

1R - 427 - 91

REPORTS

DATE:

1-21-2003

1R0427-91

DISCLOSURE REPORT

E-5

RICE OPERATING COMPANY JUNCTION BOX DISCLOSURE FORM

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
EME	Marathon-Barber EOL	E	5	20S	37E	Lea	Length	Width	Depth
							Box Has Not Been Built Yet		

LAND TYPE: BLM _____ STATE _____ FEE LANDOWNER Jimmy T. Cooper OTHER _____

Depth to Groundwater 40 feet NMOCD SITE ASSESSMENT RANKING SCORE: 20

Date Started 1/11/2002 Date Completed not complete OCD Witness No

Soil Excavated 0 cubic yards Excavation Length 0 Width 0 Depth 0 feet

Soil Disposed 0 cubic yards Offsite Facility n/a Location n/a

FINAL ANALYTICAL RESULTS: Sample Date n/a Sample Depth n/a

Procure 5-point composite sample of bottom and 4-point composite sample of sidewalls. TPH, BTEX and Chloride laboratory test results completed by using an approved lab and testing procedures pursuant to NMOCD guidelines.

Sample Location	Benzene mg/kg	Toluene mg/kg	Ethyl Benzene mg/kg	Total Xylenes mg/kg	GRO mg/kg	DRO mg/kg	Chlorides mg/kg
Vadose Zone Samples Will Be Included With Final Closure Report							

General Description of Remedial Action: Site was delineated vertically and laterally with a backhoe. Chloride impact was consistent vertically, while TPH was minimal at the location.

The site was bored on 1/23/02 and chloride was found to impact groundwater with no indications of TPH. A cased monitor well was installed and the groundwater has been sampled and analyzed quarterly (see annual groundwater report for results). ROC has contracted a hydrologic consultant to assist ROC in developing a remediation plan for the vadose zone at groundwater-impacted sites with the ultimate objective being final closure.

Marathon has several monitor wells up- and down-gradient of this site. Marathon and ROC will cooperate with respect to the vadose zone and groundwater remediation at the site, groundwater monitoring, and sharing analytical results.

CHLORIDE FIELD TESTS

LOCATION	DEPTH (ft)	ppm
Vertical	8	950
	12	1300
	16	1700
Soil Bore	20	1300
	25	1200
	28	1800
	30	1650

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DATE 1/21/2003 PRINTED NAME Kristin Farris

SIGNATURE Kristin Farris TITLE Project Scientist

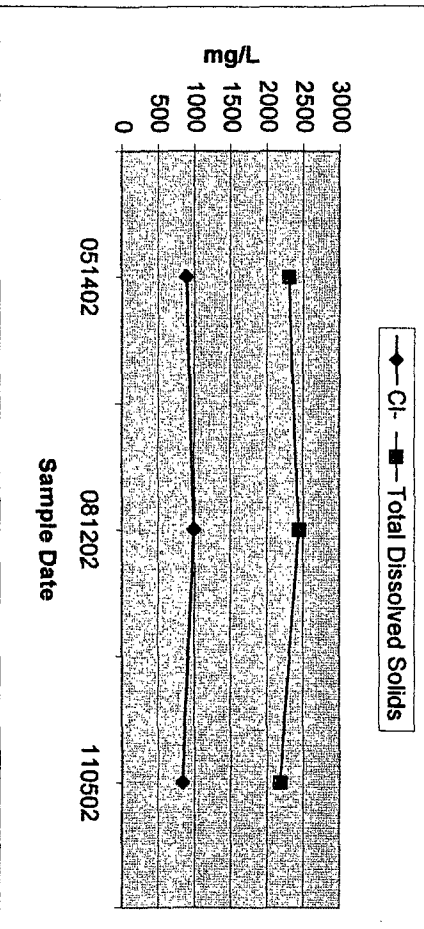
EME Jct. E-5
Marathon Barber EOL

Rice Operating Co. Monitor Well Data Sheet

All parameter concentrations are in mg/L.

MMW #	WATER LEVEL	TOTAL DEPTH	WELL VOLUME	VOLUME BAILED	SAMPLE DATE	TIME	CL-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	
1	40.72	45.21	0.720	2.00	051402	1437	886	2300	<0.001	<0.001	<0.001	<0.001	Sandy w/slow infiltration
1	40.91	45.15	0.678	1.75	081202	1020	993	2440	<0.001	0.001	<0.001	<0.003	Clear/slow recharge
1	41.15	45.1	0.632	1.9	110502	1415	833	2180	<0.001	<0.001	<0.001	<0.001	

EME Jct. E-5 Monitor Well



ANALYTICAL REPORT

Prepared for:

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

Project: jct. E-5
PO#: 510
Order#: G0204935
Report Date: 11/13/2002

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#: G0204935
Project: None Given
Project Name: jct. E-5
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>
0204935-01	MW 1	WATER	11/5/02 14:15	11/6/02 19:30	See COC	See COC
<u>Lab Testing:</u>		Rejected: No	Temp: 4 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#: G0204935
Project: None Given
Project Name: jct. E-5
Location: EME

Lab ID: 0204935-01
Sample ID: MW 1

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003670-02		11/7/02	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	93%	80	120
Bromofluorobenzene	90%	80	120

Approval:

Raland K. Tuttle
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

11-13-02

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0204935
Project: None Given
Project Name: jct. E-5
Location: EME

Lab ID: 0204935-01
Sample ID: MW 1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	422	mg/L	1	2.00	310.1	11/7/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/7/02	SB
Chloride	833	mg/L	1	5.00	9253	11/12/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/7/02	SB
SULFATE, 375.4	116	mg/L	2.5	1.25	375.4	11/12/02	SB

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	213	mg/L	100	1.0	6010B	11/11/02	SM
Magnesium	6.29	mg/L	10	0.010	6010B	11/11/02	SM
Potassium	13.4	mg/L	10	0.50	6010B	11/11/02	SM
Sodium	337	mg/L	100	1.0	6010B	11/11/02	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	2180	mg/L	1	5.0	160.1	11/7/02	TAL

Approval:

Raland K. Tuttle 11-13-02
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#: G0204935

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0003670-02			<0.001	
Ethylbenzene-mg/L		0003670-02			<0.001	
Toluene-mg/L		0003670-02			<0.001	
p/m-Xylene-mg/L		0003670-02			<0.001	
o-Xylene-mg/L		0003670-02			<0.001	
CONTROL						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0003670-03		0.1	0.096	96.%
Ethylbenzene-mg/L		0003670-03		0.1	0.099	99.%
Toluene-mg/L		0003670-03		0.1	0.098	98.%
p/m-Xylene-mg/L		0003670-03		0.2	0.209	104.5%
o-Xylene-mg/L		0003670-03		0.1	0.101	101.%
CONTROL DUP						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0003670-04		0.1	0.098	98.%
Ethylbenzene-mg/L		0003670-04		0.1	0.101	101.%
Toluene-mg/L		0003670-04		0.1	0.100	100.%
p/m-Xylene-mg/L		0003670-04		0.2	0.213	106.5%
o-Xylene-mg/L		0003670-04		0.1	0.102	102.%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0003670-05		0.1	0.100	100.%
Ethylbenzene-mg/L		0003670-05		0.1	0.102	102.%
Toluene-mg/L		0003670-05		0.1	0.102	102.%
p/m-Xylene-mg/L		0003670-05		0.2	0.216	108.%
o-Xylene-mg/L		0003670-05		0.1	0.103	103.%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0204935

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Bicarbonate Alkalinity-mg/L		0003690-01			<2.00		
Carbonate Alkalinity-mg/L		0003691-01			<0.10		
Chloride-mg/L		0003720-01			<5.00		
Hydroxide Alkalinity-mg/L		0003692-01			<0.10		
SULFATE, 375.4-mg/L		0003722-01			<0.50		
DUPLICATE		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Bicarbonate Alkalinity-mg/L		0204935-01	422		423		0.2%
Carbonate Alkalinity-mg/L		0204935-01	0		<0.10		0.0%
Hydroxide Alkalinity-mg/L		0204935-01	0		<0.10		0.0%
SULFATE, 375.4-mg/L		0204935-01	116		120		3.4%
MS		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Chloride-mg/L		0204935-01	833	500	1330	99.4%	
MSD		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Chloride-mg/L		0204935-01	833	500	1320	97.4%	0.8%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Bicarbonate Alkalinity-mg/L		0003690-04		0.05	0.0496	99.2%	
Carbonate Alkalinity-mg/L		0003691-04		0.05	0.0496	99.2%	
Chloride-mg/L		0003720-04		5000	4960	99.2%	
Hydroxide Alkalinity-mg/L		0003692-04		0.05	0.0496	99.2%	
SULFATE, 375.4-mg/L		0003722-04		50	49.0	98.0%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0204935

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0003711-02			<0.010	
Magnesium-mg/L		0003711-02			<0.001	
Potassium-mg/L		0003711-02			<0.050	
Sodium-mg/L		0003711-02			<0.010	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0204950-02	314		312	0.6%
Magnesium-mg/L		0204950-02	12.8		12.5	2.4%
Potassium-mg/L		0204950-02	17.2		16.8	2.4%
Sodium-mg/L		0204950-02	468		472	0.9%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0003711-05		2	2.01	100.5%
Magnesium-mg/L		0003711-05		2	1.90	95.5%
Potassium-mg/L		0003711-05		2	1.79	89.5%
Sodium-mg/L		0003711-05		2	1.79	89.5%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0204935

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0003668-01			<5.0		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0204936-01	17400		17200		1.2%

12600 West I-20 East
Odessa, Texas 79763

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name:

Project #:

Project Loc:

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[illegible]

ANALYTICAL REPORT

Prepared for:

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

Project: E-5
PO#: 510
Order#: G0204195
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#: G0204195
Project:
Project Name: E-5
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>
0204195-01	MW 1	WATER	8/12/02 10:20	8/12/02 20:05	See COC headspace in one 40 ml glass vial	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#: G0204195
Project:
Project Name: E-5
Location: EME SWD

Lab ID: 0204195-01
Sample ID: MW 1

8021B/5030 BTEX

Method	Date	Date	Sample	Dilution		
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0002915-02		8/20/02 20:56	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	0.002	0.001
o-Xylene	<0.001	0.001

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#: G0204195
Project:
Project Name: E-5
Location: EME SWD

Lab ID: 0204195-01
Sample ID: MW 1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	406	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	993	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	141	mg/L	2.5	1.25	375.4	8/14/02	MB

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	291	mg/L	100	1.0	6010B	8/14/02	SM
Magnesium	65.6	mg/L	10	0.010	6010B	8/14/02	SM
Potassium	13.0	mg/L	10	0.50	6010B	8/14/02	SM
Sodium	376	mg/L	100	1.0	6010B	8/14/02	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	2440	mg/L	1	5.0	160.1	8/13/02	CK

Approval:

Raland K Tuttle 8-12-02
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#: G0204195

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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#: G0204195

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Chloride-mg/L		0204137-01	56.7	100	152	95.3%	
MSD		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Chloride-mg/L		0204137-01	56.7	100	156	99.3%	2.6%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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#: G0204195

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	103.9%	
Magnesium-mg/L		0002810-05		2	2.18	109.9%	
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#: G0204195

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%

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Kristin Farris

Project Name:

61

Company Name

Rice Operating

Project #:

Company Address:

122 W. Taylor

Project Lac:

IME SWD

City/State/Zip:

Hobbs, NM 87240

PO #:

Telephone No. ()

505) 393-9174

Fax No: (505) 397-1471

Sampler Signature:

Thirion-Laguerre

[illegible]

ANALYTICAL REPORT

Prepared for:

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

Project: E-5
Order#: G0203358
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#: G0203358
Project:
Project Name: E-5
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>
0203358-01	MW 1	WATER	5/14/02 14:40	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#: G0203358
Project:
Project Name: E-5
Location: EME SWD

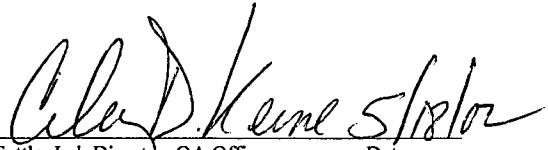
Lab ID: 0203358-01
Sample ID: MW 1

8021B/5030 BTEX

Method	Date	Date	Sample	Dilution		
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0001724-02		5/15/02 18:42	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

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0203358
Project:
Project Name: E-5
Location: EME SWD

Lab ID: 0203358-01
Sample ID: MW 1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	460	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	886	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	157	mg/L	2.5	1.25	375.4	5/17/02	SB

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	240	mg/L	50	0.500	6010B	5/16/02	SM
Magnesium	64.5	mg/L	10	0.010	6010B	5/16/02	SM
Potassium	14.3	mg/L	10	0.500	6010B	5/16/02	SM
Sodium	421	mg/L	250	2.50	6010B	5/16/02	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	2300	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
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

RL = Reporting Limit N/A = Not Applicable

Page 1 of 1

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ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0203358

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Benzene-µg/L		0001724-04		100	114	114.0%	0.9%
Ethylbenzene-µg/L		0001724-04		100	110	110.0%	3.6%
Toluene-µg/L		0001724-04		100	109	109.0%	2.7%
p/m-Xylene-µg/L		0001724-04		200	225	112.5%	0.0%
o-Xylene-µg/L		0001724-04		100	112	112.0%	0.9%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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

Anions

Order#: G0203358

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Bicarbonate Alkalinity-mg/L		0001737-01			<2.00		
Carbonate Alkalinity-mg/L		0001738-01			<0.10		
Chloride-mg/L		0001733-01			<5.00		
Hydroxide Alkalinity-mg/L		0001739-01			<0.10		
SULFATE, 375.4-mg/L		0001741-01			<0.50		
DUPLICATE		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Bicarbonate Alkalinity-mg/L		0203354-01	292		293		0.3%
Carbonate Alkalinity-mg/L		0203354-01	0		<0.10		0.0%
Hydroxide Alkalinity-mg/L		0203354-01	0		<0.10		0.0%
SULFATE, 375.4-mg/L		0203355-01	610		610		0.0%
MS		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Chloride-mg/L		0203354-01	860	500	1360	100.0%	
MSD		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Chloride-mg/L		0203354-01	860	500	1360	100.0%	0.0%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Bicarbonate Alkalinity-mg/L		0001737-04		0.05	0.0496	99.2%	
Carbonate Alkalinity-mg/L		0001738-04		0.05	0.0496	99.2%	
Chloride-mg/L		0001733-04		5000	5050	101.0%	
Hydroxide Alkalinity-mg/L		0001739-04		0.05	0.0496	99.2%	
SULFATE, 375.4-mg/L		0001741-04		50	49.9	99.8%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0203358

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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#: G0203358

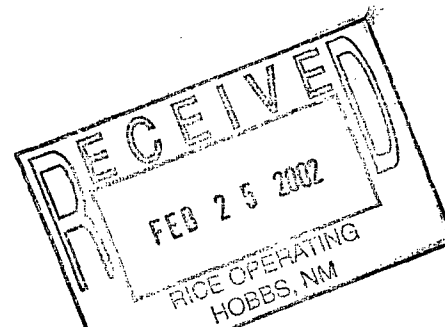
BLANK						
WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L	0001731-01			<5.00		
DUPLICATE						
WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L	0203354-01	2680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



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

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

ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ATTN: CHRIS RODRIGUEZ
122 W. TAYLOR
HOBBS, NM 88240
FAX TO: (505) 397-1471



Receiving Date: 02/19/02
Reporting Date: 02/22/02
Project Number: NOT GIVEN
Project Name: MONITOR WELL SAMPLE
Project Location: MARATHON BARBER EOL EME

Sampling Date: 02/19/02
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (mS/cm)	T-Alkalinity (mgCaCO ₃ /L)
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ANALYSIS DATE:	02/22/02	02/21/02	02/21/02	02/21/02	02/21/02	02/21/02	02/21/02
H6524-1 MW	471	248	66	12.2	3737		377
Quality Control	NR	55	49	5.27	1489		NR
True Value QC	NR	50	50	5.00	1413		NR
% Accuracy	NR	110	97.2	105	105		NR
Relative Percent Difference	NR	0	6.0	0	0.3		NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
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	Cl ⁻ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH (s.u.)	TDS (mg/L)
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ANALYSIS DATE:	02/21/02	02/21/02	02/21/02	02/21/02	02/21/02	02/22/02
H6524-1 MW	940	221	0	460	7.00	2170
Quality Control	1020	52.66	NR	948	7.11	NR
True Value QC	1000	50.00	NR	1000	7.00	NR
% Accuracy	102	105	NR	94.8	102	NR
Relative Percent Difference	5.0	0.6	NR	0.4	1.6	5.1

METHODS:	SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1
----------	-------------	-------	-------	-------	-------	-------

Amy Hill
Chemist

2-22-02
Date

PLEASE NOTE: **Liability and Damages.** Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

H6524

ARDINAL LABORATORIES, INC.

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Page 1 of 1

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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