

AP - 60

ANNUAL MONITORING REPORT

YEAR(S):

2002

RICE Operating Company

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

CERTIFIED MAIL

RETURN RECEIPT NO. 7002 2410 0000 4940 0988

April 10, 2003

Mr. William Olson

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

RECEIVED

APR 11 2003

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

RE: 2002 MONITOR WELL REPORT/SAMPLING SUMMARY
EME SWD SYSTEM
LEA COUNTY, NEW MEXICO

Mr. Olson:

Rice Operating Company (ROC) takes this opportunity to submit the 2002 Monitor Well Report for the Eunice Monument Eumont (EME) Salt Water Disposal System. There are 7 sites in this system that have monitor wells that are sampled quarterly pursuant to NMOCD guidelines. Groundwater impact became apparent at these sites during the remediation process of the Junction Box Upgrade Plan except for P-6, which was the result of a pipeline leak.

Site Name	Unit Letter	Section	Township/Range
E-5 jct.	E	5	T20S, R37E
N-5 jct.	N	5	T20S, R37E
K-6 jct.	K	6	T20S, R37E
M-16-1 jct.	M	16	T20S, R37E
K-33-1 jct.	K	33	T19S, R37E
P-6 leak	P	6	T20S, R37E
A-20 jct.	A	20	T20S, R37E

The first quarter sampling events of 2002 were performed by Environmental Plus, Inc. of Eunice. ROC sampled the monitor wells each subsequent quarter. Analysis of the samples was provided by Cardinal Laboratories of Hobbs and Environmental Lab of Texas of Odessa. In 2003, ROC will continue to conduct the sampling of the monitor wells at these sites. As in 2002, either

Environmental Lab of Texas of Odessa, Texas, or Cardinal Laboratories of Hobbs will conduct analytical tests of the water samples of 2003.

Trident Environmental of Midland, Texas has been contracted by ROC to prioritize the junction box disclosure sites and to generate work plans for remediation of the vadose zone at groundwater-impacted sites. NMOCD can anticipate the submittal of work plans for several such sites in 2003. After NMOCD approval, AFE's will be submitted to System Partners for approval. Sites with confirmed groundwater impact will also be evaluated for the extent of groundwater impact.

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

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

RICE OPERATING COMPANY

Kristin Farris

Kristin Farris
Project Scientist

Enclosures: Summary table & graph for each site
 Analytical results

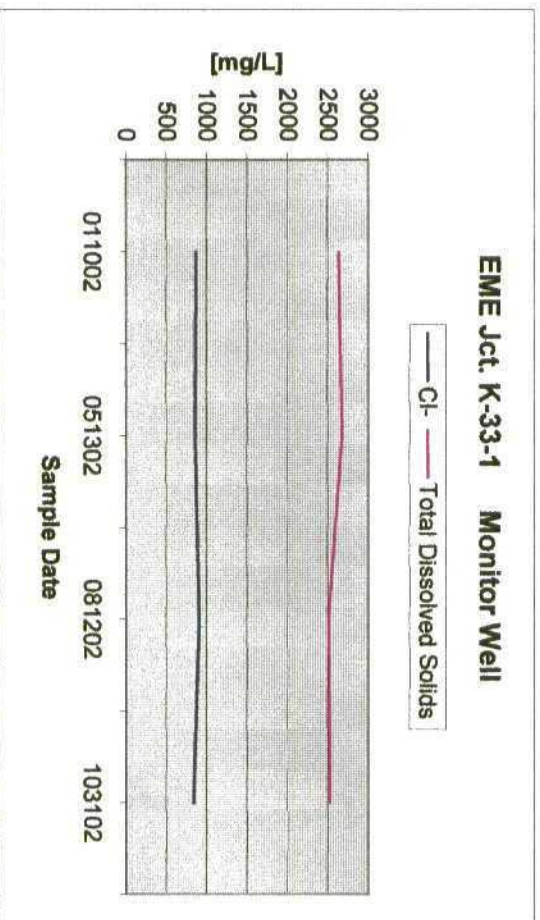
Cc: LBG, CDH, file, Wayne Price, Chris Williams
 NMOCD, District I Office
 1625 N. French Drive
 Hobbs, NM 88240

EME Jct. K-33-1
K, 33-1, 10S, 37E

Rice Operating Co. Monitor Well Data Sheet

All parameter concentrations are in mg/L.

MW #	WATER (ft)		TOTAL (gal)		SAMPLE DATE	TIME	All parameter concentrations are in mg/L.					
	LEVEL	DEPTH	WELL VOLUME	BAILED VOLUME			CL-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES
1	36.90	41.00	0.700	2.00	011002	1140	872	2635	<0.002	<0.002	<0.002	<0.006
1	36.88	40.78	0.624	2.90	051302	1010	860	2680	<0.001	<0.001	<0.001	<0.001
1	37.20	40.79	0.574	1.75	081202	1200	913	2510	<0.001	<0.001	<0.001	<0.001
1	37.11	40.77	0.586	1.75	103102	1315	842	2530	<0.001	<0.001	<0.001	<0.001



ANALYTICAL REPORT

Prepared for:

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

Project: jct. K-33-1
PO#: 510
Order#: G0204904
Report Date: 11/06/2002

Certificates

US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

Rice Operating
122 W. Taylor
Hobbs, NM 88240
505-397-1471

Order#: G0204904
Project: None Given
Project Name: jct. K-33-1
Location: EME

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

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0204904-01	MW 1	WATER	10/31/02 13:15	10/31/02 18:30	See COC	See COC
<u>Lab Testing:</u>		Rejected: No	Temp:	3.5 C		
8021B/5030 BTEX						
Anions						
Cations						
Total Dissolved Solids (TDS)						

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0204904
Project: None Given
Project Name: jct. K-33-1
Location: EME

Lab ID: 0204904-01
Sample ID: MW 1

8021B/5030 BTEX

Method	Date	Date	Sample	Dilution	Analyst	Method
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>		
0003617-02		11/1/02	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	92%	80	120
Bromofluorobenzene	92%	80	120

Approval: Raland K. Tuttle 11-07-02
Raland K. Tuttle, Lab Director, QA Officer Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0204904
Project: None Given
Project Name: jct. K-33-1
Location: EME

Lab ID: 0204904-01
Sample ID: MW 1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	307	mg/L	1	2.00	310.1	11/2/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/2/02	SB
Chloride	842	mg/L	1	5.00	9253	11/5/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/2/02	SB
SULFATE, 375.4	310	mg/L	5	2.5	375.4	11/6/02	SB

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	239	mg/L	100	1.0	6010B	11/6/02	SM
Magnesium	114	mg/L	100	0.10	6010B	11/6/02	SM
Potassium	14.9	mg/L	10	0.50	6010B	11/6/02	SM
Sodium	260	mg/L	100	1.0	6010B	11/6/02	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	2530	mg/L	1	5.0	160.1	11/4/02	TAL

Approval: Raland K. Tuttle 11-07-02
Raland K. Tuttle, Lab Director, QA Officer Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0204904

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0003617-02			<0.001	
Ethylbenzene-mg/L		0003617-02			<0.001	
Toluene-mg/L		0003617-02			<0.001	
p/m-Xylene-mg/L		0003617-02			<0.001	
o-Xylene-mg/L		0003617-02			<0.001	
CONTROL						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0003617-03		0.1	0.096	96.%
Ethylbenzene-mg/L		0003617-03		0.1	0.099	99.%
Toluene-mg/L		0003617-03		0.1	0.098	98.%
p/m-Xylene-mg/L		0003617-03		0.2	0.208	104.%
o-Xylene-mg/L		0003617-03		0.1	0.101	101.%
CONTROL DUP						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0003617-04		0.1	0.100	100.%
Ethylbenzene-mg/L		0003617-04		0.1	0.103	103.%
Toluene-mg/L		0003617-04		0.1	0.102	102.%
p/m-Xylene-mg/L		0003617-04		0.2	0.218	109.%
o-Xylene-mg/L		0003617-04		0.1	0.106	106.%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0003617-05		0.1	0.104	104.%
Ethylbenzene-mg/L		0003617-05		0.1	0.109	109.%
Toluene-mg/L		0003617-05		0.1	0.107	107.%
p/m-Xylene-mg/L		0003617-05		0.2	0.230	115.%
o-Xylene-mg/L		0003617-05		0.1	0.110	110.%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0204904

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0003651-02			<0.010	
Magnesium-mg/L		0003651-02			<0.001	
Potassium-mg/L		0003651-02			<0.050	
Sodium-mg/L		0003651-02			<0.010	
CONTROL						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0003651-03		2	1.99	99.5%
Magnesium-mg/L		0003651-03		2	2.17	108.5%
Potassium-mg/L		0003651-03		2	1.97	98.5%
Sodium-mg/L		0003651-03		2	1.92	96.6%
CONTROL DUP						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0003651-04		2	2.04	102.0%
Magnesium-mg/L		0003651-04		2	2.24	112.0%
Potassium-mg/L		0003651-04		2	1.93	96.5%
Sodium-mg/L		0003651-04		2	1.88	94.0%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0003651-05		2	2.04	102.0%
Magnesium-mg/L		0003651-05		2	2.24	112.0%
Potassium-mg/L		0003651-05		2	1.93	96.5%
Sodium-mg/L		0003651-05		2	1.88	94.0%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0204904

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0003650-01			<5.0		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0204904-01	2530		2540		0.4%

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Kristin Farris

Project Name:

inst. K-33-1

Company Name

RICE Operating

Project #:-

Company Address:

Company Address: 122 W. Taylor

Project Loc:

EME

City/State/Zip:

City/State/Zip: Hobbs, NM 88240

主
○
風

510

Telephone No. () _____

Telephone No. (505) 393-9174

Fax No:

(505) 397-1471

Sampler Signature:

Karim Jaber

[illegible]

ANALYTICAL REPORT

Prepared for:

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

Project: K-33-1
PO#: 510
Order#: G0204197
Report Date: 08/21/2002

Certificates

US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

Rice Operating
122 W. Taylor
Hobbs, NM 88240
505-397-1471

Order#: G0204197
Project:
Project Name: K-33-1
Location: EME SWD

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

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0204197-01	MW 1	WATER	8/12/02 12:00	8/12/02 20:05	See COC	See COC
<u>Lab Testing:</u>		Rejected: No	Temp:	4.0 C		
8021B/5030 BTEX						
Anions						
Cations						
Total Dissolved Solids (TDS)						

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0204197
Project:
Project Name: K-33-1
Location: EME SWD

Lab ID: 0204197-01
Sample ID: MW 1

8021B/5030 BTEX

Method	Date	Date	Sample	Dilution	Analyst	Method
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>		
0002915-02		8/21/02 12:39	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Ethylbenzene	<0.001	0.001
Toluene	<0.001	0.001
p/m-Xylene	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	110%	73	115
Bromofluorobenzene	99%	72	110

Approval: *Raland K. Tuttle* 8-22-02
Raland K. Tuttle, Lab Director, QA Officer Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0204197
Project:
Project Name: K-33-1
Location: EME SWD

Lab ID: 0204197-01
Sample ID: MW 1

Anions

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution</u> <u>Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date</u> <u>Analyzed</u>	<u>Analyst</u>
Bicarbonate Alkalinity	279	mg/L	1	2.00	310.1	8/13/02	CK
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	8/13/02	CK
Chloride	913	mg/L	1	5.00	9253	8/13/02	CK
Hydroxide Alkalinity	< 0.10	mg/L	1	0.10	310.1	8/13/02	CK
SULFATE, 375.4	292	mg/L	5	2.5	375.4	8/14/02	MB

Cations

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution</u> <u>Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date</u> <u>Analyzed</u>	<u>Analyst</u>
Calcium	378	mg/L	100	1.0	6010B	8/14/02	SM
Magnesium	110	mg/L	100	0.10	6010B	8/14/02	SM
Potassium	15.0	mg/L	10	0.50	6010B	8/14/02	SM
Sodium	280	mg/L	100	1.0	6010B	8/14/02	SM

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution</u> <u>Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date</u> <u>Analyzed</u>	<u>Analyst</u>
Total Dissolved Solids (TDS)	2510	mg/L	1	5.0	160.1	8/13/02	CK

Approval:

Raland K. Tuttle 8-22-02
Raland K. Tuttle, Lab Director, QA Officer
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0204197

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Benzene-mg/L		0002915-02			<0.001	
Ethylbenzene-mg/L		0002915-02			<0.001	
Toluene-mg/L		0002915-02			<0.001	
p/m-Xylene-mg/L		0002915-02			<0.001	
o-Xylene-mg/L		0002915-02			<0.001	
MS						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Benzene-mg/L		0204268-01	0	0.1	0.095	95.%
Ethylbenzene-mg/L		0204268-01	0	0.1	0.097	97.%
Toluene-mg/L		0204268-01	0	0.1	0.099	99.%
p/m-Xylene-mg/L		0204268-01	0	0.2	0.201	100.5%
o-Xylene-mg/L		0204268-01	0	0.1	0.094	94.%
MSD						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Benzene-mg/L		0204268-01	0	0.1	0.099	99.% 4.1%
Ethylbenzene-mg/L		0204268-01	0	0.1	0.101	101.% 4.%
Toluene-mg/L		0204268-01	0	0.1	0.103	103.% 4.%
p/m-Xylene-mg/L		0204268-01	0	0.2	0.210	105.% 4.4%
o-Xylene-mg/L		0204268-01	0	0.1	0.100	100.% 6.2%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Benzene-mg/L		0002915-05		0.1	0.104	104.%
Ethylbenzene-mg/L		0002915-05		0.1	0.107	107.%
Toluene-mg/L		0002915-05		0.1	0.106	106.%
p/m-Xylene-mg/L		0002915-05		0.2	0.222	111.%
o-Xylene-mg/L		0002915-05		0.1	0.106	106.%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0204197

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Bicarbonate Alkalinity-mg/L		0002801-01			<2.00	
Carbonate Alkalinity-mg/L		0002801-01			<0.10	
Chloride-mg/L		0002793-01			<5.00	
Hydroxide Alkalinity-mg/L		0002801-01			< 0.10	
SULFATE, 375.4-mg/L		0002811-01			<0.5	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Bicarbonate Alkalinity-mg/L		0204196-01	360		358	0.6%
Carbonate Alkalinity-mg/L		0204196-01	0		<0.10	0.0%
Hydroxide Alkalinity-mg/L		0204196-01	0		< 0.10	0.0%
SULFATE, 375.4-mg/L		0204195-01	141		143	1.4%
MS						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Chloride-mg/L		0204137-01	56.7	100	152	95.3%
MSD						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Chloride-mg/L		0204137-01	56.7	100	156	99.3%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Bicarbonate Alkalinity-mg/L		0002801-04		0.05	0.0575	115.0%
Carbonate Alkalinity-mg/L		0002801-04		0.05	0.0575	115.0%
Chloride-mg/L		0002793-04		5000	4870	97.4%
Hydroxide Alkalinity-mg/L		0002801-04		0.05	0.0575	115.0%
SULFATE, 375.4-mg/L		0002811-04		50	48.8	97.6%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0204197

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0002810-02			< 0.010	
Magnesium-mg/L		0002810-02			<0.001	
Potassium-mg/L		0002810-02			<0.05	
Sodium-mg/L		0002810-02			<0.01	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0204137-02	35.6		34.7	2.6%
Magnesium-mg/L		0204137-02	10.5		10.2	2.9%
Potassium-mg/L		0204137-02	3.02		3.1	2.6%
Sodium-mg/L		0204137-02	47.9		48.3	0.8%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0002810-05		2	2.06	103.%
Magnesium-mg/L		0002810-05		2	2.18	109.%
Potassium-mg/L		0002810-05		2	1.77	88.5%
Sodium-mg/L		0002810-05		2	1.79	89.5%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0204197

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0002822-01			<5.00		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0204197-01	2510		2640		5.0%

12600 West I-20 East
Odessa, Texas 79763

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Kristin Farris

Project Name:

K-33-1

Rice Operating

Project #:

122 W. Taylor

Project Loc:

EME SWD

Hobbs NM 88220

PO #: 50

Fax No: (505) 397-1471

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James Harris

[illegible]

ANALYTICAL REPORT

Prepared for:

DONNIE ANDERSON
RICE OPERATING COMPANY
122 W. TAYLOR
HOBBS, NM 88242

Project: K-33-1
Order#: G0203354
Report Date: 05/17/2002

Certificates

US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

RICE OPERATING COMPANY
122 W. TAYLOR
HOBBS, NM 88242
505-397-1471

Order#: G0203354
Project:
Project Name: K-33-1
Location: EME SWD

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

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0203354-01	MW 1	WATER	5/13/02 10:10	5/15/02 10:00	See COC	See COC
<u>Lab Testing:</u>		Rejected: No	Temp: See COC			
8021B/5030 BTEX						
Anions						
Cations						
Total Dissolved Solids (TDS)						

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

DONNIE ANDERSON
RICE OPERATING COMPANY
122 W. TAYLOR
HOBBS, NM 88242

Order#: G0203354
Project:
Project Name: K-33-1
Location: EME SWD

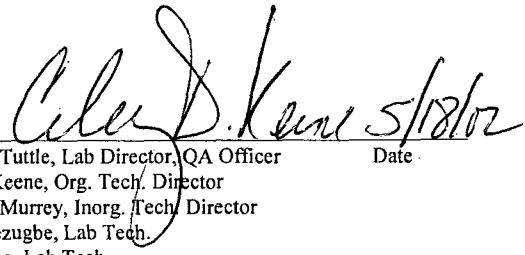
Lab ID: 0203354-01
Sample ID: MW 1

8021B/5030 BTEX

Method	Date	Date	Sample	Dilution	Analyst	Method
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>		
0001724-02		5/15/02 17:14	1	1	CK	8021B

Parameter	Result µg/L	RL
Benzene	<1.00	1.00
Ethylbenzene	<1.00	1.00
Toluene	<1.00	1.00
p/m-Xylene	<1.00	1.00
o-Xylene	<1.00	1.00

Approval:


Raland K. Tuttle, Lab Director, QA Officer
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

Date

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

Page 1 of 1

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

DONNIE ANDERSON
RICE OPERATING COMPANY
122 W. TAYLOR
HOBBS, NM 88242

Order#: G0203354
Project:
Project Name: K-33-1
Location: EME SWD

Lab ID: 0203354-01
Sample ID: MW 1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	292	mg/L	1	2.0	310.1	5/15/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.1	310.1	5/15/02	SB
Chloride	860	mg/L	1	5.00	9253	5/16/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.1	310.1	5/15/02	SB
SULFATE, 375.4	346	mg/L	12.5	6.25	375.4	5/17/02	SB

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	266	mg/L	50	0.500	6010B	5/16/02	SM
Magnesium	106	mg/L	50	0.050	6010B	5/16/02	SM
Potassium	15.4	mg/L	10	0.500	6010B	5/16/02	SM
Sodium	303	mg/L	50	0.500	6010B	5/16/02	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	2680	mg/L	1	5.0	160.1	5/15/02	SB

Approval: Raland K. Tuttle 5-19-02
Raland K. Tuttle, Lab Director, QA Officer Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0203354

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-µg/L		0001724-02			<1.00	
Ethylbenzene-µg/L		0001724-02			<1.00	
Toluene-µg/L		0001724-02			<1.00	
p/m-Xylene-µg/L		0001724-02			<1.00	
o-Xylene-µg/L		0001724-02			<1.00	
CONTROL						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-µg/L		0001724-03		100	115	115.0%
Ethylbenzene-µg/L		0001724-03		100	114	114.0%
Toluene-µg/L		0001724-03		100	112	112.0%
p/m-Xylene-µg/L		0001724-03		200	225	112.5%
o-Xylene-µg/L		0001724-03		100	113	113.0%
CONTROL DUP						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-µg/L		0001724-04		100	114	114.0%
Ethylbenzene-µg/L		0001724-04		100	110	110.0%
Toluene-µg/L		0001724-04		100	109	109.0%
p/m-Xylene-µg/L		0001724-04		200	225	112.5%
o-Xylene-µg/L		0001724-04		100	112	112.0%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-µg/L		0001724-05		100	115	115.0%
Ethylbenzene-µg/L		0001724-05		100	112	112.0%
Toluene-µg/L		0001724-05		100	109	109.0%
p/m-Xylene-µg/L		0001724-05		200	226	113.0%
o-Xylene-µg/L		0001724-05		100	111	111.0%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0203354

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0001725-02			<0.010	
Magnesium-mg/L		0001725-02			<0.001	
Potassium-mg/L		0001725-02			<0.050	
Sodium-mg/L		0001725-02			<0.010	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0203354-01	266		264	0.8%
Magnesium-mg/L		0203354-01	106		106	0.0%
Potassium-mg/L		0203354-01	15.4		14.8	4.0%
Sodium-mg/L		0203354-01	303		308	1.6%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0001725-05		2	1.99	99.5%
Magnesium-mg/L		0001725-05		2	2.06	103.0%
Potassium-mg/L		0001725-05		2	1.77	88.5%
Sodium-mg/L		0001725-05		2	1.91	95.5%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0203354

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0001731-01			<5.00		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0203354-01	2680		2760		2.9%

12600 West I-20 East
Odessa, Texas 79763

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name: K-33-1

Project #:

Project Loc: EME SWD

PO #: 716

Fax No: (505) 397-1471

Sampler Signature: Karin Jarriz

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