

AP - 66

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 COMAPANY

Kristin Farris

Kristin Farris
Project Scientist

Enclosures: Summary table & graph for each site
 Analytical results

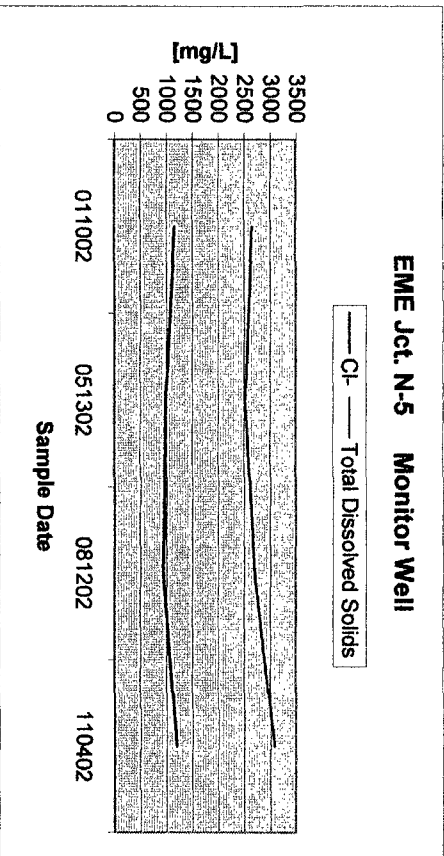
Cc: LBG, CDH, file, Wayne Price, Chris Williams
 NMOCD, District I Office
 1625 N. French Drive
 Hobbs, NM 88240

EME Jct. N-5
N. 5, 20S, 37E

Rice Operating Co. Monitor Well Data Sheet

All parameter concentrations are in mg/L

MW #	(ft)		(gal)		SAMPLE DATE	TIME	CL-	TDS	BENZENE	TOLUENE	ETHYL		TOTAL
	WATER LEVEL	TOTAL DEPTH	WELL VOLUME	VOLUME BAILED							BENZENE	XYLENES	
1	35.50	41.30	0.900	2.80	011002	1415	1160	2652	<0.002	<0.002	<0.006	<0.006	<0.006
1	37.47	40.18	0.434	2.25	051302	1445	993	2520	<0.001	0.00198	0.0028	0.00915	(Sandy)
1	37.75	40.19	0.390	1.50	081202	1100	939	2700	<0.001	<0.001	<0.001	<0.003	
1	37.90	40.20	0.368	1.29	110402	1600	1200	3083	<0.002	<0.002	<0.002	<0.006	(sandy, slow recharge, TPH odor)





ARDINAL LABORATORIES

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: KRISTIN FARRIS
122 W. TAYLOR
HOBBS, NM 88240
FAX TO: (505) 397-1471

Receiving Date: 11/05/02
Reporting Date: 11/08/02
Project Number: 510
Project Name: N-5 JCT.
Project Location: EME

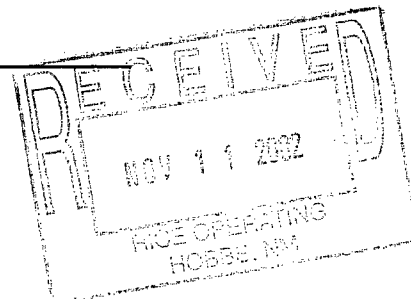
Sampling Date: 11/04/02
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		11/05/02	11/05/02	11/05/02	11/05/02
H7179-1	MW1	<0.002	<0.002	<0.002	<0.006
Quality Control		0.103	0.099	0.100	0.287
True Value QC		0.100	0.100	0.100	0.300
% Recovery		103	99.2	99.8	95.6
Relative Percent Difference		4.7	2.4	0.4	1.1

METHOD: EPA SW-846 8260

Bryan J. Cook
Chemist

11/8/02
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.



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: KRISTIN FARRIS
122 W. TAYLOR
HOBBS, NM 88240
FAX TO: (505) 397-1471

Receiving Date: 11/05/02
Reporting Date: 11/07/02
Project Number: 510
Project Name: N-5 JCT.
Project Location: EME

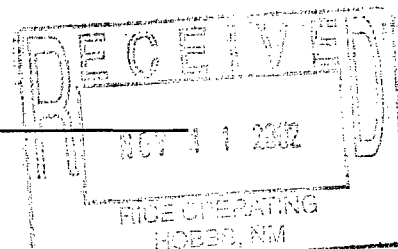
Sampling Date: 11/04/02
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (mS/cm)	T-Alkalinity (mgCaCO ₃ /L)
ANALYSIS DATE:		11/06/02	11/06/02	11/06/02	11/06/02	11/06/02	11/06/02
H7179-1	MW1	569	206	78	6.78	1924	345
Quality Control		NR	43	48	4.62	1322	NR
True Value QC		NR	50	50	5.00	1413	NR
% Recovery		NR	86.0	96.0	92.4	93.6	NR
Relative Percent Difference		NR	0	0	9.0	0.7	NR
METHODS:		SM3500-Ca-D		3500-Mg E	8049	120.1	310.1

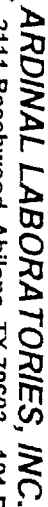
		Cl ⁻ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:		11/06/02	11/06/02	11/06/02	11/06/02	11/06/02	11/07/02
H7179-1	MW1	1200	44.9	0	421	6.97	3083
Quality Control		1000	49.87	NR	991	7.01	NR
True Value QC		1000	50.00	NR	1000	7.00	NR
% Recovery		100	99.7	NR	99.1	100	NR
Relative Percent Difference		5.0	1.3	NR	0	0.1	8.8
METHODS:		SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1

Amy Hill
Chemist

11-7-02
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 licensors 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.



2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

Page ____ of ____

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

ANALYTICAL REPORT

Prepared for:

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

Project: N-5
PO#: 510
Order#: G0204196
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#: G0204196
Project:
Project Name: N-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>
0204196-01	MW 1	WATER	8/12/02 11:00	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#: G0204196
Project:
Project Name: N-5
Location: EME SWD

Lab ID: 0204196-01

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		8/20/02 21:18	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, Lab Director, QA Officer
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

Date

8-22-02

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

Page 1 of 1

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0204196
Project:
Project Name: N-5
Location: EME SWD

Lab ID: 0204196-01
Sample ID: MW 1

Anions

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Bicarbonate Alkalinity	360	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	939	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	109	mg/L	2.5	1.25	375.4	8/14/02	MB

Cations

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Calcium	310	mg/L	100	1.0	6010B	8/14/02	SM
Magnesium	66.4	mg/L	10	0.010	6010B	8/14/02	SM
Potassium	7.88	mg/L	10	0.50	6010B	8/14/02	SM
Sodium	294	mg/L	100	1.0	6010B	8/14/02	SM

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Total Dissolved Solids (TDS)	2700	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 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#: G0204196

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#: G0204196

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#: G0204196

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
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
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
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#: G0204196

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%

12500 West I-20 East
Odessa, Texas 79763

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Kristin Farris

Company Name Rock Consulting

Company Address: 122 W. Taylor

City/State/Zip: Hobbs, NM 88240

Telephone No: (505) 393-9174

Sampler Signature: K. J. D. Davis

[illegible]

ANALYTICAL REPORT

Prepared for:

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

Project: N-5
Order#: G0203357
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#: G0203357
Project:
Project Name: N-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>
0203357-01	MW 1	WATER	5/13/02 14:45	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#: G0203357
Project:
Project Name: N-5
Location: EME SWD

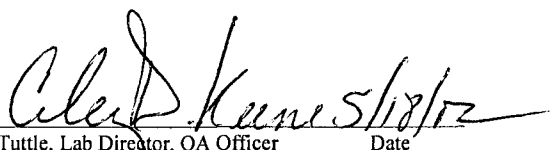
Lab ID: 0203357-01
Sample ID: MW 1

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 11:34	1	1	CK	8021B

Parameter	Result µg/L	RL
Benzene	<1.00	1.00
Ethylbenzene	2.80	1.00
Toluene	1.98	1.00
p/m-Xylene	7.72	1.00
o-Xylene	1.43	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#: G0203357
Project:
Project Name: N-5
Location: EME SWD

Lab ID: 0203357-01
Sample ID: MW 1

Anions

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Bicarbonate Alkalinity	319	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	993	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	142	mg/L	5	2.5	375.4	5/17/02	SB

Cations

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Calcium	274	mg/L	50	0.500	6010B	5/16/02	SM
Magnesium	68.6	mg/L	10	0.010	6010B	5/16/02	SM
Potassium	8.02	mg/L	10	0.500	6010B	5/16/02	SM
Sodium	346	mg/L	250	2.50	6010B	5/16/02	SM

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Total Dissolved Solids (TDS)	2520	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#: G0203357

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

Anions

Order#: G0203357

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
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						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
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						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Chloride-mg/L		0203354-01	860	500	1360	100.0%
MSD						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Chloride-mg/L		0203354-01	860	500	1360	100.0%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
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#: G0203357

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
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
Calcium-mg/L		0203354-01	266		264	0.8%
Magnesium-mg/L		0203354-01	106		106	0.9%
Potassium-mg/L		0203354-01	15.4		14.8	4.9%
Sodium-mg/L		0203354-01	303		308	1.6%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0001725-05		2	1.99	99.5%
Magnesium-mg/L		0001725-05		2	2.06	103.9%
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#: G0203357

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name: N-5

Project #:

Project Loc: EME SWD

PO #: 1716

Fax No: (505) 397-1471

Sampler Signature: Harold Lopez

[illegible]



ENVIRONMENTAL PLUS, INC.

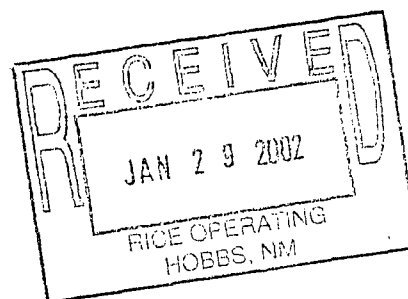
Micro-Blaze

Micro-Blaze Out™

STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

January 25, 2002

Mr. Donnie Anderson
Rice Operating Company
122 West Taylor
Hobbs, New Mexico 88240



Subject: Monument EME System Monitor Well Sampling

Dear Mr. Anderson,

Included below is the development and sampling information collected by Environmental Plus, Inc. (EPI) on 1-10-02 for the Monument EME System monitor wells.

RICE OPERATING MONUMENT EME SYSTEM MONITOR WELLS						
MONITOR WELL ID	DATE	WELL CASING INSIDE DIAMETER INCHES	WATER LEVEL FROM TOP OF CASING FEET	TOTAL DEPTH FROM TOP OF CASING FEET	BORE WATER VOLUME GALLONS	PURGE VOLUME GALLONS
P6	1/10/2002	2	36.7	48.0	1.8	5.5
K33-1	1/10/2002	2	36.9	41.0	0.7	2.0
M16-1	1/10/2002	2	22.6	35.1	2.0	6.1
JUNCTION N-5	1/10/2002	2	35.5	41.3	0.9	2.8

If you have any questions or require more information please call Mr. Ben Miller or myself at the office or at 505.390.0288 or 505.390.7864, respectively.

Sincerely,

Pat McCasland
EPI Technical Services Manager

cc: Ben Miller, EPI Vice President and General Manager
Sherry Miller, EPI President
file

ENVIRONMENTAL PLUS, INC.



PHONE (915) 873-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

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

ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ATTN: DONNIE ANDERSON
122 W. TAYLOR
HOBBS, NM 88240
FAX TO:

Receiving Date: 01/11/02
Reporting Date: 01/16/02
Project Owner: RICE OPERATING CO.
Project Name: JUNCTION N-5
Project Location: NOT GIVEN

Sampling Date: 01/10/02
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (u S/cm)	T-Alkalinity (mgCaCO ₃ /L)
ANALYSIS DATE:		01/16/02	01/15/02	01/15/02	01/15/02	01/15/02	01/15/02
H6428-1	R011002JN5MW	334	398	90	12.9	4350	314
Quality Control		NR	55.0	48.8	5.27	1489	NR
True Value QC		NR	50.0	50.0	5.00	1413	NR
% Recovery		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	8048	120.1	310.1
----------	-------------	-----------	------	-------	-------

	Cl ⁻ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:	01/15/02	01/15/02	01/15/02	01/15/02	01/15/02	01/15/02
H6428-1 R011002BWMW	1160	149	0	383	7.09	2652
Quality Control	1040	52.86	NR	984	7.00	NR
True Value QC	1000	50.00	NR	1000	7.00	NR
% Recovery	104	105	NR	98.4	100	NR
Relative Percent Difference	1.0	0.8	NR	2.7	0.1	NR

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

Amy Hill
Chemist

1-16-02
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.

H6428A.XLS



PHONE (915) 873-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (506) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

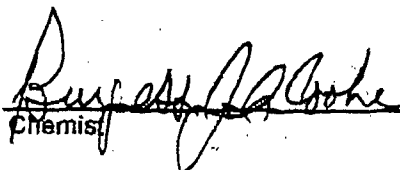
ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ATTN: DONNIE ANDERSON
122 W. TAYLOR
HOBBS, NM 88240
FAX TO:

Receiving Date: 01/11/02
Reporting Date: 01/12/02
Project Owner: RICE OPERATING CO.
Project Name: JUNCTION N-5
Project Location: NOT GIVEN

Sampling Date: 01/10/02
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		01/11/02	01/11/02	01/11/02	01/11/02
H6428-1	R011002JN5MW	<0.002	<0.002	0.006	<0.006
Quality Control		0.100	0.104	0.108	0.314
True Value QC		0.100	0.100	0.100	0.300
% Recovery		99.9	104	108	105
Relative Percent Difference		1.6	2.8	2.2	1.9

METHOD: EPA SW-846 8260


Chemist

1/12/02
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.

H6428B.XLS

