

AP – 042

**ANNUAL GW
MONITOR REPORT**

**DATE:
2006**



ARCADIS

Infrastructure, environment, buildings

2007 FEB 23 AM 10 10

Sent Certified Mail

Return Receipt No. 7002 2410 0001 5812 9794

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

Subject: **2006 MONITOR WELL REPORT/SAMPLING SUMMARY**
JCT. M-16-1, EME SWD SYSTEM
UNIT 'M', SEC. 16, T20S, R37E
NMOCD CASE #AP-42 (formerly 1R0427-93)

Dear Mr. Hansen:

On behalf of Rice Operating Company (ROC), ARCADIS G&M, Inc. (ARCADIS) respectfully submits the 2006 Monitor Well Report for the EME Jct. M-16-1 site located in the Eunice Monument Eumont (EME) Salt Water Disposal (SWD) System.

One monitoring well was installed on 1/9/2002 during delineation as part of the Junction Box Upgrade Program.

A Stage 1 Abatement Plan Proposal was submitted to NMOCD on June 23, 2005 and approved by NMOCD on February 21, 2006.

Monitor wells MW-2 and MW-3 were installed southeast and southwest of Jct. M-16-1 on February 28, 2006 and March 1, 2006, respectively and soil and groundwater samples were collected. Monitor wells MW-4 and MW-5 were installed June 1, 2006 south and north of Jct. M-16-1, respectively and soil and groundwater samples were collected. A Stage 1 Abatement Plan Report and Stage 2 Abatement Plan Proposal was submitted to NMOCD on January 30, 2007. The report details the investigation and investigation results.

Part of a bigger picture

AP-42
Annual GW Mon. Report
2006

ARCADIS G&M, Inc.
1004 North Big Spring Street
Suite 300
Midland
Texas 79701
Tel 432 687 5400
Fax 432 687 5401
www.arcadis-us.com

Environmental

Date:
20 February 2007

Contact:
Sharon E. Hall

Phone:
432 687-5400

Email:
shall@arcadis-us.com

Our ref:
MT000856.0001

ARCADIS

Mr. Ed Hansen
1 April 2007

All wells are sampled quarterly per NMOCD guidelines. The attached table summarizes the analytical results from groundwater samples collected from the monitor wells at the site. 2006 groundwater laboratory reports are also attached.

ROC is the service provider (agent) 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.

Sincerely,
ARCADIS G&M, Inc.



Sharon E. Hall
Site Evaluation Department Manager

Copies:
Kristin Farris Pope- ROC (3 copies)

Use or disclosure of information contained on this sheet is subject to the restriction and disclaimer located on the signature page of this document.

EME Jct. M-16-1

unit 'M', Sec. 16, T20S, R37E

NMOCD Case #1R0427-93

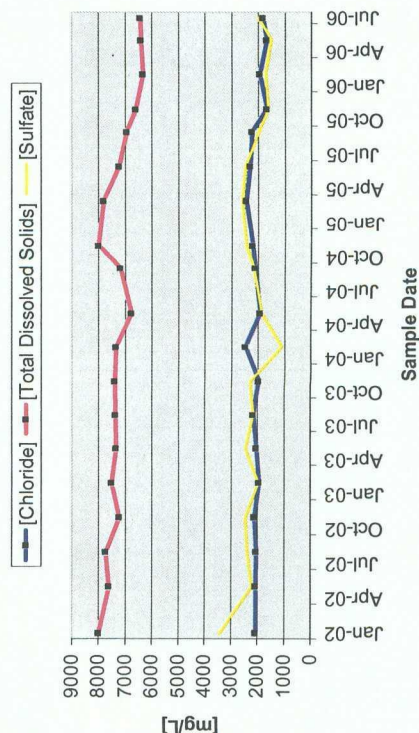
2-inch well

MW #	(ft)		(gal)		SAMPLE DATE	CT	TDS	All concentrations are in mg/L					COMMENTS
	DEPTH TO WATER *	TOTAL DEPTH	WELL VOLUME	PURGED VOLUME				BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	SULFATE	
1	22.60	35.10	2,000	6.10	01/10/02	2079	8016	<0.002	<0.002	<0.002	<0.006	3420	
1	23.78	25.81	0.325	1.00	05/13/02	2070	7620	<0.001	<0.001	<0.001	<0.001	2220	
1	23.08	34.80	1.875	5.75	08/23/02	2040	7740	<0.001	<0.001	<0.001	<0.001	2380	
1	23.53	34.69	1.786	5.50	11/12/02	2130	7230	<0.001	<0.001	<0.001	<0.001	2460	
1	23.20	34.49	1.800	5.40	02/27/03	1960	7520	<0.001	<0.001	<0.001	<0.001	1980	
1	23.10	34.50	1.824	5.40	05/22/03	2060	7350	<0.001	<0.001	<0.001	<0.001	2470	
1	23.83	34.25	1.660	5.00	08/22/03	2170	7390	<0.001	<0.001	<0.001	<0.001	2170	
1	24.07	34.34	1.640	4.90	11/20/03	1990	7400	<0.001	<0.001	<0.001	<0.001	2300	
1	24.90	34.25	1.490	4.47	02/18/04	2479	7368	<0.002	<0.002	<0.002	<0.006	1106	
1	22.75	34.25	1.840	5.50	05/26/04	1919	6784	<0.002	<0.002	<0.002	<0.006	1889	
1	23.18	31.40	1.315	3.95	09/07/04	2130	7200	<0.001	<0.001	<0.001	<0.001	2180	
1	22.45	31.40	1.430	4.30	11/24/04	2210	8020	<0.001	0.000766	0.00291	0.01019	2460	lt. odor; clear
1	XXX	XXX	XXX	XXX	03/22/05	2470	7810	<0.001	<0.001	<0.001	<0.001	2600	
1	21.00	32.00	XXX	5.61	06/28/05	2310	7230	<0.001	<0.001	<0.001	<0.001	2480	
1	21.39	32.00	XXX	5.09	09/06/05	2250	6950	<0.001	<0.001	<0.001	<0.001	1990	
1	21.35	31.50	1.600	5.00	11/02/05	1700	6600	<0.001	<0.001	<0.001	<0.001	1630	Clear with no odor
1	21.27	31.50	1.600	5.00	02/01/06	1960	6340	<0.001	<0.001	<0.001	<0.001	1740	Clear with no odor
1	21.14	31.50	1.700	10.00	05/03/06	1690	6420	<0.001	<0.001	<0.001	<0.001	1510	
1	21.95	31.50	1.500	10.00	7/25/2006	1830	6435	<0.001	<0.001	<0.001	<0.001	2010	
1	21.43	31.50	1.600	8.00	10/20/06	1800	5990	<0.001	<0.001	<0.001	<0.001	2230	Clear, no odor

* Depth to water measured from top of casing

Casing is 2.958 ft

EME Jct. M-16-1 Monitor Well 1



EME Jct. M-16-1
unit 'M', Sec. 16, T20S, R37E

NMOCD Case # 1R0427-93

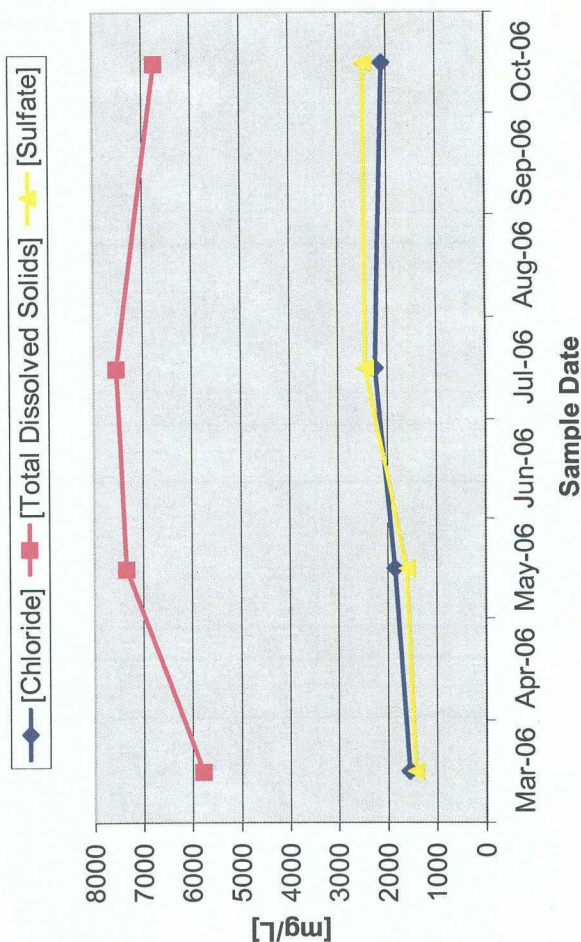
2-inch well

All concentrations are in mg/L

MW #	DEPTH TO WATER *	TOTAL DEPTH	WELL VOLUME	VOLUME PURGED	SAMPLE DATE	Cl ⁻	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	SULFATE	COMMENTS
	(ft)		(gal)										
2	20.81	32.35	1.800	6.00	03/08/06	1570	5780	<0.001	<0.001	<0.001	<0.001	1450	
2	20.75	32.35	1.900	10.00	05/03/06	1850	7330	<0.001	<0.001	<0.001	<0.001	1620	
2	21.58	32.35	1.700	10.00	07/25/06	2240	7535	<0.001	<0.001	<0.001	<0.001	2440	
2	21.02	32.35	1.800	8.00	10/20/06	2090	6740	<0.001	<0.001	<0.001	<0.001	2470	

* Depth to water measured from top of casing
Casing is 2.958 ft

EME Jct. M-16-1 Monitor Well 2



EME Jct. M-16-1
unit 'M', Sec. 16, T20S, R37E

NMOCD Case # 1R0427-93

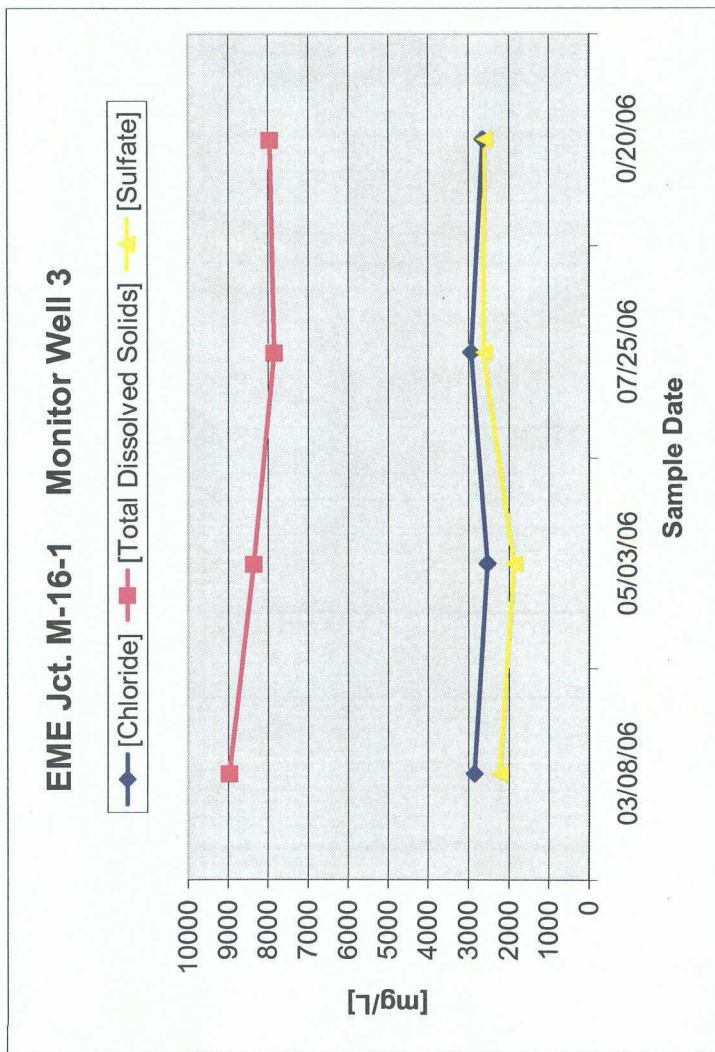
2-inch well

(ft) (gal)

All concentrations are in mg/L

MW #	DEPTH TO WATER *	TOTAL DEPTH	WELL VOLUME	VOLUME PURGED	SAMPLE DATE	Cl ⁻	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	SULFATE	COMMENTS
3	18.73	27.53	1.400	4.50	03/08/06	2860	8960	<0.001	<0.001	<0.001	<0.001	2220	
3	18.69	27.53	1.400	10.00	05/03/06	2540	8350	<0.001	<0.001	<0.001	<0.001	1860	
3	19.44	27.53	1.300	10.00	07/25/06	2940	7840	<0.001	<0.001	<0.001	<0.001	2620	
3	18.96	27.53	1.400	6.00	0/20/06	2650	7960	<0.001	<0.001	<0.001	<0.001	2600	

* Depth to water measured from top of casing
Casing is 2.958 ft



EME Jct. M-16-1

unit 'M', Sec. 16, T20S, R37E

NMOCDCase # 1R0427-93

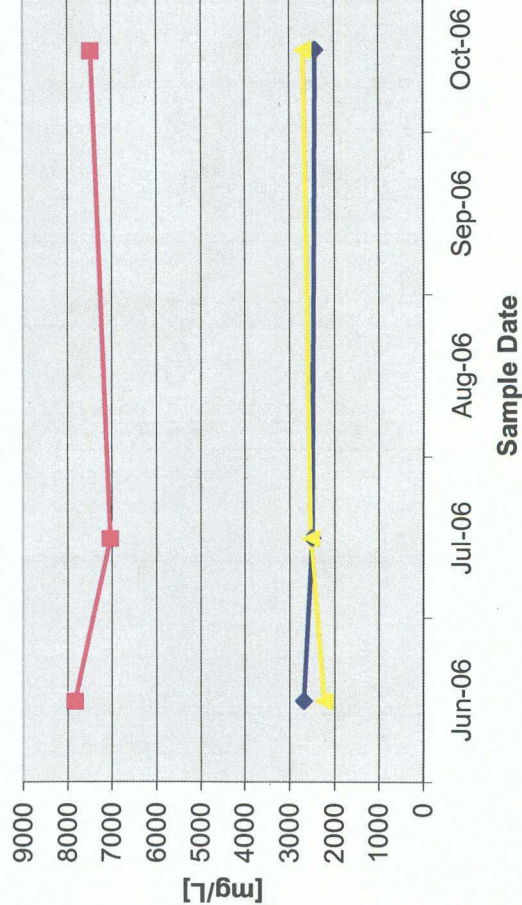
2-inch well

All concentrations are in mg/L

MW #	DEPTH TO WATER *	TOTAL DEPTH	WELL VOLUME	VOLUME PURGED	SAMPLE DATE	Cl ⁻	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	SULFATE	COMMENTS
4	20.82	31.40	1.700	10.00	06/13/06	2680	7820	<0.001	<0.001	<0.001	<0.001	2220	
4	21.08	31.40	1.700	10.00	07/25/06	2500	7030	<0.001	<0.001	<0.001	<0.001	2530	
4	20.59	31.40	1.700	8.00	10/20/06	2430	7470	<0.001	<0.001	<0.001	<0.001	2680	

EME Jct. M-16-1 Monitor Well 4

—◆— [Chloride] —■— [Total Dissolved Solids] —▲— [Sulfate]



EME Jct. M-16-1

unit 'M', Sec. 16, T20S, R37E

NMOCD Case # 1R0427-93

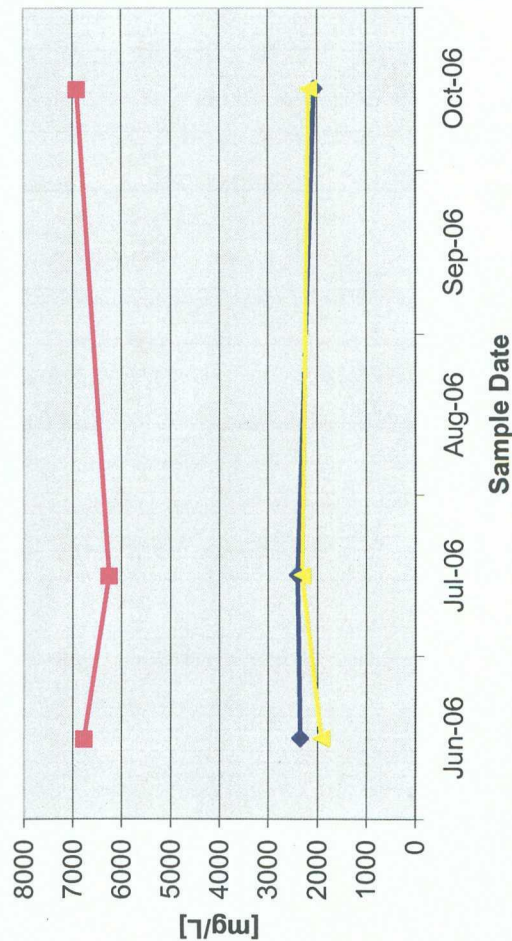
2-inch well

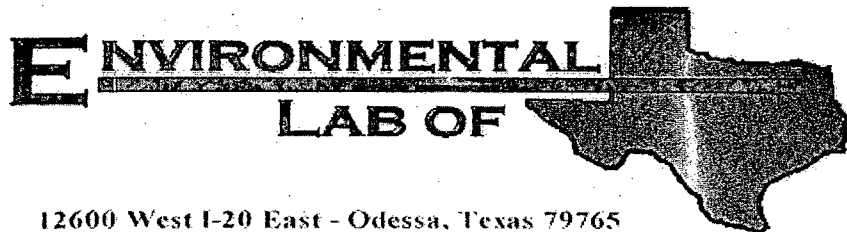
All concentrations are in mg/L

MW #	DEPTH TO WATER *	TOTAL DEPTH	WELL VOLUME	VOLUME PURGED	SAMPLE DATE	Cl ⁻	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	SULFATE
5	20.91	33.50	2.000	10.00	06/13/06	2350	6760	<0.001	<0.001	<0.001	<0.001	1920
5	21.19	33.50	2.000	10.00	07/25/06	2400	6245	<0.001	<0.001	<0.001	<0.001	2310
5	20.70	33.50	2.000	10.00	10/20/06	2060	6910	<0.001	<0.001	<0.001	<0.001	2170

EME Jct. M-16-1 Monitor Well 5

—◆— [Chloride] —■— [Total Dissolved Solids] —▲— [Sulfate]





12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Kristin Farris-Pope

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: EME Jct. M-16-1

Project Number: None Given

Location: T20S-R37E-Sec 16M, Lea County, NM

Lab Order Number: 6J23008

Report Date: 10/31/06

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

Project: EME Jct. M-16-1
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	6J23008-01	Water	10/20/06 12:05	10-23-2006 12:00
Monitor Well #2	6J23008-02	Water	10/20/06 10:10	10-23-2006 12:00
Monitor Well #3	6J23008-03	Water	10/20/06 13:00	10-23-2006 12:00
Monitor Well #4	6J23008-04	Water	10/20/06 14:10	10-23-2006 12:00
Monitor Well #5	6J23008-05	Water	10/20/06 09:05	10-23-2006 12:00

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

Project: EME Jct. M-16-1
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
Monitor Well #1 (6J23008-01) Water									
Benzene	ND	0.00100	mg/L	1	EJ62606	10/26/06	10/27/06	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		80.2 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		82.0 %	80-120		"	"	"	"	
Monitor Well #2 (6J23008-02) Water									
Benzene	ND	0.00100	mg/L	1	EJ62606	10/26/06	10/27/06	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		83.5 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		85.5 %	80-120		"	"	"	"	
Monitor Well #3 (6J23008-03) Water									
Benzene	ND	0.00100	mg/L	1	EJ62606	10/26/06	10/29/06	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		95.5 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		84.8 %	80-120		"	"	"	"	
Monitor Well #4 (6J23008-04) Water									
Benzene	ND	0.00100	mg/L	1	EJ62606	10/26/06	10/29/06	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		104 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.2 %	80-120		"	"	"	"	

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 11

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

Project: EME Jct. M-16-1
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
Monitor Well #5 (6J23008-05) Water									
Benzene	ND	0.00100	mg/L	1	EJ62606	10/26/06	10/29/06	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		100 %	80-120		"	"	"	"	
Surrogate: <i>4</i> -Bromofluorobenzene		100 %	80-120		"	"	"	"	

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

Project: EME Jct. M-16-1
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 (6J23008-01) Water									
Total Alkalinity	456	4.00	mg/L	2	EJ62401	10/25/06	10/25/06	EPA 310.1M	
Chloride	1800	50.0	"	100	EJ62404	10/24/06	10/24/06	EPA 300.0	
Total Dissolved Solids	5990	10.0	"	1	EJ62601	10/25/06	10/26/08	EPA 160.1	
Sulfate	2230	50.0	"	100	EJ62404	10/24/06	10/24/06	EPA 300.0	
Monitor Well #2 (6J23008-02) Water									
Total Alkalinity	368	4.00	mg/L	2	EJ62401	10/25/06	10/25/06	EPA 310.1M	
Chloride	2090	50.0	"	100	EJ62404	10/24/06	10/24/06	EPA 300.0	
Total Dissolved Solids	6740	10.0	"	1	EJ62601	10/25/06	10/26/08	EPA 160.1	
Sulfate	2470	50.0	"	100	EJ62404	10/24/06	10/24/06	EPA 300.0	
Monitor Well #3 (6J23008-03) Water									
Total Alkalinity	412	4.00	mg/L	2	EJ62401	10/25/06	10/25/06	EPA 310.1M	
Chloride	2650	50.0	"	100	EJ62404	10/24/06	10/24/06	EPA 300.0	
Total Dissolved Solids	7960	10.0	"	1	EJ62601	10/25/06	10/26/08	EPA 160.1	
Sulfate	2600	50.0	"	100	EJ62404	10/24/06	10/24/06	EPA 300.0	
Monitor Well #4 (6J23008-04) Water									
Total Alkalinity	448	4.00	mg/L	2	EJ62401	10/25/06	10/25/06	EPA 310.1M	
Chloride	2430	50.0	"	100	EJ62404	10/24/06	10/24/06	EPA 300.0	
Total Dissolved Solids	7470	10.0	"	1	EJ62601	10/25/06	10/26/08	EPA 160.1	
Sulfate	2680	50.0	"	100	EJ62404	10/24/06	10/24/06	EPA 300.0	
Monitor Well #5 (6J23008-05) Water									
Total Alkalinity	404	4.00	mg/L	2	EJ62401	10/25/06	10/25/06	EPA 310.1M	
Chloride	2060	50.0	"	100	EJ62404	10/24/06	10/24/06	EPA 300.0	
Total Dissolved Solids	6910	10.0	"	1	EJ62601	10/25/06	10/26/08	EPA 160.1	
Sulfate	2170	50.0	"	100	EJ62404	10/24/06	10/24/06	EPA 300.0	

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

Project: EME Jct. M-16-1
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 (6J23008-01) Water									
Calcium	245	4.05	mg/L	50	EJ62513	10/25/06	10/25/06	EPA 6010B	
Magnesium	160	1.80	"	"	"	"	"	"	
Potassium	33.7	0.600	"	10	"	"	"	"	
Sodium	1690	10.8	"	250	"	"	"	"	
Monitor Well #2 (6J23008-02) Water									
Calcium	376	4.05	mg/L	50	EJ62513	10/25/06	10/25/06	EPA 6010B	
Magnesium	230	1.80	"	"	"	"	"	"	
Potassium	42.4	0.600	"	10	"	"	"	"	
Sodium	1850	10.8	"	250	"	"	"	"	
Monitor Well #3 (6J23008-03) Water									
Calcium	356	4.05	mg/L	50	EJ62513	10/25/06	10/25/06	EPA 6010B	
Magnesium	222	1.80	"	"	"	"	"	"	
Potassium	44.7	0.600	"	10	"	"	"	"	
Sodium	2370	10.8	"	250	"	"	"	"	
Monitor Well #4 (6J23008-04) Water									
Calcium	341	4.05	mg/L	50	EJ62513	10/25/06	10/25/06	EPA 6010B	
Magnesium	262	1.80	"	"	"	"	"	"	
Potassium	41.1	0.600	"	10	"	"	"	"	
Sodium	2260	10.8	"	250	"	"	"	"	
Monitor Well #5 (6J23008-05) Water									
Calcium	315	4.05	mg/L	50	EJ62513	10/25/06	10/25/06	EPA 6010B	
Magnesium	218	1.80	"	"	"	"	"	"	
Potassium	39.9	0.600	"	10	"	"	"	"	
Sodium	1960	10.8	"	250	"	"	"	"	

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

Project: EME Jct. M-16-1
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 EJ62606 - EPA 5030C (GC)										
Blank (EJ62606-BLK1)										
Prepared: 10/26/06 Analyzed: 10/27/06										
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	33.1		ug/l	40.0		82.8	80-120			
Surrogate: 4-Bromofluorobenzene	32.8		"	40.0		82.0	80-120			
LCS (EJ62606-BS1)										
Prepared: 10/26/06 Analyzed: 10/27/06										
Benzene	0.0439	0.00100	mg/L	0.0500		87.8	80-120			
Toluene	0.0444	0.00100	"	0.0500		88.8	80-120			
Ethylbenzene	0.0423	0.00100	"	0.0500		84.6	80-120			
Xylene (p/m)	0.0834	0.00100	"	0.100		83.4	80-120			
Xylene (o)	0.0428	0.00100	"	0.0500		85.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.0		ug/l	40.0		87.5	80-120			
Surrogate: 4-Bromofluorobenzene	35.0		"	40.0		87.5	80-120			
Calibration Check (EJ62606-CCV1)										
Prepared: 10/26/06 Analyzed: 10/29/06										
Benzene	59.5		ug/l	50.0		119	80-120			
Toluene	56.1		"	50.0		112	80-120			
Ethylbenzene	58.4		"	50.0		117	80-120			
Xylene (p/m)	116		"	100		116	80-120			
Xylene (o)	59.0		"	50.0		118	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.1		"	40.0		92.8	80-120			
Surrogate: 4-Bromofluorobenzene	42.0		"	40.0		105	80-120			
Matrix Spike (EJ62606-MS1)										
Source: 6J23009-01 Prepared: 10/26/06 Analyzed: 10/29/06										
Benzene	0.0563	0.00100	mg/L	0.0500	ND	113	80-120			
Toluene	0.0560	0.00100	"	0.0500	ND	112	80-120			
Ethylbenzene	0.0593	0.00100	"	0.0500	ND	119	80-120			
Xylene (p/m)	0.115	0.00100	"	0.100	ND	115	80-120			
Xylene (o)	0.0501	0.00100	"	0.0500	ND	100	80-120			
Surrogate: a,a,a-Trifluorotoluene	39.4		ug/l	40.0		98.5	80-120			
Surrogate: 4-Bromofluorobenzene	44.4		"	40.0		111	80-120			

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 6 of 11

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

Project: EME Jct. M-16-1
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 Limits	RPD Limit	Notes
Batch EJ62606 - EPA 5030C (GC)								
Matrix Spike Dup (EJ62606-MSD1)		Source: 6J23009-01		Prepared: 10/26/06		Analyzed: 10/29/06		
Benzene	0.0488	0.00100	mg/L	0.0500	ND	97.6	80-120	20
Toluene	0.0459	0.00100	"	0.0500	ND	91.8	80-120	20
Ethylbenzene	0.0481	0.00100	"	0.0500	ND	96.2	80-120	20
Xylene (p/m)	0.0984	0.00100	"	0.100	ND	98.4	80-120	20
Xylene (o)	0.0521	0.00100	"	0.0500	ND	104	80-120	20
Surrogate: a,a,a-Trifluorotoluene	34.3		ug/l	40.0		85.8	80-120	
Surrogate: 4-Bromofluorobenzene	42.0		"	40.0		105	80-120	

QR-02

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

Project: EME Jct. M-16-1
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 Limits	RPD	RPD Limit	Notes
Batch EJ62401 - General Preparation (WetChem)									
Blank (EJ62401-BLK1)				Prepared & Analyzed: 10/24/06					
Total Alkalinity	ND	2.00	mg/L						
Duplicate (EJ62401-DUP1)				Source: 6J19010-01		Prepared & Analyzed: 10/24/06			
Total Alkalinity	270	2.00	mg/L		272		0.738	20	
Reference (EJ62401-SRM1)				Prepared & Analyzed: 10/24/06					
Total Alkalinity	248		mg/L	250		99.2	90-110		
Batch EJ62404 - General Preparation (WetChem)									
Blank (EJ62404-BLK1)				Prepared & Analyzed: 10/24/06					
Chloride	ND	0.500	mg/L						
Sulfate	ND	0.500	"						
LCS (EJ62404-BS1)				Prepared & Analyzed: 10/24/06					
Chloride	11.3	0.500	mg/L	10.0		113	80-120		
Sulfate	10.6	0.500	"	10.0		106	80-120		
Calibration Check (EJ62404-CCV1)				Prepared & Analyzed: 10/24/06					
Sulfate	11.0		mg/L	10.0		110	80-120		
Chloride	11.8		"	10.0		118	80-120		
Duplicate (EJ62404-DUP1)				Source: 6J19026-03		Prepared & Analyzed: 10/24/06			
Sulfate	23.2	5.00	mg/L		22.8		1.74	20	
Chloride	69.5	5.00	"		77.5		10.9	20	
Duplicate (EJ62404-DUP2)				Source: 6J24001-01		Prepared & Analyzed: 10/24/06			
Sulfate	44.0	25.0	mg/L		45.3		2.91	20	
Chloride	1570	25.0	"		1640		4.36	20	

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

Project: EME Jct. M-16-1
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 EJ62404 - General Preparation (WetChem)

Matrix Spike (EJ62404-MS1) Source: 6J19026-03 Prepared & Analyzed: 10/24/06

Chloride	192	5.00	mg/L	100	77.5	114	80-120			
Sulfate	124	5.00	"	100	22.8	101	80-120			

Matrix Spike (EJ62404-MS2) Source: 6J24001-01 Prepared & Analyzed: 10/24/06

Chloride	2240	25.0	mg/L	500	1640	120	80-120			
Sulfate	540	25.0	"	500	45.3	98.9	80-120			

Batch EJ62601 - Filtration Preparation

Duplicate (EJ62601-DUP1) Source: 6J23008-01 Prepared: 10/25/06 Analyzed: 10/26/08

Total Dissolved Solids	6280	10.0	mg/L		5990			4.73	5	
------------------------	------	------	------	--	------	--	--	------	---	--

Duplicate (EJ62601-DUP2) Source: 6J25004-01 Prepared: 10/25/06 Analyzed: 10/26/08

Total Dissolved Solids	1040	10.0	mg/L		1010			2.93	5	
------------------------	------	------	------	--	------	--	--	------	---	--

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

Project: EME Jct. M-16-1
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 EJ62513 - 6010B/No Digestion

Blank (EJ62513-BLK1)

Prepared & Analyzed: 10/25/06

Calcium	ND	0.0810	mg/L						
Magnesium	ND	0.0360	"						
Potassium	ND	0.0600	"						
Sodium	ND	0.0430	"						

Calibration Check (EJ62513-CCV1)

Prepared & Analyzed: 10/25/06

Calcium	2.23		mg/L	2.00		112	85-115		
Magnesium	2.29		"	2.00		114	85-115		
Potassium	1.74		"	2.00		87.0	85-115		
Sodium	2.13		"	2.00		106	85-115		

Duplicate (EJ62513-DUP1)

Source: 6J19026-03

Prepared & Analyzed: 10/25/06

Calcium	53.8	0.810	mg/L	54.7		1.66	20		
Magnesium	21.4	0.360	"	21.5		0.466	20		
Potassium	12.0	0.600	"	12.2		1.65	20		
Sodium	27.4	0.430	"	27.0		1.47	20		

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

Project: EME Jct. M-16-1
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Notes and Definitions

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

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

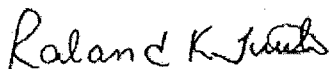
RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:



Date:

10/31/2006

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

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

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

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

12600 West I-20 East
Odessa, Texas 79768

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Kristin Farris Pope kpope@riceswd.com

Project Name:

EME Junction M-16-1

Company Name RICE Operating Company

Project Number:

Company Address: 122 W. Taylor Street

Project Log:

T20S-R37E-Sec16M, Lea County NM

City/State/Zip: Hobbs, New Mexico 88240

PO Number:

Telephone No: (505) 393-9174

Fax No: (505) 397-1471

Sampler Signature: Rozanne Johnson (505) 631-9310

Email: rozanne@valor.net.com

LAB # (lab use only)		FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative										Matrix										Analyze For	
						HNO ₃	HCl (2) all oil glass vials	NaOH	H ₂ SO ₄	None (2) 1 Liter HClPE	Other (Specify)	Water	Sediment	Soil	Other (Specify)	TPH 412.1 2015M 9005 10005	Carbon (C), As, Mg, Na, Ni	Arsenic (As), SO ₄ , CO ₃ , HCO ₃	SAR / ESP / DEC	Metals: As, Ag, Ba, Cd, Cr, Pb, Hg, Se	Contaminants	BTX 202 REV 030	WORM	Total Dissolved Solids	RUSH TAT (Pre-Schedule)		
	Monitor Well #1		10/20/2006	12:05	3	X	2			1		X					X	X	X	X		X		X			
	Monitor Well #2		10/20/2006	10:10	3	X	2			1		X					X	X	X	X		X		X			
	Monitor Well #3		10/20/2006	13:00	3	X	2			1		X					X	X	X	X		X		X			
	Monitor Well #4		10/20/2006	14:10	3	X	2			1		X					X	X	X	X		X		X			
	Monitor Well #5		10/20/2006	9:05	3	X	2			1		X					X	X	X	X		X		X			

Special Instructions:

PLEASE Email RESULTS TO: kpope@riceswd.com; mfranks@riceswd.com

rozanne@valornet.com

Sample Containers Intact? ☒ N

Labels on container? ☒ N

Custody Seal: Container / Cooler

Temperature Upon Receipt:

Laboratory Comments: 4.0

Relinquished by: 

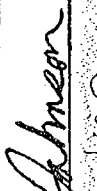
Rozanne Johnson

Relinquished by: 

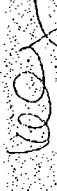
James Johnson

Date: 10-23-06 6:10

Date: 10-23-06 12:00

Received by: 

James Johnson

Received by ELOT: 

Rozanne Johnson

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Live Op.
 Date/ Time: 10/23/08 12:00
 Lab ID #: 652300f
 Initials: OK

Sample Receipt Checklist

Client Initials

#1 Temperature of container/ cooler?	Yes	No	4.0 °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 ELDT?	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 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



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
155 McCutcheon, Suite H El Paso, Texas 79932 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail lab@traceanalysis.com

Analytical and Quality Control Report

Kristen Farris-Pope
Rice Operating Company
122 W Taylor Street
Hobbs, NM, 88240

Report Date: August 17, 2006

Work Order: 6072814



Project Location: Lea County, NM
Project Name: EME Junction M-16-1
Project Number: EME Junction M-16-1

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
97135	MW-1	water	2006-07-25	08:45	2006-07-26
97136	MW-2	water	2006-07-25	09:40	2006-07-26
97137	MW-3	water	2006-07-25	10:35	2006-07-26
97138	MW-4	water	2006-07-25	11:55	2006-07-26
97139	MW-5	water	2006-07-25	13:10	2006-07-26

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 21 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Report

Sample: 97135 - MW-1

Analysis: Alkalinity
QC Batch: 28763
Prep Batch: 25162

Analytical Method: SM 2320B
Date Analyzed: 2006-08-07
Sample Preparation: 2006-08-07

Prep Method: N/A
Analyzed By: LJ
Prepared By: LJ

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		386	mg/L as CaCo3	1	4.00
Total Alkalinity		386	mg/L as CaCo3	1	4.00

Sample: 97135 - MW-1

Analysis: BTEX
QC Batch: 28457
Prep Batch: 24898

Analytical Method: S 8021B
Date Analyzed: 2006-07-28
Sample Preparation: 2006-07-28

Prep Method: S 5030B
Analyzed By: KB
Prepared By: KB

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0904	mg/L	1	0.100	90	66.2 - 127.7
4-Bromofluorobenzene (4-BFB)	1	0.0651	mg/L	1	0.100	65	70.6 - 129.2

Sample: 97135 - MW-1

Analysis: Cations
QC Batch: 28607
Prep Batch: 24949

Analytical Method: S 6010B
Date Analyzed: 2006-08-02
Sample Preparation: 2006-07-31

Prep Method: S 3005A
Analyzed By: TP
Prepared By: TS

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		302	mg/L	10	0.500
Dissolved Potassium		52.2	mg/L	1	1.00
Dissolved Magnesium		188	mg/L	10	1.00
Dissolved Sodium		1660	mg/L	100	1.00

Sample: 97135 - MW-1

Analysis: Ion Chromatography
QC Batch: 28552
Prep Batch: 24973

Analytical Method: E 300.0
Date Analyzed: 2006-07-31
Sample Preparation: 2006-07-29

Prep Method: N/A
Analyzed By: WB
Prepared By: WB

¹BFB surrogate recovery outside normal limits. ICV/CCV and TFT surrogate recovery show the method to be in control.

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1830	mg/L	50	0.500
Sulfate		2010	mg/L	50	0.500

Sample: 97135 - MW-1

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 28666	Date Analyzed: 2006-08-01	Analyzed By: SM
Prep Batch: 25064	Sample Preparation: 2009-07-31	Prepared By: SM

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		6435	mg/L	5	10.00

Sample: 97136 - MW-2

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 28763	Date Analyzed: 2006-08-07	Analyzed By: LJ
Prep Batch: 25162	Sample Preparation: 2006-08-07	Prepared By: LJ

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		338	mg/L as CaCo3	1	4.00
Total Alkalinity		338	mg/L as CaCo3	1	4.00

Sample: 97136 - MW-2

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 28457	Date Analyzed: 2006-07-28	Analyzed By: KB
Prep Batch: 24898	Sample Preparation: 2006-07-28	Prepared By: KB

Parameter	Flag	RL Result	Units	Dilution	RL
MTBE		<0.00100	mg/L	1	0.00100
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0895	mg/L	1	0.100	90	66.2 - 127.7
4-Bromofluorobenzene (4-BFB)	²	0.0621	mg/L	1	0.100	62	70.6 - 129.2

²BFB surrogate recovery outside normal limits. ICV/CCV and TFT surrogate recovery show the method to be in control.

Sample: 97136 - MW-2

Analysis:	Cations	Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	28607	Date Analyzed:	2006-08-02	Analyzed By:	TP
Prep Batch:	24949	Sample Preparation:	2006-07-31	Prepared By:	TS

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		389	mg/L	10	0.500
Dissolved Potassium		60.4	mg/L	1	1.00
Dissolved Magnesium		244	mg/L	10	1.00
Dissolved Sodium		1830	mg/L	100	1.00

Sample: 97136 - MW-2

Analysis:	Ion Chromatography	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	28552	Date Analyzed:	2006-07-31	Analyzed By:	WB
Prep Batch:	24973	Sample Preparation:	2006-07-29	Prepared By:	WB

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2240	mg/L	50	0.500
Sulfate		2440	mg/L	50	0.500

Sample: 97136 - MW-2

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	28667	Date Analyzed:	2006-08-01	Analyzed By:	SM
Prep Batch:	25065	Sample Preparation:	2009-07-31	Prepared By:	SM

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		7535	mg/L	5	10.00

Sample: 97137 - MW-3

Analysis:	Alkalinity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	28763	Date Analyzed:	2006-08-07	Analyzed By:	LJ
Prep Batch:	25162	Sample Preparation:	2006-08-07	Prepared By:	LJ

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		404	mg/L as CaCo3	1	4.00
Total Alkalinity		404	mg/L as CaCo3	1	4.00

Sample: 97137 - MW-3

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 28457	Date Analyzed: 2006-07-28	Analyzed By: KB
Prep Batch: 24898	Sample Preparation: 2006-07-28	Prepared By: KB

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0887	mg/L	1	0.100	89	66.2 - 127.7
4-Bromofluorobenzene (4-BFB)	³	0.0596	mg/L	1	0.100	60	70.6 - 129.2

Sample: 97137 - MW-3

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 28607	Date Analyzed: 2006-08-02	Analyzed By: TP
Prep Batch: 24949	Sample Preparation: 2006-07-31	Prepared By: TS

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		343	mg/L	10	0.500
Dissolved Potassium		60.1	mg/L	1	1.00
Dissolved Magnesium		228	mg/L	10	1.00
Dissolved Sodium		1900	mg/L	100	1.00

Sample: 97137 - MW-3

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 29104 ^a	Date Analyzed: 2006-08-16	Analyzed By: WB
Prep Batch: 25429	Sample Preparation: 2006-08-15	Prepared By: WB

^aMatrix not reported %IA Cl is 124 and SO4 123 and RPD is 2 for CL and 2 for SO4.

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2940	mg/L	100	0.500
Sulfate		2620	mg/L	100	0.500

Sample: 97137 - MW-3

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 28667	Date Analyzed: 2006-08-01	Analyzed By: SM
Prep Batch: 25065	Sample Preparation: 2009-07-31	Prepared By: SM

³BFB surrogate recovery outside normal limits. ICV/CCV and TFT surrogate recovery show the method to be in control.

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		7840	mg/L	10	10.00

Sample: 97138 - MW-4

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 28763	Date Analyzed: 2006-08-07	Analyzed By: LJ
Prep Batch: 25162	Sample Preparation: 2006-08-07	Prepared By: LJ

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		410	mg/L as CaCo3	1	4.00
Total Alkalinity		410	mg/L as CaCo3	1	4.00

Sample: 97138 - MW-4

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 28457	Date Analyzed: 2006-07-28	Analyzed By: KB
Prep Batch: 24898	Sample Preparation: 2006-07-28	Prepared By: KB

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0888	mg/L	1	0.100	89	66.2 - 127.7
4-Bromofluorobenzene (4-BFB)	4	0.0603	mg/L	1	0.100	60	70.6 - 129.2

Sample: 97138 - MW-4

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 28607	Date Analyzed: 2006-08-02	Analyzed By: TP
Prep Batch: 24949	Sample Preparation: 2006-07-31	Prepared By: TS

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		346	mg/L	10	0.500
Dissolved Potassium		54.9	mg/L	1	1.00
Dissolved Magnesium		251	mg/L	10	1.00
Dissolved Sodium		1840	mg/L	100	1.00

⁴BFB surrogate recovery outside normal limits. ICV/CCV and TFT surrogate recovery show the method to be in control.

Sample: 97138 - MW-4

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 29113	Date Analyzed: 2006-08-16	Analyzed By: WB
Prep Batch: 25430	Sample Preparation: 2006-08-15	Prepared By: WB

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2500	mg/L	100	0.500
Sulfate		2530	mg/L	100	0.500

Sample: 97138 - MW-4

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 28667	Date Analyzed: 2006-08-01	Analyzed By: SM
Prep Batch: 25065	Sample Preparation: 2009-07-31	Prepared By: SM

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		7030	mg/L	10	10.00

Sample: 97139 - MW-5

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 28763	Date Analyzed: 2006-08-07	Analyzed By: LJ
Prep Batch: 25162	Sample Preparation: 2006-08-07	Prepared By: LJ

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		384	mg/L as CaCo3	1	4.00
Total Alkalinity		384	mg/L as CaCo3	1	4.00

Sample: 97139 - MW-5

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 28457	Date Analyzed: 2006-07-28	Analyzed By: KB
Prep Batch: 24898	Sample Preparation: 2006-07-28	Prepared By: KB

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0882	mg/L	1	0.100	88	66.2 - 127.7

continued...

sample continued ...

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)	⁵	0.0601	mg/L	1	0.100	60	70.6 - 129.2

Sample: 97139 - MW-5

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 28607	Date Analyzed: 2006-08-02	Analyzed By: TP
Prep Batch: 24949	Sample Preparation: 2006-07-31	Prepared By: TS

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		306	mg/L	10	0.500
Dissolved Potassium		56.6	mg/L	1	1.00
Dissolved Magnesium		209	mg/L	10	1.00
Dissolved Sodium		1650	mg/L	100	1.00

Sample: 97139 - MW-5

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 28553	Date Analyzed: 2006-07-31	Analyzed By: WB
Prep Batch: 24974	Sample Preparation: 2006-07-29	Prepared By: WB

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		2400	mg/L	50	0.500
Sulfate		2310	mg/L	50	0.500

Sample: 97139 - MW-5

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 28667	Date Analyzed: 2006-08-01	Analyzed By: SM
Prep Batch: 25065	Sample Preparation: 2009-07-31	Prepared By: SM

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		6245	mg/L	5	10.00

Method Blank (1) QC Batch: 28457

QC Batch: 28457	Date Analyzed: 2006-07-28	Analyzed By: KB
Prep Batch: 24898	QC Preparation: 2006-07-28	Prepared By: KB

continued ...

⁵BFB surrogate recovery outside normal limits. ICV/CCV and TFT surrogate recovery show the method to be in control.

method blank continued...

Parameter	Flag	MDL Result	Units	RL
Parameter	Flag	MDL Result	Units	RL
MTBE		<0.000193	mg/L	0.01
Benzene		<0.000255	mg/L	0.001
Toluene		<0.000210	mg/L	0.001
Ethylbenzene		<0.000317	mg/L	0.001
Xylene		<0.000603	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0915	mg/L	1	0.100	92	79.3 - 116
4-Bromofluorobenzene (4-BFB)		0.0654	mg/L	1	0.100	65	47.6 - 122

Method Blank (1) QC Batch: 28552

QC Batch: 28552
Prep Batch: 24973

Date Analyzed: 2006-07-31
QC Preparation: 2006-07-29

Analyzed By: WB
Prepared By: WB

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.0181	mg/L	0.5
Sulfate		<0.0485	mg/L	0.5

Method Blank (1) QC Batch: 28553

QC Batch: 28553
Prep Batch: 24974

Date Analyzed: 2006-07-31
QC Preparation: 2006-07-29

Analyzed By: WB
Prepared By: WB

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.0181	mg/L	0.5
Sulfate		<0.0485	mg/L	0.5

Method Blank (1) QC Batch: 28607

QC Batch: 28607
Prep Batch: 24949

Date Analyzed: 2006-08-02
QC Preparation: 2006-07-31

Analyzed By: TP
Prepared By: TS

Parameter	Flag	MDL Result	Units	RL
Dissolved Calcium		0.175	mg/L	0.5
Dissolved Potassium		0.614	mg/L	1
Dissolved Magnesium		0.935	mg/L	1
Dissolved Sodium		0.947	mg/L	1

Method Blank (1) QC Batch: 28666

QC Batch: 28666
Prep Batch: 25064

Date Analyzed: 2006-08-01
QC Preparation: 2006-07-31

Analyzed By: SM
Prepared By: SM

Parameter	Flag	MDL Result	Units	RL
Total Dissolved Solids		<5.000	mg/L	10

Method Blank (1) QC Batch: 28667

QC Batch: 28667
Prep Batch: 25065

Date Analyzed: 2006-08-01
QC Preparation: 2006-07-31

Analyzed By: SM
Prepared By: SM

Parameter	Flag	MDL Result	Units	RL
Total Dissolved Solids		<5.000	mg/L	10

Method Blank (1) QC Batch: 28763

QC Batch: 28763
Prep Batch: 25162

Date Analyzed: 2006-08-07
QC Preparation: 2006-08-07

Analyzed By: LJ
Prepared By: LJ

Parameter	Flag	MDL Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4
Total Alkalinity		<4.00	mg/L as CaCo3	4

Method Blank (1) QC Batch: 29104

QC Batch: 29104
Prep Batch: 25429

Date Analyzed: 2006-08-16
QC Preparation: 2006-08-15

Analyzed By: WB
Prepared By: WB

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.0181	mg/L	0.5
Sulfate		<0.0485	mg/L	0.5

Method Blank (1) QC Batch: 29113

QC Batch: 29113
Prep Batch: 25430

Date Analyzed: 2006-08-16
QC Preparation: 2006-08-15

Analyzed By: WB
Prepared By: WB

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.0181	mg/L	0.5
Sulfate		<0.0485	mg/L	0.5

Duplicates (1)

QC Batch: 28666
Prep Batch: 25064

Date Analyzed: 2006-08-01
QC Preparation: 2006-07-31

Analyzed By: SM
Prepared By: SM

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	7235	6435	mg/L	5	12	17.2

Duplicates (1)

QC Batch: 28667
Prep Batch: 25065

Date Analyzed: 2006-08-01
QC Preparation: 2006-07-31

Analyzed By: SM
Prepared By: SM

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1344	1298	mg/L	2	4	17.2

Duplicates (1)

QC Batch: 28763
Prep Batch: 25162

Date Analyzed: 2006-08-07
QC Preparation: 2006-08-07

Analyzed By: LJ
Prepared By: LJ

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Bicarbonate Alkalinity	170	174	mg/L as CaCo3	1	2	12.6
Total Alkalinity	170	174	mg/L as CaCo3	1	2	11.5

Laboratory Control Spike (LCS-1)

QC Batch: 28457
Prep Batch: 24898

Date Analyzed: 2006-07-28
QC Preparation: 2006-07-28

Analyzed By: KB
Prepared By: KB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
MTBE	0.0958	mg/L	1	0.100	<0.000193	96	82.3 - 110
Benzene	0.0958	mg/L	1	0.100	<0.000255	96	82.2 - 119
Toluene	0.0943	mg/L	1	0.100	<0.000210	94	81.2 - 119
Ethylbenzene	0.0926	mg/L	1	0.100	<0.000317	93	80 - 122
Xylene	0.284	mg/L	1	0.300	<0.000603	95	81.3 - 122

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
MTBE	0.0930	mg/L	1	0.100	<0.000193	96	82.3 - 110	3	20
Benzene	0.0950	mg/L	1	0.100	<0.000255	96	82.2 - 119	1	20
Toluene	0.0940	mg/L	1	0.100	<0.000210	94	81.2 - 119	0	20

continued...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Ethylbenzene	0.0925	mg/L	1	0.100	<0.000317	93	80 - 122	0	20
Xylene	0.284	mg/L	1	0.300	<0.000603	95	81.3 - 122	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0910	0.0909	mg/L	1	0.100	91	91	81.8 - 114
4-Bromofluorobenzene (4-BFB)	0.101	0.101	mg/L	1	0.100	101	101	72.7 - 116

Laboratory Control Spike (LCS-1)

QC Batch: 28552
Prep Batch: 24973

Date Analyzed: 2006-07-31
QC Preparation: 2006-07-29

Analyzed By: WB
Prepared By: WB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11.8	mg/L	1	12.5	<0.0181	95	90 - 110
Sulfate	11.9	mg/L	1	12.5	<0.0485	95	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	12.0	mg/L	1	12.5	<0.0181	95	90 - 110	1	20
Sulfate	12.0	mg/L	1	12.5	<0.0485	95	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 28553
Prep Batch: 24974

Date Analyzed: 2006-07-31
QC Preparation: 2006-07-29

Analyzed By: WB
Prepared By: WB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	12.0	mg/L	1	12.5	<0.0181	96	90 - 110
Sulfate	12.1	mg/L	1	12.5	<0.0485	97	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	12.0	mg/L	1	12.5	<0.0181	96	90 - 110	0	20
Sulfate	12.0	mg/L	1	12.5	<0.0485	97	90 - 110	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 28607
Prep Batch: 24949

Date Analyzed: 2006-08-02
QC Preparation: 2006-07-31

Analyzed By: TP
Prepared By: TS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Calcium	53.7	mg/L	1	50.0	<0.0950	107	85 - 115
Dissolved Potassium	49.7	mg/L	1	50.0	<0.377	99	85 - 113
Dissolved Magnesium	49.5	mg/L	1	50.0	<0.704	99	85 - 113
Dissolved Sodium	48.7	mg/L	1	50.0	<0.261	97	85 - 111

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Dissolved Calcium	52.6	mg/L	1	50.0	<0.0950	107	85 - 115	2	20
Dissolved Potassium	49.0	mg/L	1	50.0	<0.377	99	85 - 113	1	20
Dissolved Magnesium	51.4	mg/L	1	50.0	<0.704	99	85 - 113	4	20
Dissolved Sodium	49.8	mg/L	1	50.0	<0.261	97	85 - 111	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 29104
Prep Batch: 25429

Date Analyzed: 2006-08-16
QC Preparation: 2006-08-15

Analyzed By: WB
Prepared By: WB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11.9	mg/L	1	12.5	<0.0181	95	90 - 110
Sulfate	11.3	mg/L	1	12.5	<0.0485	90	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11.6	mg/L	1	12.5	<0.0181	95	90 - 110	3	20
Sulfate	11.3	mg/L	1	12.5	<0.0485	90	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 29113
Prep Batch: 25430

Date Analyzed: 2006-08-16
QC Preparation: 2006-08-15

Analyzed By: WB
Prepared By: WB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11.8	mg/L	1	12.5	<0.0181	94	90 - 110
Sulfate	11.3	mg/L	1	12.5	<0.0485	90	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11.9	mg/L	1	12.5	<0.0181	94	90 - 110	1	20
Sulfate	11.5	mg/L	1	12.5	<0.0485	90	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 97188

QC Batch: 28457
Prep Batch: 24898

Date Analyzed: 2006-07-28
QC Preparation: 2006-07-28

Analyzed By: KB
Prepared By: KB

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
MTBE	0.0968	mg/L	1	0.100	<0.000193	97	68.6 - 122
Benzene	0.0965	mg/L	1	0.100	<0.000255	96	70.9 - 126
Toluene	0.0961	mg/L	1	0.100	<0.000210	96	70.8 - 125
Ethylbenzene	0.0956	mg/L	1	0.100	<0.000317	96	74.8 - 125
Xylene	0.291	mg/L	1	0.300	<0.000603	97	75.7 - 126

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
MTBE	⁶ NA	mg/L	1	0.100	<0.000193	0	68.6 - 122	200	20
Benzene	⁷ NA	mg/L	1	0.100	<0.000255	0	70.9 - 126	200	20
Toluene	⁸ NA	mg/L	1	0.100	<0.000210	0	70.8 - 125	200	20
Ethylbenzene	⁹ NA	mg/L	1	0.100	<0.000317	0	74.8 - 125	200	20
Xylene	¹⁰ NA	mg/L	1	0.300	<0.000603	0	75.7 - 126	200	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	¹¹ 0.0916	NA	mg/L	1	0.1	92	0	73.6 - 121
4-Bromofluorobenzene (4-BFB)	¹² 0.102	NA	mg/L	1	0.1	102	0	81.8 - 114

Matrix Spike (MS-1) Spiked Sample: 97132

QC Batch: 28552
Prep Batch: 24973

Date Analyzed: 2006-07-31
QC Preparation: 2006-07-29

Analyzed By: WB
Prepared By: WB

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	8800	mg/L	500	12.5	2890	94	25.4 - 171
Sulfate	6870	mg/L	500	12.5	566	101	0 - 677

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	8820	mg/L	500	12.5	2890	95	25.4 - 171	0	20
Sulfate	6780	mg/L	500	12.5	566	99	0 - 677	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

⁶RPD is out of range because a matrix spike duplicate was not prepared.

⁷RPD is out of range because a matrix spike duplicate was not prepared.

⁸RPD is out of range because a matrix spike duplicate was not prepared.

⁹RPD is out of range because a matrix spike duplicate was not prepared.

¹⁰RPD is out of range because a matrix spike duplicate was not prepared.

¹¹RPD is out of range because a matrix spike duplicate was not prepared.

¹²RPD is out of range because a matrix spike duplicate was not prepared.

Matrix Spike (MS-1) Spiked Sample: 96738

QC Batch: 28553
Prep Batch: 24974

Date Analyzed: 2006-07-31
QC Preparation: 2006-07-29

Analyzed By: WB
Prepared By: WB

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	280	mg/L	5	12.5	223	91	25.4 - 171
Sulfate	451	mg/L	5	12.5	400	82	0 - 677

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	274	mg/L	5	12.5	223	82	25.4 - 171	2	20
Sulfate	443	mg/L	5	12.5	400	69	0 - 677	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 97133

QC Batch: 28607
Prep Batch: 24949

Date Analyzed: 2006-08-02
QC Preparation: 2006-07-31

Analyzed By: TP
Prepared By: TS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Calcium	420	mg/L	1	50.0	362	116	68.4 - 138
Dissolved Potassium	¹³ 95.5	mg/L	1	50.0	56.3	78	82 - 129
Dissolved Magnesium	344	mg/L	1	50.0	291	106	61.2 - 135
Dissolved Sodium	¹⁴ 1420	mg/L	100	50.0	1320	2	81.8 - 125

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Dissolved Calcium	416	mg/L	1	50.0	362	108	68.4 - 138	1	20
Dissolved Potassium	101	mg/L	1	50.0	56.3	89	82 - 129	6	20
Dissolved Magnesium	333	mg/L	1	50.0	291	84	61.2 - 135	3	20
Dissolved Sodium	¹⁵ 1480	mg/L	100	50.0	1320	3	81.8 - 125	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 97138

QC Batch: 29113
Prep Batch: 25430

Date Analyzed: 2006-08-16
QC Preparation: 2006-08-15

Analyzed By: WB
Prepared By: WB

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	3680	mg/L	100	12.5	2497	95	25.4 - 171

continued...

¹³Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

¹⁴Matrix spike recoveries out of control limits due to matrix spike being diluted out. Use LCS/LCSD to demonstrate analysis is under control.

¹⁵Matrix spike recoveries out of control limits due to matrix spike being diluted out. Use LCS/LCSD to demonstrate analysis is under control.

matrix spikes continued...

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	3760	mg/L	100	12.5	2530	98	0 - 677

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	3690	mg/L	100	12.5	2497	96	25.4 - 171	0	20
Sulfate	3750	mg/L	100	12.5	2530	98	0 - 677	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1)

QC Batch: 28457

Date Analyzed: 2006-07-28

Analyzed By: KB

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.100	0.0936	94	85 - 115	2006-07-28
Benzene		mg/L	0.100	0.0950	95	85 - 115	2006-07-28
Toluene		mg/L	0.100	0.0942	94	85 - 115	2006-07-28
Ethylbenzene		mg/L	0.100	0.0926	93	85 - 115	2006-07-28
Xylene		mg/L	0.300	0.285	95	85 - 115	2006-07-28

Standard (CCV-1)

QC Batch: 28457

Date Analyzed: 2006-07-28

Analyzed By: KB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.100	0.0953	95	85 - 115	2006-07-28
Benzene		mg/L	0.100	0.0963	96	85 - 115	2006-07-28
Toluene		mg/L	0.100	0.0945	94	85 - 115	2006-07-28
Ethylbenzene		mg/L	0.100	0.0930	93	85 - 115	2006-07-28
Xylene		mg/L	0.300	0.285	95	85 - 115	2006-07-28

Standard (ICV-1)

QC Batch: 28552

Date Analyzed: 2006-07-31

Analyzed By: WB

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.9	95	90 - 110	2006-07-31
Sulfate		mg/L	12.5	12.1	97	90 - 110	2006-07-31

Standard (CCV-1)

QC Batch: 28552

Date Analyzed: 2006-07-31

Analyzed By: WB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.1	97	90 - 110	2006-07-31
Sulfate		mg/L	12.5	12.0	96	90 - 110	2006-07-31

Standard (ICV-1)

QC Batch: 28553

Date Analyzed: 2006-07-31

Analyzed By: WB

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.1	97	90 - 110	2006-07-31
Sulfate		mg/L	12.5	12.0	96	90 - 110	2006-07-31

Standard (CCV-1)

QC Batch: 28553

Date Analyzed: 2006-07-31

Analyzed By: WB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.2	98	90 - 110	2006-07-31
Sulfate		mg/L	12.5	12.1	97	90 - 110	2006-07-31

Standard (ICV-1)

QC Batch: 28607

Date Analyzed: 2006-08-02

Analyzed By: TP

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	50.5	101	90 - 110	2006-08-02
Dissolved Potassium		mg/L	50.0	48.6	97	90 - 110	2006-08-02
Dissolved Magnesium		mg/L	50.0	50.7	101	90 - 110	2006-08-02
Dissolved Sodium		mg/L	50.0	50.4	101	90 - 110	2006-08-02

Standard (CCV-1)

QC Batch: 28607

Date Analyzed: 2006-08-02

Analyzed By: TP

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	50.8	102	90 - 110	2006-08-02
Dissolved Potassium		mg/L	50.0	47.2	94	90 - 110	2006-08-02
Dissolved Magnesium		mg/L	50.0	49.0	98	90 - 110	2006-08-02
Dissolved Sodium		mg/L	50.0	48.9	98	90 - 110	2006-08-02

Standard (ICV-1)

QC Batch: 28666

Date Analyzed: 2006-08-01

Analyzed By: SM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	982.0	98	90 - 110	2006-08-01

Standard (CCV-1)

QC Batch: 28666

Date Analyzed: 2006-08-01

Analyzed By: SM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1003	100	90 - 110	2006-08-01

Standard (ICV-1)

QC Batch: 28667

Date Analyzed: 2006-08-01

Analyzed By: SM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	999.0	100	90 - 110	2006-08-01

Standard (CCV-1)

QC Batch: 28667

Date Analyzed: 2006-08-01

Analyzed By: SM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1003	100	90 - 110	2006-08-01

Standard (ICV-1)

QC Batch: 28763

Date Analyzed: 2006-08-07

Analyzed By: LJ

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Alkalinity		mg/L as CaCo3	250	236	94	90 - 110	2006-08-07

Standard (CCV-1)

QC Batch: 28763

Date Analyzed: 2006-08-07

Analyzed By: LJ

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Alkalinity		mg/L as CaCo3	250	240	96	90 - 110	2006-08-07

Standard (ICV-1)

QC Batch: 29104

Date Analyzed: 2006-08-16

Analyzed By: WB

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.5	100	90 - 110	2006-08-16
Sulfate		mg/L	12.5	12.2	98	90 - 110	2006-08-16

Standard (CCV-1)

QC Batch: 29104

Date Analyzed: 2006-08-16

Analyzed By: WB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.6	93	90 - 110	2006-08-16
Sulfate		mg/L	12.5	11.3	90	90 - 110	2006-08-16

Standard (ICV-1)

QC Batch: 29113

Date Analyzed: 2006-08-16

Analyzed By: WB

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.6	93	90 - 110	2006-08-16
Sulfate		mg/L	12.5	11.3	90	90 - 110	2006-08-16

Standard (CCV-1)

QC Batch: 29113

Date Analyzed: 2006-08-16

Analyzed By: WB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.8	94	90 - 110	2006-08-16
Sulfate		mg/L	12.5	11.4	91	90 - 110	2006-08-16

Subinitial of samples constitutes agreement to Terms and Conditions listed on reverse side of COC

Cation-Anion Balance Sheet

DATE: 8/16/2006

Sample #	Calcium ppm	Magnesium ppm	Sodium ppm	Potassium ppm	Alkalinity ppm	Sulfate ppm	Chloride ppm	Nitrate ppm	Fluoride ppm	TDS ppm	EC µMHOs/cm
97135	302	188	1680	52.2	386	2010	1830			6435	
97136	399	244	1930	60.4	338	2440	2240			7535	
97137	343	228	1900	60.1	404	2820	2940			7840	
97138	346	251	1840	54.9	410	2630	2500			7030	
97139	306	209	1650	56.5	384	2310	2400			6240	

Sample #	Calcium in meq/L	Magnesium in meq/L	Sodium in meq/L	Potassium in meq/L	Alkalinity in meq/L	Sulfate in meq/L	Chloride in meq/L	Nitrate in meq/L	Fluoride in meq/L	Cations in meq/L	Anions in meq/L	Percentage Error
97135	15.07	15.47	72.21	1.34	7.72	41.85	51.62			104.09	101.19	2.8
97136	19.41	20.08	79.61	1.55	6.76	50.80	63.19			120.84	120.75	0.1
97137	17.12	18.76	82.65	1.54	8.06	54.55	82.94			120.07	145.67	19.2
97138	17.27	20.65	80.04	1.40	8.20	52.67	70.53			119.36	131.40	9.6
97139	15.27	17.20	71.78	1.45	7.68	48.09	67.70			105.69	123.48	15.5

EC/Cation	EC/Anion
97135	
97136	
97137	
97138	
97139	

TDS/EC	TDS/Cat	TDS/Anion
	0.62	0.64
	0.62	0.62
	0.65	0.54
	0.59	0.54
	0.59	0.51

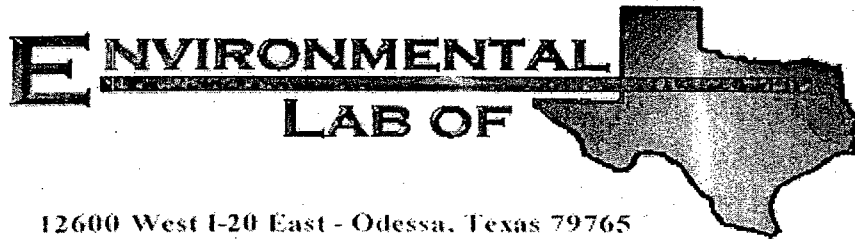
range
range
range
range
range

0
0
0
0
0

to
to
to
to
to

0
0
0
0
0

needs to be 0.55-0.77
needs to be 0.55-0.77
needs to be 0.55-0.77
needs to be 0.55-0.77
needs to be 0.55-0.77



12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Kristin Farris-Pope

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: EME Jct. M-16-1

Project Number: None Given

Location: Lea County

Lab Order Number: 6F15001

Report Date: 06/26/06

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

Project: EME Jct. M-16-1
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 #4	6F15001-01	Water	06/13/06 09:45	06/15/06 07:50
Monitor Well #5	6F15001-02	Water	06/13/06 11:00	06/15/06 07:50

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

Project: EME Jct. M-16-1
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
Monitor Well #4 (6F15001-01) Water									
Benzene	ND	0.00100	mg/L	1	EF61921	06/19/06	06/20/06	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		101 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.5 %	80-120		"	"	"	"	
Monitor Well #5 (6F15001-02) Water									
Benzene	ND	0.00100	mg/L	1	EF61921	06/19/06	06/20/06	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		106 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.5 %	80-120		"	"	"	"	

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

Project: EME Jct. M-16-1
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 #4 (6F15001-01) Water									
Total Alkalinity	386	2.00	mg/L	1	EF62316	06/22/06	06/22/06	EPA 310.1M	
Chloride	2680	50.0	"	100	EF61712	06/17/06	06/17/06	EPA 300.0	
Total Dissolved Solids	7820	5.00	"	1	EF61918	06/15/06	06/16/06	EPA 160.1	
Sulfate	2220	50.0	"	100	EF61712	06/17/06	06/17/06	EPA 300.0	
Monitor Well #5 (6F15001-02) Water									
Total Alkalinity	344	2.00	mg/L	1	EF62316	06/22/06	06/22/06	EPA 310.1M	
Chloride	2350	50.0	"	100	EF61712	06/17/06	06/17/06	EPA 300.0	
Total Dissolved Solids	6760	5.00	"	1	EF61918	06/15/06	06/16/06	EPA 160.1	
Sulfate	1920	50.0	"	100	EF61712	06/17/06	06/17/06	EPA 300.0	

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

Project: EME Jct. M-16-1
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 #4 (6F15001-01) Water									
Calcium	320	0.500	mg/L	50	EF61505	06/15/06	06/15/06	EPA 200.7	
Magnesium	229	0.0500	"	"	"	"	"	"	
Potassium	38.5	0.500	"	10	"	"	"	"	
Sodium	1760	5.00	"	500	"	"	"	"	
Monitor Well #5 (6F15001-02) Water									
Calcium	296	0.500	mg/L	50	EF61505	06/15/06	06/15/06	EPA 200.7	
Magnesium	206	0.0500	"	"	"	"	"	"	
Potassium	34.1	0.500	"	10	"	"	"	"	
Sodium	1790	5.00	"	500	"	"	"	"	

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

Project: EME Jct. M-16-1
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 Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	-------

Batch EF61921 - EPA 5030C (GC)

Blank (EF61921-BLK1)

Prepared: 06/19/06 Analyzed: 06/20/06

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	38.4		ug/l	40.0		96.0		80-120	
Surrogate: 4-Bromofluorobenzene	38.4		"	40.0		96.0		80-120	

LCS (EF61921-BS1)

Prepared: 06/19/06 Analyzed: 06/20/06

Benzene	0.0529	0.00100	mg/L	0.0500		106		80-120	
Toluene	0.0579	0.00100	"	0.0500		116		80-120	
Ethylbenzene	0.0565	0.00100	"	0.0500		113		80-120	
Xylene (p/m)	0.119	0.00100	"	0.100		119		80-120	
Xylene (o)	0.0589	0.00100	"	0.0500		118		80-120	
Surrogate: a,a,a-Trifluorotoluene	41.6		ug/l	40.0		104		80-120	
Surrogate: 4-Bromofluorobenzene	40.7		"	40.0		102		80-120	

Calibration Check (EF61921-CCV1)

Prepared: 06/19/06 Analyzed: 06/20/06

Benzene	58.0		ug/l	50.0		116		80-120	
Toluene	59.2		"	50.0		118		80-120	
Ethylbenzene	57.5		"	50.0		115		80-120	
Xylene (p/m)	119		"	100		119		80-120	
Xylene (o)	59.0		"	50.0		118		80-120	
Surrogate: a,a,a-Trifluorotoluene	44.1		"	40.0		110		80-120	
Surrogate: 4-Bromofluorobenzene	38.4		"	40.0		96.0		80-120	

Matrix Spike (EF61921-MS1)

Source: 6F15001-01

Prepared: 06/19/06 Analyzed: 06/20/06

Benzene	0.0488	0.00100	mg/L	0.0500	ND	97.6		80-120	
Toluene	0.0539	0.00100	"	0.0500	ND	108		80-120	
Ethylbenzene	0.0501	0.00100	"	0.0500	ND	100		80-120	
Xylene (p/m)	0.115	0.00100	"	0.100	ND	115		80-120	
Xylene (o)	0.0576	0.00100	"	0.0500	ND	115		80-120	
Surrogate: a,a,a-Trifluorotoluene	37.6		ug/l	40.0		94.0		80-120	
Surrogate: 4-Bromofluorobenzene	41.7		"	40.0		104		80-120	

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 5 of 11

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

Project: EME Jct. M-16-1
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 EF61921 - EPA 5030C (GC)

Matrix Spike Dup (EF61921-MSD1)		Source: 6F15001-01		Prepared: 06/19/06		Analyzed: 06/20/06				
Benzene	0.0484	0.00100	mg/L	0.0500	ND	96.8	80-120	0.823	20	
Toluene	0.0469	0.00100	"	0.0500	ND	93.8	80-120	14.1	20	
Ethylbenzene	0.0451	0.00100	"	0.0500	ND	90.2	80-120	10.3	20	
Xylene (p/m)	0.0979	0.00100	"	0.100	ND	97.9	80-120	16.1	20	
Xylene (o)	0.0497	0.00100	"	0.0500	ND	99.4	80-120	14.6	20	
Surrogate: a,a,a-Trifluorotoluene	33.7		ug/l	40.0		84.2	80-120			
Surrogate: 4-Bromofluorobenzene	39.1		"	40.0		97.8	80-120			

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: EME Jct. M-16-1 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 Limits	RPD	RPD Limit	Notes
Batch EF61712 - General Preparation (WetChem)									
Blank (EF61712-BLK1)				Prepared & Analyzed: 06/17/06					
Chloride	ND	0.500	mg/L						
Sulfate	ND	0.500	"						
LCS (EF61712-BS1)				Prepared & Analyzed: 06/17/06					
Chloride	10.0		mg/L	10.0		100	80-120		
Sulfate	8.16		"	10.0		81.6	80-120		
Calibration Check (EF61712-CCV1)				Prepared & Analyzed: 06/17/06					
Chloride	10.9		mg/L	10.0		109	80-120		
Sulfate	10.5		"	10.0		105	80-120		
Duplicate (EF61712-DUP1)				Source: 6F14013-01		Prepared & Analyzed: 06/17/06			
Chloride	47.9	5.00	mg/L		48.8		1.86	20	
Sulfate	69.2	5.00	"		69.8		0.863	20	
Duplicate (EF61712-DUP2)				Source: 6F15003-05		Prepared & Analyzed: 06/18/06			
Chloride	198	5.00	mg/L		197		0.506	20	
Sulfate	154	5.00	"		152		1.31	20	
Matrix Spike (EF61712-MS1)				Source: 6F14013-01		Prepared & Analyzed: 06/17/06			
Chloride	157	5.00	mg/L	100	48.8	108	80-120		
Sulfate	154	5.00	"	100	69.8	84.2	75-125		
Matrix Spike (EF61712-MS2)				Source: 6F15003-05		Prepared & Analyzed: 06/18/06			
Sulfate	249	5.00	mg/L	100	152	97.0	75-125		
Chloride	301	5.00	"	100	197	104	80-120		

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

Project: EME Jct. M-16-1
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 Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	-------

Batch EF61918 - Filtration Preparation

Blank (EF61918-BLK1)

Prepared: 06/15/06 Analyzed: 06/16/06

Total Dissolved Solids ND 5.00 mg/L

Duplicate (EF61918-DUP1)

Source: 6F15001-01

Prepared: 06/15/06 Analyzed: 06/16/06

Total Dissolved Solids 7770 5.00 mg/L 7820 0.641 5

Batch EF62316 - General Preparation (WetChem)

Blank (EF62316-BLK1)

Prepared & Analyzed: 06/22/06

Total Alkalinity ND 2.00 mg/L

Carbonate Alkalinity ND 0.100 "

Bicarbonate Alkalinity ND 2.00 "

Hydroxide Alkalinity ND 0.100 "

LCS (EF62316-BS1)

Prepared & Analyzed: 06/22/06

Total Alkalinity 248 2.00 mg/L 250 99.2 85-115

Duplicate (EF62316-DUP1)

Source: 6F15001-01

Prepared & Analyzed: 06/22/06

Total Alkalinity 380 2.00 mg/L 386 1.57 20

Carbonate Alkalinity 0.00 0.100 " 0.00 20

Bicarbonate Alkalinity 380 2.00 " 386 1.57 20

Hydroxide Alkalinity 0.00 0.100 " 0.00 20

Duplicate (EF62316-DUP2)

Source: 6F22003-01

Prepared & Analyzed: 06/22/06

Total Alkalinity 142 2.00 mg/L 144 1.40 20

Carbonate Alkalinity 0.00 0.100 " 0.00 20

Bicarbonate Alkalinity 142 2.00 " 144 1.40 20

Hydroxide Alkalinity 0.00 0.100 " 0.00 20

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

Project: EME Jet. M-16-1
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 Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	-------

Batch EF62316 - General Preparation (WetChem)

Reference (EF62316-SRM1)

Prepared & Analyzed: 06/22/06

Total Alkalinity	78.0	2.00	mg/L	82.0	95.1	85-115			
Bicarbonate Alkalinity	78.0	2.00	"	82.0	95.1	85-115			

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

Project: EME Jct. M-16-1
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 EF61505 - 6010B/No Digestion

Blank (EF61505-BLK1)

Prepared & Analyzed: 06/15/06

Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							

Calibration Check (EF61505-CCV1)

Prepared & Analyzed: 06/15/06

Calcium	2.01		mg/L	2.00		100	85-115			
Magnesium	2.12		"	2.00		106	85-115			
Potassium	1.76		"	2.00		88.0	85-115			
Sodium	1.74		"	2.00		87.0	85-115			

Duplicate (EF61505-DUP1)

Source: 6F15001-01

Prepared & Analyzed: 06/15/06

Calcium	316	0.500	mg/L		320			1.26	20	
Magnesium	231	0.0500	"		229			0.870	20	
Potassium	38.4	0.500	"		38.5			0.260	20	
Sodium	1740	5.00	"		1760			1.14	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 10 of 11

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

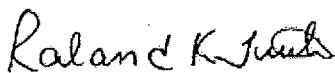
Project: EME Jct. M-16-1
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

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:



Date:

6/26/2006

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

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

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

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

12600 West 1-20 East
Odessa, Texas 79765

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Fax No: (505) 397-1471

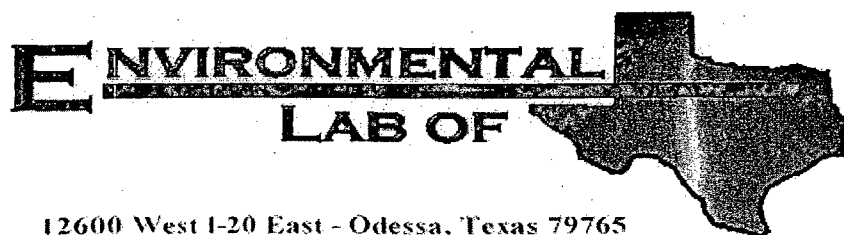
品名

[illegible]

Client: Rice Op.
 Date/Time: 6/15/06 7:50
 Order #: 6F15001
 Initials: CK

Temperature of container/cooler?	Yes	No	1.5	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?	Yes	No		
Chain of Custody signed when relinquished and received?	Yes	No		
Chain of custody agrees with sample label(s)	Yes	No		
Container labels legible and intact?	Yes	No		
Sample Matrix and properties same as on chain of custody?	Yes	No		
Samples in proper container/bottle?	Yes	No		
Samples properly preserved?	Yes	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?	Yes	No		
All samples received within sufficient hold time?	Yes	No		
/OC samples have zero headspace?	Yes	No	Not Applicable	

Contact Person: - _____ Date/Time: _____ Contacted by: _____
Regarding: _____



12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Sharon Hall

ARCADIS

1004 N. Big Spring Street

Midland, TX 79701

Project: MT000856.0001

Project Number: MT000856.001

Location: None Given

Lab Order Number: 6C02008

Report Date: 03/08/06

ARCADIS
1004 N. Big Spring Street
Midland TX, 79701

Project: MT000856.0001
Project Number: MT000856.001
Project Manager: Sharon Hall

Fax: (432) 687-5401

Reported:
03/08/06 16:08

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
A20 MW-3 5'-10'	6C02008-01	Soil	02/28/06 14:00	03/02/06 09:20
A20 MW-3 20'-25'	6C02008-02	Soil	02/28/06 14:10	03/02/06 09:20
A20 MW-2 0-5'	6C02008-03	Soil	02/28/06 11:15	03/02/06 09:20
A20 MW-2 15'-20'	6C02008-04	Soil	02/28/06 11:35	03/02/06 09:20
M16-1 MW-3 15'-20'	6C02008-05	Soil	03/01/06 09:10	03/02/06 09:20
M16-1 MW-2 15'-20'	6C02008-06	Soil	02/28/06 17:40	03/02/06 09:20

ARCADIS
1004 N. Big Spring Street
Midland TX, 79701

Project: MT000856.0001
Project Number: MT000856.001
Project Manager: Sharon Hall

Fax: (432) 687-5401

Reported:
03/08/06 16:08

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	--------	-------

A20 MW-3 5'-10' (6C02008-01) Soil

Benzene	ND	0.0250	mg/kg dry	25	EC60604	03/06/06	03/06/06	EPA 8021B	
Toluene	0.0875	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.106	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.176	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		81.2 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	80-120		"	"	"	"	

A20 MW-3 20'-25' (6C02008-02) Soil

Benzene	ND	0.0250	mg/kg dry	25	EC60604	03/06/06	03/06/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		88.2 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.0 %	80-120		"	"	"	"	

A20 MW-2 0-5' (6C02008-03) Soil

Benzene	ND	0.0250	mg/kg dry	25	EC60604	03/06/06	03/06/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		81.0 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	80-120		"	"	"	"	

A20 MW-2 15'-20' (6C02008-04) Soil

Benzene	ND	0.0250	mg/kg dry	25	EC60604	03/06/06	03/06/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		81.8 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	80-120		"	"	"	"	

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 8

ARCADIS
1004 N. Big Spring Street
Midland TX, 79701

Project: MT000856.0001
Project Number: MT000856.001
Project Manager: Sharon Hall

Fax: (432) 687-5401

Reported:
03/08/06 16:08

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
M16-1 MW-3 15'-20' (6C02008-05) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EC60604	03/06/06	03/06/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		81.0 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	80-120		"	"	"	"	
M16-1 MW-2 15'-20' (6C02008-06) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EC60604	03/06/06	03/06/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		85.0 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.8 %	80-120		"	"	"	"	

ARCADIS 1004 N. Big Spring Street Midland TX, 79701	Project: MT000856.0001 Project Number: MT000856.001 Project Manager: Sharon Hall	Fax: (432) 687-5401 Reported: 03/08/06 16:08
---	--	--

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
A20 MW-3 5'-10' (6C02008-01) Soil									
Chloride	881	20.0	mg/kg	40	EC60801	03/07/06	03/08/06	EPA 300.0	
% Moisture	6.5	0.1	%	1	EC60307	03/02/06	03/03/06	% calculation	
A20 MW-3 20'-25' (6C02008-02) Soil									
Chloride	292	10.0	mg/kg	20	EC60801	03/07/06	03/08/06	EPA 300.0	
% Moisture	7.1	0.1	%	1	EC60307	03/02/06	03/03/06	% calculation	
A20 MW-2 0-5' (6C02008-03) Soil									
Chloride	49.9	5.00	mg/kg	10	EC60801	03/07/06	03/08/06	EPA 300.0	
% Moisture	4.9	0.1	%	1	EC60307	03/02/06	03/03/06	% calculation	
A20 MW-2 15'-20' (6C02008-04) Soil									
Chloride	500	10.0	mg/kg	20	EC60801	03/07/06	03/08/06	EPA 300.0	
% Moisture	9.1	0.1	%	1	EC60307	03/02/06	03/03/06	% calculation	
M16-1 MW-3 15'-20' (6C02008-05) Soil									
Chloride	175	10.0	mg/kg	20	EC60801	03/07/06	03/08/06	EPA 300.0	
% Moisture	5.7	0.1	%	1	EC60307	03/02/06	03/03/06	% calculation	
M16-1 MW-2 15'-20' (6C02008-06) Soil									
Chloride	197	5.00	mg/kg	10	EC60801	03/07/06	03/08/06	EPA 300.0	
% Moisture	7.3	0.1	%	1	EC60307	03/02/06	03/03/06	% calculation	

ARCADIS
1004 N. Big Spring Street
Midland TX, 79701

Project: MT000856.0001
Project Number: MT000856.001
Project Manager: Sharon Hall

Fax: (432) 687-5401

Reported:
03/08/06 16:08

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 EC60604 - EPA 5030C (GC)

Blank (EC60604-BLK1)

Prepared & Analyzed: 03/06/06

Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	32.1		ug/kg	40.0		80.2	80-120			
Surrogate: 4-Bromofluorobenzene	41.0		"	40.0		102	80-120			

LCS (EC60604-BS1)

Prepared & Analyzed: 03/06/06

Benzene	0.0405	0.00100	mg/kg wet	0.0500		81.0	80-120			
Toluene	0.0464	0.00100	"	0.0500		92.8	80-120			
Ethylbenzene	0.0555	0.00100	"	0.0500		111	80-120			
Xylene (p/m)	0.117	0.00100	"	0.100		117	80-120			
Xylene (o)	0.0579	0.00100	"	0.0500		116	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.7		ug/kg	40.0		94.2	80-120			
Surrogate: 4-Bromofluorobenzene	42.9		"	40.0		107	80-120			

Calibration Check (EC60604-CCV1)

Prepared & Analyzed: 03/06/06

Benzene	40.3		ug/kg	50.0		80.6	80-120			
Toluene	42.0		"	50.0		84.0	80-120			
Ethylbenzene	47.3		"	50.0		94.6	80-120			
Xylene (p/m)	99.5		"	100		99.5	80-120			
Xylene (o)	50.2		"	50.0		100	80-120			
Surrogate: a,a,a-Trifluorotoluene	33.6		"	40.0		84.0	80-120			
Surrogate: 4-Bromofluorobenzene	33.3		"	40.0		83.2	80-120			

Matrix Spike (EC60604-MS1)

Source: 6C03004-01

Prepared & Analyzed: 03/06/06

Benzene	1.25	0.0250	mg/kg dry	1.55	ND	80.6	80-120			
Toluene	1.40	0.0250	"	1.55	ND	90.3	80-120			
Ethylbenzene	1.73	0.0250	"	1.55	ND	112	80-120			
Xylene (p/m)	3.64	0.0250	"	3.11	ND	117	80-120			
Xylene (o)	1.82	0.0250	"	1.55	ND	117	80-120			
Surrogate: a,a,a-Trifluorotoluene	34.0		ug/kg	40.0		85.0	80-120			
Surrogate: 4-Bromofluorobenzene	47.1		"	40.0		118	80-120			

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 5 of 8

ARCADIS
1004 N. Big Spring Street
Midland TX, 79701

Project: MT000856.0001
Project Number: MT000856.001
Project Manager: Sharon Hall

Fax: (432) 687-5401

Reported:
03/08/06 16:08

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 EC60604 - EPA 5030C (GC)

Matrix Spike Dup (EC60604-MSD1)		Source: 6C03004-01		Prepared & Analyzed: 03/06/06						
Benzene	1.26	0.0250	mg/kg dry	1.55	ND	81.3	80-120	0.865	20	
Toluene	1.40	0.0250	"	1.55	ND	90.3	80-120	0.00	20	
Ethylbenzene	1.69	0.0250	"	1.55	ND	109	80-120	2.71	20	
Xylene (p/m)	3.58	0.0250	"	3.11	ND	115	80-120	1.72	20	
Xylene (o)	1.79	0.0250	"	1.55	ND	115	80-120	1.72	20	
Surrogate: a,a,a-Trifluorotoluene	34.1		ug/kg	40.0		85.2	80-120			
Surrogate: 4-Bromofluorobenzene	44.3		"	40.0		111	80-120			

ARCADIS
1004 N. Big Spring Street
Midland TX, 79701

Project: MT000856.0001
Project Number: MT000856.001
Project Manager: Sharon Hall

Fax: (432) 687-5401
Reported:
03/08/06 16:08

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch EC60307 - General Preparation (Prep)									
Blank (EC60307-BLK1)				Prepared: 03/02/06 Analyzed: 03/03/06					
% Solids	100		%						
Duplicate (EC60307-DUP1)				Source: 6C02006-01 Prepared: 03/02/06 Analyzed: 03/03/06					
% Solids	98.9		%		98.8		0.101	20	
Duplicate (EC60307-DUP2)				Source: 6C02009-08 Prepared: 03/02/06 Analyzed: 03/03/06					
% Solids	71.3		%		73.3		2.77	20	
Batch EC60801 - Water Extraction									
Blank (EC60801-BLK1)				Prepared: 03/07/06 Analyzed: 03/08/06					
Chloride	ND	0.500	mg/kg						
LCS (EC60801-BS1)				Prepared: 03/07/06 Analyzed: 03/08/06					
Chloride	8.66		mg/L	10.0		86.6		80-120	
Calibration Check (EC60801-CCV1)				Prepared: 03/07/06 Analyzed: 03/08/06					
Chloride	9.34		mg/L	10.0		93.4		80-120	
Duplicate (EC60801-DUP1)				Source: 6C02003-01 Prepared: 03/07/06 Analyzed: 03/08/06					
Chloride	473	10.0	mg/kg		470		0.636	20	

ARCADIS	Project: MT000856.0001	Fax: (432) 687-5401
1004 N. Big Spring Street	Project Number: MT000856.001	Reported:
Midland TX, 79701	Project Manager: Sharon Hall	03/08/06 16:08

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference
LCS Laboratory Control Spike
MS Matrix Spike
Dup Duplicate

Report Approved By:

Raland K. Tuttle

Date:

3/8/2006

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

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

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

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



Laboratory Task Order No./P.O. No. _____

Sampler(s)/Affiliation ARCADIS/RL

	Sample ID/Location	Matrix	Date/Sampled	Time XXXXXX	BTEX % 02	I L Geno and (2)	RTE HCL	Remarks	Total
AZ0 MW-3(5'-10')	S	2/28/06	14:00	/				W002008-01	1
AZ0 MW-3(20'-25')	S	2/28/06	14:10	/				-02	1
AZ0 MW-2(0'-5')	S	2/28/06	11:15	/				-03	1
AZ0 MW-2(15'-20')	S	2/28/06	11:35	/				-07-	1
M16-1 MW-3(15'-20')	S	3/1/06	9:10	/				-05	1
M16-1 MW-2(15'-20')	S	2/28/06	17:40	/				-00	1
Sample Matrix:	L = Liquid;	S = Solid;	A = Air					Total No. of Bottles/ Containers	6

Relinquished by: <u>Ralph Lant</u>	Organization: <u>ARCADIS</u>	Date: <u>3 12 106</u>	Time: <u>9:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>Calvin Kelly</u>	Organization: <u>Elect</u>	Date: <u>3 12 106</u>	Time: <u>9:20</u>	Seal Intact? <u>No</u>
Relinquished by: _____	Organization: _____	Date: <u>1 1</u>	Time: _____	Seal Intact? <u>Yes</u>
Received by: _____	Organization: _____	Date: <u>1 1</u>	Time: _____	Seal Intact? <u>No</u>

Special Instructions/Remarks: 5.0°C 40% glucose w/ control

Delivery Method: xxx In Person ☐ Common Carrier ☐ Lab Courier ☐ Other _____

Environmental Lab of Texas

Variance / Corrective Action Report – Sample Log-In

Client: ARCADIS

Date/Time: 3/2/06 9:20

Order #: 6002008

Initials: CK

Sample Receipt Checklist

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

Other observations:

Variance Documentation:

Contact Person: - _____ Date/Time: _____ Contacted by: _____
Regarding: _____

Corrective Action Taken:

Hall, Sharon

From: Hall, Sharon
Sent: Tuesday, February 20, 2007 1:39 PM
To: Hansen, Edward J., EMNRD
Cc: Kristin Pope
Subject: AP-42 Annual Groundwater Report
Attachments: M-16-1 2006 annual report.pdf; EME Jct M-16-1 Lab Results 6 13 06.pdf; EME Jct M-16-1 Lab Results 10 20 06.pdf; EME M-16-1 Lab Results 3 08 06.pdf; EME M-16-1 Lab Results 5 03 06.pdf; EME M-16-1 Lab Results 7 25 06.pdf; GW.pdf

Ed, on behalf of ROC I am respectfully submitting the annual groundwater report for the AP-42 site. I am sending you a hard copy and CD in the mail. Best regards, Sharon

Sharon E. Hall PG, REM
Site Evaluation Department Manager
ARCADIS G&M Inc
1004 N. Big Spring Street, Suite 300
Midland, Texas 79701
ph: 432 687-5400
fax: 432 687-5401

2/20/2007