	"	1	EF71519	06/12/07	06/15/07	EPA 160.1	
Sulfate	**371**	100	"	200	EF71504	06/15/07	06/15/07	EPA 300.0	

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

Total Metals by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M5-1s (7F11013-01) Water									
Calcium	**776**	40.5	mg/L	500	EF71902	06/19/07	06/19/07	EPA 6010B	
Magnesium	**230**	3.60	"	100	"	"	"	"	
Potassium	**27.5**	0.600	"	10	"	"	"	"	
Sodium	**2120**	21.5	"	500	"	"	"	"	
M5-1d (7F11013-02) Water									
Calcium	**955**	40.5	mg/L	500	EF71902	06/19/07	06/19/07	EPA 6010B	
Magnesium	**236**	3.60	"	100	"	"	"	"	
Potassium	**21.8**	0.600	"	10	"	"	"	"	
Sodium	**1370**	21.5	"	500	"	"	"	"	

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF71312 - EPA 5030C (GC)										
Blank (EF71312-BLK1)				Prepared: 06/13/07 Analyzed: 06/15/07						
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	*46.1*		*ug/l*	*50.0*		*92.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*41.1*		*"*	*50.0*		*82.2*	*80-120*			
LCS (EF71312-BS1)				Prepared: 06/13/07 Analyzed: 06/15/07						
Benzene	0.0508	0.00100	mg/L	0.0500		102	80-120			
Toluene	0.0522	0.00100	"	0.0500		104	80-120			
Ethylbenzene	0.0541	0.00100	"	0.0500		108	80-120			
Xylene (p/m)	0.0945	0.00100	"	0.100		94.5	80-120			
Xylene (o)	0.0527	0.00100	"	0.0500		105	80-120			
Surrogate: a,a,a-Trifluorotoluene	*49.2*		*ug/l*	*50.0*		*98.4*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*47.4*		*"*	*50.0*		*94.8*	*80-120*			
Calibration Check (EF71312-CCV1)				Prepared: 06/13/07 Analyzed: 06/15/07						
Benzene	0.0493		mg/L	0.0500		98.6	80-120			
Toluene	0.0501		"	0.0500		100	80-120			
Ethylbenzene	0.0485		"	0.0500		97.0	80-120			
Xylene (p/m)	0.0906		"	0.100		90.6	80-120			
Xylene (o)	0.0506		"	0.0500		101	80-120			
Surrogate: a,a,a-Trifluorotoluene	*48.6*		*ug/l*	*50.0*		*97.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*46.8*		*"*	*50.0*		*93.6*	*80-120*			
Matrix Spike (EF71312-MS1)		**Source: 7F12005-03**		Prepared: 06/13/07 Analyzed: 06/15/07						
Benzene	0.0494	0.00100	mg/L	0.0500	ND	98.8	80-120			
Toluene	0.0505	0.00100	"	0.0500	ND	101	80-120			
Ethylbenzene	0.0534	0.00100	"	0.0500	ND	107	80-120			
Xylene (p/m)	0.0936	0.00100	"	0.100	ND	93.6	80-120			
Xylene (o)	0.0523	0.00100	"	0.0500	ND	105	80-120			
Surrogate: a,a,a-Trifluorotoluene	*50.4*		*ug/l*	*50.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*47.1*		*"*	*50.0*		*94.2*	*80-120*			

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF71312 - EPA 5030C (GC)										
Matrix Spike Dup (EF71312-MSD1)		**Source: 7F12005-03**		Prepared: 06/13/07 Analyzed: 06/15/07						
Benzene	0.0478	0.00100	mg/L	0.0500	ND	95.6	80-120	3.29	20	
Toluene	0.0495	0.00100	"	0.0500	ND	99.0	80-120	2.00	20	
Ethylbenzene	0.0523	0.00100	"	0.0500	ND	105	80-120	1.89	20	
Xylene (p/m)	0.0913	0.00100	"	0.100	ND	91.3	80-120	2.49	20	
Xylene (o)	0.0506	0.00100	"	0.0500	ND	101	80-120	3.88	20	
Surrogate: a,a,a-Trifluorotoluene	*49.5*		*ug/l*	*50.0*		*99.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*47.1*		*"*	*50.0*		*94.2*	*80-120*			

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

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 EF71403 - General Preparation (WetChem)										
Blank (EF71403-BLK1)				Prepared & Analyzed: 06/14/07						
Total Alkalinity	ND	2.00	mg/L							
LCS (EF71403-BS1)				Prepared & Analyzed: 06/14/07						
Bicarbonate Alkalinity	170	2.00	mg/L	200		85.0	85-115			
Duplicate (EF71403-DUP1)		**Source: 7F11010-01**		Prepared & Analyzed: 06/14/07						
Total Alkalinity	320	2.00	mg/L		320			0.00	20	
Reference (EF71403-SRM1)				Prepared & Analyzed: 06/14/07						
Total Alkalinity	250		mg/L	250		100	90-110			
Batch EF71504 - General Preparation (WetChem)										
Blank (EF71504-BLK1)				Prepared & Analyzed: 06/15/07						
Sulfate	ND	0.500	mg/L							
Chloride	ND	0.500	"							
LCS (EF71504-BS1)				Prepared & Analyzed: 06/15/07						
Sulfate	10.1	0.500	mg/L	10.0		101	80-120			
Chloride	9.83	0.500	"	10.0		98.3	80-120			
Calibration Check (EF71504-CCV1)				Prepared & Analyzed: 06/15/07						
Chloride	9.07		mg/L	10.0		90.7	80-120			
Sulfate	12.0		"	10.0		120	80-120			
Duplicate (EF71504-DUP1)		**Source: 7F11014-01**		Prepared & Analyzed: 06/15/07						
Sulfate	104	12.5	mg/L		104			0.00	20	
Chloride	734	12.5	"		731			0.410	20	

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

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 EF71504 - General Preparation (WetChem)										
Duplicate (EF71504-DUP2)		**Source: 7F11017-01**		Prepared & Analyzed: 06/15/07						
Sulfate	76.7	5.00	mg/L		77.6			1.17	20	
Chloride	67.9	5.00	"		69.9			2.90	20	
Matrix Spike (EF71504-MS1)		**Source: 7F11014-01**		Prepared & Analyzed: 06/15/07						
Chloride	992	12.5	mg/L	250	731	104	80-120			
Sulfate	354	12.5	"	250	104	100	80-120			
Matrix Spike (EF71504-MS2)		**Source: 7F11017-01**		Prepared & Analyzed: 06/15/07						
Sulfate	174	5.00	mg/L	100	77.6	96.4	80-120			
Chloride	168	5.00	"	100	69.9	98.1	80-120			
Batch EF71519 - General Preparation (WetChem)										
Blank (EF71519-BLK1)				Prepared: 06/12/07 Analyzed: 06/15/07						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (EF71519-DUP1)		**Source: 7F11009-01**		Prepared: 06/12/07 Analyzed: 06/15/07						
Total Dissolved Solids	24600	10.0	mg/L		23000			6.72	20	
Duplicate (EF71519-DUP2)		**Source: 7F11014-03**		Prepared: 06/12/07 Analyzed: 06/15/07						
Total Dissolved Solids	1380	10.0	mg/L		1340			2.94	20	

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME M-5 SWD Project Number: None Given Project Manager: Kristin Farris-Pope	Fax: (505) 397-1471

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 EF71902 - 6010B/No Digestion										
Blank (EF71902-BLK1)				Prepared & Analyzed: 06/19/07						
Calcium	ND	0.0810	mg/L							
Magnesium	ND	0.0360	"							
Potassium	ND	0.0600	"							
Sodium	ND	0.0430	"							
Calibration Check (EF71902-CCV1)				Prepared & Analyzed: 06/19/07						
Calcium	2.04		mg/L	2.00		102	85-115			
Magnesium	2.00		"	2.00		100	85-115			
Potassium	2.13		"	2.00		106	85-115			
Sodium	2.04		"	2.00		102	85-115			
Duplicate (EF71902-DUP1)		**Source: 7F11010-01**		Prepared & Analyzed: 06/19/07						
Calcium	956	40.5	mg/L		940			1.69	20	
Magnesium	337	3.60	"		346			2.64	20	
Potassium	29.9	0.600	"		30.9			3.29	20	
Sodium	2970	21.5	"		2940			1.02	20	

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: Brent Barron Date: 6/27/2007

Brent Barron, Laboratory Director/Corp. Technical Director
Celey D. Keene, Org. Tech Director
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer
Jeanne Mc Murrey, Inorg. Tech Director

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

Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Kristin Farris Pope kpope@riceswd.com

Company Name: RICE Operating Company

Company Address: 122 W. Taylor Street

City/State/Zip: Hobbs, New Mexico 88240

Telephone No: (505) 393-9174 Fax No: (505) 397-1471

Sampler Signature: Rozanne Johnson (505)631-9310 e-mail: rozanne@valornet.com

Project Name: EME M-5 SWD

Project #:

Project Loc: T20S R37E Sec5 M ~ Lea County New Mexico

PO #:

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: TE11013

284089

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl (2) 40 ml glass vials	H_2SO_4	NaOH	$Na_2S_2O_3$	None (1) 1 Liter HDPE	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se (TCLP / TOTAL)	Volatiles (BTEX-N 8260)	Semivolatiles	BTEX 8021B/5030 (TOTAL X)	RCI	N.O.R.M.	Total Dissolved Solids			RUSH TAT (Pre-Scheduled) 24, 48, 72 hrs	Standard TAT
01	M5-1s			6/7/2007	13:55		3	X		2				1		GW			X	X					X			X				X
02	M5-1d			6/7/2007	14:50		3	X		2				1		GW			X	X					X			X				X

Special Instructions:

Please email to: kpope@riceswd.com matt@riceswd.com rozanne@valornet.com
jpurvis@riceswd.com

Relinquished by:	Date	Time	Received by:	Date	Time
Rozanne Johnson	6/11/07		Cathy Watkins	6/11/07	14:41
Relinquished by: Cathy Watkins	6/11/07		Received by:		
Relinquished by:			Received by ELOT: Andrea Lann	6/11/07	4:30

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep.?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 5.0 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Rice

Date/ Time: 6·11·07 4:30

Lab ID #: 7F11013

Initials: AL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	Yes	No	5.0 °C	
#2	Shipping container in good condition?	Yes	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present	
#5	Chain of Custody present?	Yes	No		
#6	Sample instructions complete of Chain of Custody?	Yes	No		
#7	Chain of Custody signed when relinquished/ received?	Yes	No		
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	Yes	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#11	Containers supplied by ELOT?	Yes	No		
#12	Samples in proper container/ bottle?	Yes	No	See Below	
#13	Samples properly preserved?	Yes	No	See Below	
#14	Sample bottles intact?	Yes	No		
#15	Preservations documented on Chain of Custody?	Yes	No		
#16	Containers documented on Chain of Custody?	Yes	No		
#17	Sufficient sample amount for indicated test(s)?	Yes	No	See Below	
#18	All samples received within sufficient hold time?	Yes	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	Yes	No	Not Applicable	

Variance Documentation

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

Regarding: _____

Corrective Action Taken:

_____

_____

_____

Check all that Apply:

- ☐ See attached e-mail/ fax
- ☐ Client understands and would like to proceed with analysis
- ☐ Cooling process had begun shortly after sampling event

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: KRISTIN FARRIS-POPE
122 W. TAYLOR
HOBBS, NM 88240
FAX TO: (505) 397-1471

Receiving Date: 08/29/07
Reporting Date: 09/04/07
Project Number: NOT GIVEN
Project Name: EME M-5 SWD
Project Location: T20S-R37E-SEC5 M ~ LEA CO., NM

Sampling Date: 08/27/07
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: HM
Analyzed By: CK

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		08/30/07	08/30/07	08/30/07	08/30/07
H13194-1	M5-1s	<0.002	<0.002	<0.002	<0.006
H13194-2	M5-1d	<0.002	<0.002	<0.002	<0.006
Quality Control		0.086	0.082	0.082	0.252
True Value QC		0.100	0.100	0.100	0.300
% Recovery		86.0	82.3	82.4	84.0
Relative Percent Difference		6.0	2.6	1.8	0.7

METHOD: EPA SW-846 8021 B

Chemist

09/06/07
Date

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H13194B PIOF

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ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: KRISTIN FARRIS-POPE
122 W. TAYLOR STREET
HOBBS, NM 88240
FAX TO: (505) 397-1471

Receiving Date: 08/29/07
Reporting Date: 09/05/07
Project Owner: NOT GIVEN
Project Name: EME M-5 SWD
Project Location: T20S-R37E-SEC5 M~LEA COUNTY, NM

Sampling Date: 08/27/07
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: HM
Analyzed By: HM/KS

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (uS/cm)	T-Alkalinity (mgCaCO3/L)
ANALYSIS DATE:		09/04/07	09/04/07	09/04/07	09/05/07	08/30/07	09/04/07
H13194-1	M5-1s	1895	865	182	15.4	13,970	136
H13194-2	M5-1d	2070	1680	363	19.1	19,590	92.0
Quality Control		NR	50.6	53.2	1.87	1423	NR
True Value QC		NR	50.0	50.0	2.00	1413	NR
% Recovery		NR	101	106	93.6	101	NR
Relative Percent Difference		NR	< 0.1	3.1	2.1	< 0.1	NR
METHODS:			SM3500-Ca-D	3500-Mg E	8049	120.1	310.1

		Cl⁻ (mg/L)	SO_4 (mg/L)	CO_3 (mg/L)	HCO_3 (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:		09/04/07	09/05/07	09/04/07	09/04/07	08/30/07	09/04/07
H13194-1	M5-1s	4,499	554	0	166	6.76	10,095
H13194-2	M5-1d	6,898	394	0	112	6.63	14,776
Quality Control		500	24.0	NR	1025	6.97	NR
True Value QC		500	25.0	NR	1000	7.00	NR
% Recovery		100	96.1	NR	102	99.6	NR
Relative Percent Difference		< 0.1	8.2	NR	6.1	0.1	NR
METHODS:		SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1

Chemist

09-05-07
Date

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H13194 RICE

101 East Marland - Hobbs, New Mexico 88240
Tel (505) 393-2326
Fax (505) 393-2476

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: RICE Operating Company

BILL TO Company: RICE Operating Company PO#

Project Manager: Kristin Farris-Pope, Project Scientist

Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240

Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240

Phone#: (505) 393-9174 Fax#: (505)397-1471

Phone #: (505) 393-9174 Fax #: (505)397-1471

Project #: Project Name: EME M-5 SWD

Project Location: T20S-R37E-Sec5 M ~ Lea County - New Mexico

Sampler Signature: Rozanne Johnson (505)631-9310 rozanne@valornet.com

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE		PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2007)	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content		Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
H13194-1	M5-1s	G	3	X					2				1		8-27	13:10		X																X	X	X		
-2	M5-1d	G	3	X					2				1		8-27	14:05		X																X	X	X		

Relinquished by: Rozanne Johnson Date: 8-29-07 Time: 4:05

Received by: Date: Time:

Relinquished by: Date: Time:

Received By: (Laboratory Staff) Date: 08/29/07 Time: 4:05

Delivered By: (Circle One) Sampler - UPS - Bus - Other:

Sample Condition: Cool Yes ✓ No; Intact Yes ✓ No

CHECKED BY: (Initials)

Phone Results: Yes No

Fax Results: Yes No Additional Fax Number:

REMARKS:

Email Results to: kpope@riceswd.com rozanne@valornet.com

CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: KRISTIN FARRIS-POPE
122 WEST TAYLOR
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 11/13/07
Reporting Date: 11/20/07
Project Number: NOT GIVEN
Project Name: EME M-5 SWD
Project Location: T20S R37E SEC5 M - LEA COUNTY, NM

Sampling Date: 11/09/07
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: CK
Analyzed By: AB

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		11/14/07	11/14/07	11/14/07	11/14/07
H13698-1	M5-1S	<0.001	<0.001	<0.001	<0.003
H13698-2	M5-1D	<0.001	<0.001	<0.001	<0.003
Quality Control		0.102	0.092	0.095	0.293
True Value QC		0.100	0.100	0.100	0.300
% Recovery		102	92	95	98
Relative Percent Difference		2.4	0.4	1.0	1.5

METHOD: EPA SW-846 8021B

Chemist

11/20/07
Date

H13698b Rice

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ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: KRISTIN FARRIS-POPE
122 W. TAYLOR STREET
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 11/13/07
Reporting Date: 11/19/07
Project Number: NOT GIVEN
Project Name: EME M-5 SWD
Project Location: T20S-R37E-SEC5 M~LEA COUNTY, NM

Sampling Date: 11/09/07
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: CK
Analyzed By: HM/KS

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (uS/cm)	T-Alkalinity ($mgCaCO_3/L$)
ANALYSIS DATE:		11/16/07	11/16/07	11/16/07	11/15/07	11/14/07	11/14/07
H13698-1	M5-1s	1,807	872	234	15.9	13,910	240
H13698-2	M5-1d	2,207	1,710	383	13.5	20,310	212
Quality Control		NR	49.2	51.6	2.95	1,415	NR
True Value QC		NR	50.0	50.0	3.00	1,413	NR
% Recovery		NR	98.5	103	98.3	100	NR
Relative Percent Difference		NR	< 0.1	1.5	5.0	0.1	NR
METHODS:			SM3500-Ca-D	3500-Mg E	8049	120.1	310.1

		Cl^- (mg/L)	SO_4 (mg/L)	CO_3 (mg/L)	HCO_3 (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:		11/15/07	11/16/07	11/14/07	11/14/07	11/14/07	11/15/07
H13698-1	M5-1s	4,400	549	0	393	6.76	8,193
H13698-2	M5-1d	7,100	435	0	259	6.59	12,247
Quality Control		500	24.3	NR	988	6.95	NR
True Value QC		500	25.0	NR	1000	7.00	NR
% Recovery		100	97.0	NR	98.8	99.3	NR
Relative Percent Difference		< 0.1	3.5	NR	1.2	0.7	NR
METHODS:		SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1

Kristin Sapiston
Chemist

11/19/07
Date

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H13698 RICE

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Tel (505) 393-2326
Fax (505) 393-2476

Cardinal Laboratories, Inc.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # _____

Company Name: RICE Operating Company	BILL TO Company: RICE Operating Company PO#
Project Manager: Kristin Farris-Pope, Project Scientist	Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240
Address: (Street, City, Zip) 122 W Taylor Street ~ Hobbs, New Mexico 88240	Phone#: (505) 393-9174 Fax#: (505)397-1471
Phone #: (505) 393-9174 Fax #: (505)397-1471	
Project #: Project Name: EME M-5 SWD	
Project Location: T20S-R37E-Sec5 M ~ Lea County - New Mexico	Sampler Signature: Rozanne Johnson (505)631-9310 rozanne@valornet.com

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	(G)rab or (C)omp	# CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE		PRESERVATIVE METHOD: HCL (2 40ml VOA)	HNO_3	$NaHSO_4$	H_2SO_4	ICE (1-1Liter HDPE)	NONE	SAMPLING: DATE (2007)	TIME	MTBE 8021B/602	BTEX 8021B/602	TPH 418.1/TX1005 / TX1005 Extended (C35)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B/624	GC/MS Semi. Vol. 8270C/625	PCB's 8082/608	Pesticides 8081A/608	BOD, TSS, pH	Moisture Content		Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	Total Dissolved Solids	Chlorides	Turn Around Time ~ 24 Hours
1413698-1	M5-1s	G	3	X					2				1		11-9	13:55		X																X	X	X		
2	M5-1d	G	3	X					2				1		11-9	15:00		X																X	X	X		

Relinquished by: Rozanne Johnson Date: 11-13-2007 Time: 2:05	Received by: Date: Time:	Phone Results ☐ Yes ☐ No
		Fax Results ☐ Yes ☐ No Additional Fax Number:
Relinquished by: Date: Time:	Received By: (Laboratory Staff) Date: 11/13/07 Time: 2:05	REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Cool Yes ☑ No ☐; Intact Yes ☑ No ☐	CHECKED BY: (Initials) cph

Email Results to: kpope@riceswd.com
lweinheimer@riceswd.com
rozanne@valornet.com