

AP - 43

ANNUAL MONITORING REPORT

YEAR(S):
2003

RICE Operating Company

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

1R0927-H
n 89?

CERTIFIED MAIL

RETURN RECEIPT NO. 7002 2410 0000 4940 1282

March 4, 2004

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

RE: 2003 MONITOR WELL REPORT/SAMPLING SUMMARY
EME SWD SYSTEM
LEA COUNTY, NEW MEXICO

Mr. Price:

Rice Operating Company (ROC) takes this opportunity to submit the 2003 Monitor Well Report for the Eunice Monument Eumont (EME) Salt Water Disposal System. Listed below are 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 H-13, 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
H-13 leak	H	13	T20S, R36E
A-20 jct.	A	20	T20S, R37E

ROC samples these monitor wells each quarter. Analysis of the samples was provided by Cardinal Laboratories of Hobbs and Environmental Lab of Texas of Odessa. In 2004, ROC will continue to conduct the sampling of the monitor wells at these sites. As in 2003, either Environmental Lab of Texas of Odessa, Texas, or Cardinal Laboratories of Hobbs will continue to conduct analytical tests of the water samples of 2004.

ROC will continue to address the groundwater concerns at these sites in 2004 by contracting a consultant/groundwater specialist to generate work plans for remediation of the vadose zone at groundwater-impacted sites and to address the groundwater concerns. NMOCD can anticipate more work plan submissions for such sites as they are prioritized in 2004. 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
Project Scientist

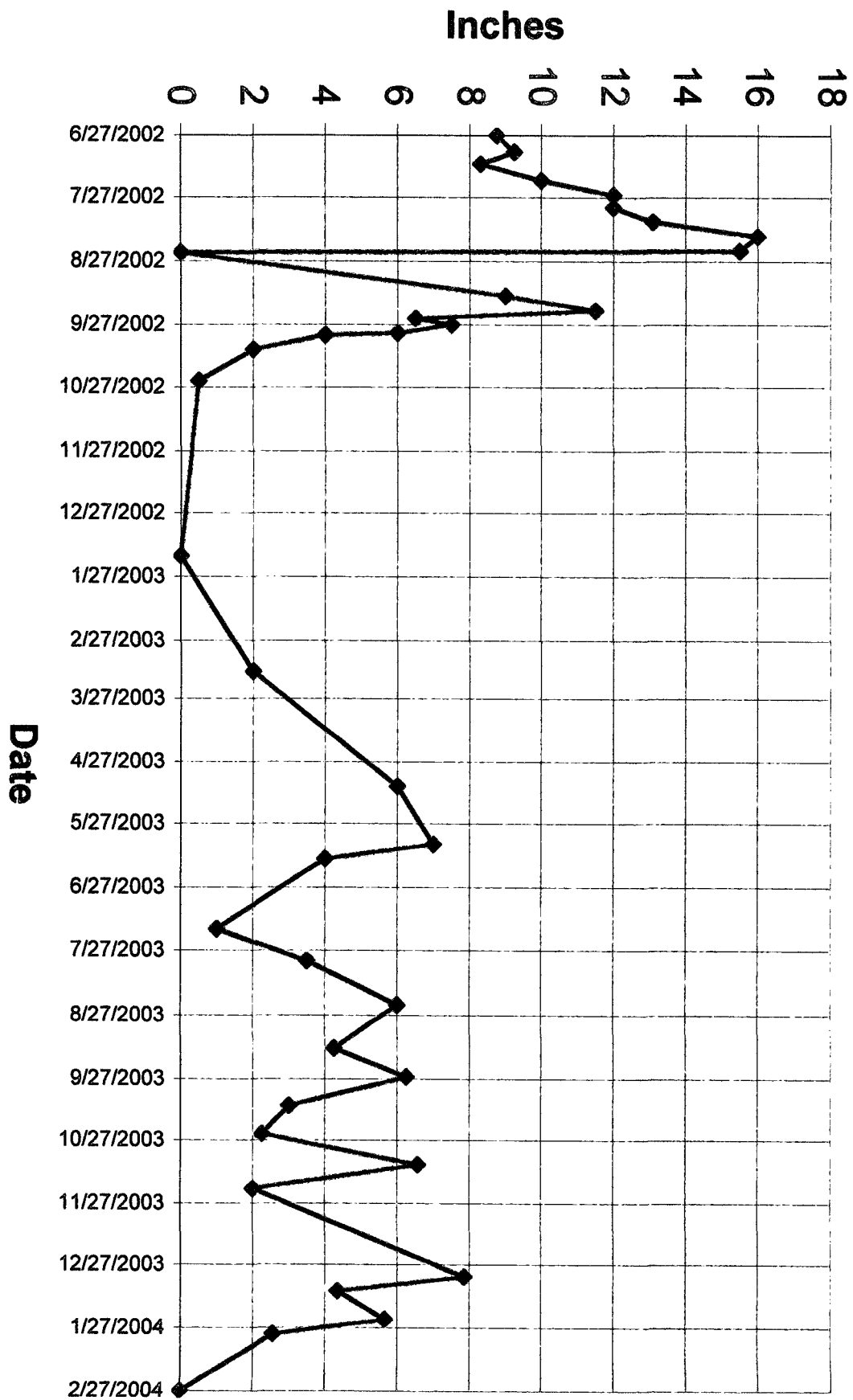
Enclosures: Summary table & graph for each site
 Analytical results

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

EME A-20 Monitor Well
Unit 'A', Sec. 20, T20S, R37E

<u>Date</u>	<u>Height of oil (in.)</u>	<u>Depth to water (ft.)</u>	<u>Activity</u>
6/27/2002	8.75	25.40	
7/5/2002	9.25	25.36	
7/11/2002	8.30	25.30	
7/19/2002	10.00	25.32	
7/26/2002	12.00	25.48	
8/1/2002	12.00	25.64	
8/8/2002	13.10	26.70	
8/15/2002	16.00	25.84	
8/22/2002	15.50	26.00	Bailed oil until only a skim remained
8/23/2002	0.00	26.00	
9/13/2002	9.00	xxx	
9/20/2002	11.50	25.83	Dropped absorbent pads in well
9/24/2002	6.50	25.50	Removed saturated pads
9/27/2002	7.50	25.79	Dropped absorbent pads in well
10/1/2002	6.00	25.54	Removed pads and added another
10/2/2002	4.00	25.25	Removed pads
10/9/2002	2.00	25.83	
10/24/2002	0.50	25.08	
1/17/2003	0 (sheen)	xxx	
3/14/2003	2.00	24.82	
5/9/2003	6.00	25.50	
6/6/2003	7.00	25.40	Dropped absorbent pads in well
6/13/2003	4.00	25.60	Changed absorbent pads in well
7/17/2003	1.00	26.50	Changed absorbent pads in well
08/01/03	3.50	25.34	Changed absorbent pads in well
8/22/2003	6.00	26.34	Changed absorbent pads in well
9/12/2003	4.25	25.45	Changed absorbent pads in well
9/26/2003	6.25	25.35	Changed absorbent pads in well
10/10/2003	3.00	25.55	Changed absorbent pads in well
10/24/2003	2.25	25.65	Changed absorbent pads in well
11/8/2003	6.57	25.85	Bailed oil until only a skim remained
11/20/2003	2.00	25.65	Quarterly sampling done
1/2/2004	7.85	25.43	Changed absorbent pads in well
1/9/2004	4.35	25.63	Changed absorbent pads in well
1/23/2004	5.65	25.54	Changed absorbent pads in well
1/30/2004	2.55	25.36	Changed absorbent pads in well
2/27/2004	0 (skim)	25.64	Sampled and placed absorbent pad in well

EME Monitor Well A-20



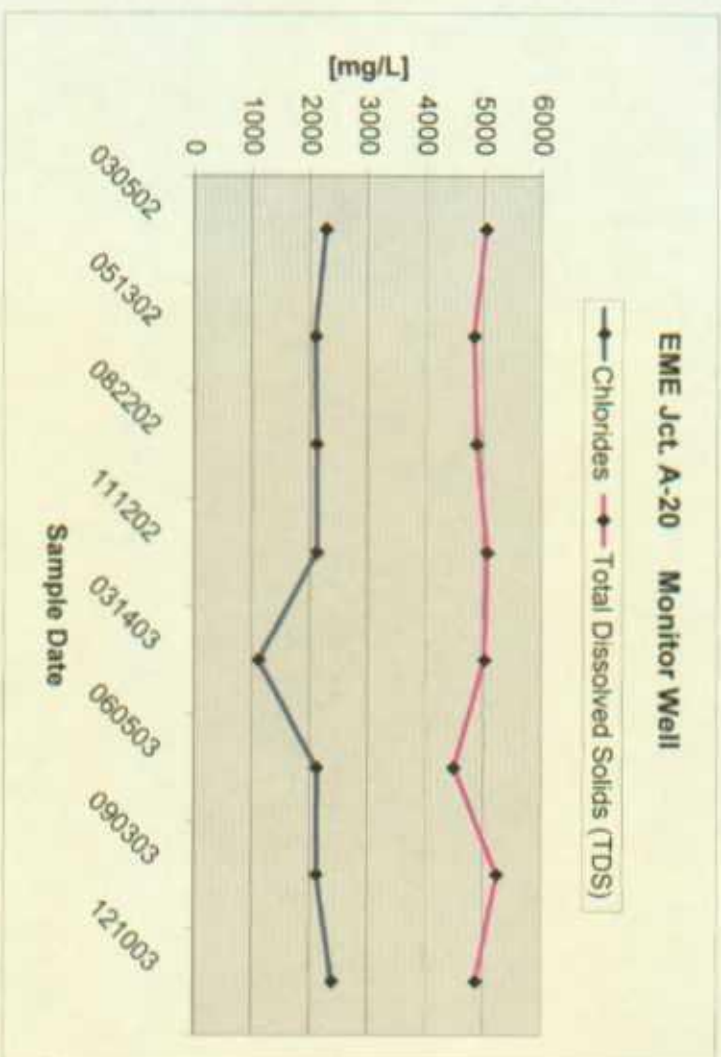
EME Jct. A-20
A.20, 20S, 37E

Rice Operating Co. Monitor Well Data Sheet

All parameter concentrations are in mg/L

All parameter concentrations are in mg/L												
MW #	(ft)		(gal)		SAMPLE DATE	TIME	CL-	TDS	BENZENE	TOLUENE	ETHYL	
	WATER LEVEL •	TOTAL DEPTH	WELL VOLUME	VOLUME BAILED							BENZENE	XYLENES
1	24.70	38.40	2.200	6.70	030502	1130	2279	5044	<0.002	0.003	0.006	0.014
1	25.62	38.22	2.000	6.00	051302	1145	2100	4840	XXX	XXX	XXX	XXX
1	26.00	38.25	1.960	6.00	082202	1625	2130	4890	XXX	XXX	XXX	XXX
1	24.97	38.25	2.125	6.50	111202	1500	2130	5070	XXX	XXX	XXX	XXX
	26.20	38.00	0.280	0.80	031403	1300	1120	5020	XXX	XXX	XXX	XXX
	23.20	26.00	0.448	1.30	060503	1200	2130	4500	XXX	XXX	XXX	XXX
	23.42	26.00	0.400	1.20	090303	1630	2130	5240	XXX	XXX	XXX	XXX
	23.20	26.00	0.448	1.30	121003	945	2390	4870	XXX	XXX	XXX	XXX

12" oil
15.5" oil
oil film



* Depth to water is measured from the top of the casing
Casing is 2.875 ft

ANALYTICAL REPORT

Prepared for:

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

Project: A-20
PO#: 510
Order#: G0308153
Report Date: 12/13/2003

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#: G0308153
Project:
Project Name: A-20
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>
0308153-01	MW1	WATER	12/10/03 9:45	12/11/03 7:00	1 L HDPE	ice
<u>Lab Testing:</u>		Rejected: No	Temp: 2.0 C			
Anions						
Cations						
Total Dissolved Solids (TDS)						

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0308153
Project:
Project Name: A-20
Location: EME

Lab ID: 0308153-01
Sample ID: MW1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	342	mg/L	1	2.00	310.1	12/11/03	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	12/11/03	SB
Chloride	2390	mg/L	1	5.00	9253	12/11/03	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	12/11/03	SB
SULFATE, 375.4	731	mg/L	12.5	6.25	375.4	12/11/03	SB

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	301	mg/L	100	1.0	6010B	12/12/03	SM
Magnesium	238	mg/L	100	0.10	6010B	12/12/03	SM
Potassium	26.8	mg/L	10	0.50	6010B	12/12/03	SM
Sodium	1510	mg/L	1000	10.0	6010B	12/12/03	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	4870	mg/L	1	5.0	160.1	12/12/03	SM

Approval:

Raland K. Tuttle 12-13-03
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

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0308153

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Bicarbonate Alkalinity-mg/L		0007698-01			<2.00	
Carbonate Alkalinity-mg/L		0007699-01			<0.10	
Chloride-mg/L		0007706-01			<5.00	
Hydroxide Alkalinity-mg/L		0007700-01			<0.10	
SULFATE, 375.4-mg/L		0007707-01			<0.50	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Bicarbonate Alkalinity-mg/L		0308153-01	342		344	0.6%
Carbonate Alkalinity-mg/L		0308153-01	0		<0.10	0.0%
Hydroxide Alkalinity-mg/L		0308153-01	0		<0.10	0.0%
SULFATE, 375.4-mg/L		0308153-01	731		715	2.2%
MS						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Chloride-mg/L		0308153-01	2390	2500	4830	97.6%
MSD						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Chloride-mg/L		0308153-01	2390	2500	4870	99.2% 0.8%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Bicarbonate Alkalinity-mg/L		0007698-04		0.05	0.0496	99.2%
Carbonate Alkalinity-mg/L		0007699-04		0.05	0.0496	99.2%
Chloride-mg/L		0007706-04		5000	4960	99.2%
Hydroxide Alkalinity-mg/L		0007700-04		0.05	0.0496	99.2%
SULFATE, 375.4-mg/L		0007707-04		50	48.1	96.2%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0308153

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0007715-02			<0.010	
Magnesium-mg/L		0007715-02			<0.001	
Potassium-mg/L		0007715-02			<0.050	
Sodium-mg/L		0007715-02			<0.010	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0308153-01	301		302	0.3%
Magnesium-mg/L		0308153-01	238		235	1.3%
Potassium-mg/L		0308153-01	26.8		27.0	0.7%
Sodium-mg/L		0308153-01	1510		1480	2.0%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0007715-05		2	1.77	88.5%
Magnesium-mg/L		0007715-05		2	2.12	106.0%
Potassium-mg/L		0007715-05		2	1.89	94.5%
Sodium-mg/L		0007715-05		2	2.17	108.5%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0308153

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0007714-01			<5.0		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0308153-01	4870		4910		0.8%

12600 West I-20 East
Odessa, Texas 79763

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Kristin Farris
Project Name: A-20
Company Name: RICE Operating
Project #: _____
Company Address: 122 W Taylor
Project Loc: EME
City/State/Zip: Holbrook, NM 88240
PO #: 510

Telephone No: (505) 393-9174
Fax No: (505) 397-1471
Sampler Signature: [Signature]

0308153 LAB # (Lab 153-0112) 01	FIELD CODE <u>MW1</u>	Date Sampled <u>12-10-03</u>	Time Sampled <u>9:45</u>	No. of Containers <u>1</u>	Preservative HNO ₃ _____ HCl _____ NaOH _____ H ₂ SO ₄ _____ None <u>X</u>	Other (Specify) _____	Water <u>X</u>	Sludge _____	Soil _____	Other (Specify) _____	Matrix	Analyze For: Metals: As Ag Ba Cd Cr Pb Hg Se Volatiles Semi-volatiles BTEX 8021 B/5030 _____	RUSH TAT (Pre-Schedule) Standard TAT
	TDS/CL/SAR/EC TPH 118.1 TPH TX 1025/1005 TPH 6015M GRC/DRO TOTAL: _____ TCIP: _____												

Special Instructions: Major Anions, Cation, TDS

Relinquished by: [Signature] Date: 12/10/03 Time: 9:45

Received by: [Signature] Date: 12/11/03 Time: 7:00 AM

Relinquished by: [Signature] Date: 12/11/03 Time: 7:00 AM

Sample Containers Included? Yes
Temperature Upon Receipt see 20C
Laboratory Comments: 1 L HORE

ANALYTICAL REPORT

Prepared for:

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

Project: EME A-20

PO#: 510

Order#: G0305986

Report Date: 03/20/2003

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#: G0305986
Project:
Project Name: EME A-20
Location: None Given

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>
0305986-01	MW 1	WATER	3/14/03	3/14/03 19:30	L HDPE	Ice
<u>Lab Testing:</u>		Rejected: No	Temp: 2.0 C			
Anions						
Cations						
Total Dissolved Solids (TDS)						

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0305986
Project:
Project Name: EME A-20
Location: None Given

Lab ID: 0305986-01

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	398	mg/L	1	2.00	310.1	3/17/03	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	3/17/03	SB
Chloride	1120	mg/L	1	5.00	9253	3/17/03	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	3/17/03	SB
SULFATE, 375.4	673	mg/L	10	5.0	375.4	3/17/03	SB

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)	5020	mg/L	1	5.0	160.1	3/17/03	TAL

Approval: Raland K Tuttle 3-25-03
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#: G0305986
Project:
Project Name: EME A-20
Location: None Given

Lab ID: 0305986-01
Sample ID: MW 1

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>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Analyst</u>
Calcium	252	mg/L	100	1.0	6010B	03/18/2003	3/19/03	SM
Magnesium	207	mg/L	100	0.10	6010B	03/18/2003	3/19/03	SM
Potassium	27.2	mg/L	10	0.50	6010B	03/18/2003	3/19/03	SM
Sodium	1580	mg/L	1000	10.0	6010B	03/18/2003	3/19/03	SM

Approval:

Raland K. Tuttle 3-25-03

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

Anions

Order#: G0305986

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Bicarbonate Alkalinity-mg/L		0004955-01			2.00		
Carbonate Alkalinity-mg/L		0004957-01			<0.10		
Chloride-mg/L		0004953-01			<5.00		
Hydroxide Alkalinity-mg/L		0004959-01			<0.10		
SULFATE, 375.4-mg/L		0004961-01			<0.50		
DUPLICATE		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Bicarbonate Alkalinity-mg/L		0305981-01	226		225		0.4%
Carbonate Alkalinity-mg/L		0305981-01	0		<0.10		0.0%
Hydroxide Alkalinity-mg/L		0305981-01	0		<0.10		0.0%
SULFATE, 375.4-mg/L		0305966-02	319		311		2.5%
MS		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Chloride-mg/L		0305981-01	53.2	100	152	98.8%	
MSD		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Chloride-mg/L		0305981-01	53.2	100	151	97.8%	0.7%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Bicarbonate Alkalinity-mg/L		0004955-04		0.05	0.0496	99.2%	
Carbonate Alkalinity-mg/L		0004957-04		0.05	0.0496	99.2%	
Chloride-mg/L		0004953-04		5000	4960	99.2%	
Hydroxide Alkalinity-mg/L		0004959-04		0.05	0.0496	99.2%	
SULFATE, 375.4-mg/L		0004961-04		50	52	104.0%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0305986

BLANK							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Calcium-mg/L		0004974-02			<0.010		
Magnesium-mg/L		0004974-02			<0.001		
Potassium-mg/L		0004974-02			<0.050		
Sodium-mg/L		0004974-02			<0.010		
DUPLICATE							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Calcium-mg/L		0305966-01	12.8		13.0		1.6%
Magnesium-mg/L		0305966-01	2.5		2.57		2.8%
Potassium-mg/L		0305966-01	5.38		5.44		1.1%
Sodium-mg/L		0305966-01	360		365		1.4%
SRM							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Calcium-mg/L		0004974-05		2	2.19	109.5%	
Magnesium-mg/L		0004974-05		2	2.06	103.3%	
Potassium-mg/L		0004974-05		2	1.87	93.5%	
Sodium-mg/L		0004974-05		2	1.96	98.3%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0305986

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0004969-01			<5.0		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0305984-01	2310		2330		0.9%

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

Que Garts

[illegible]

ANALYTICAL REPORT

Prepared for:

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

Project: A-20

PO#:

Order#: G0307401

Report Date: 09/10/2003

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#: G0307401
Project:
Project Name: A-20
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>
0307401-01	MW1	WATER	9/3/03 16:30	9/8/03 8:00	4 oz glass	ice
<u>Lab Testing:</u>		Rejected: No	Temp: 7.0 C			
Anions						
Cations						
Total Dissolved Solids (TDS)						

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0307401
Project:
Project Name: A-20
Location: EME

Lab ID: 0307401-01
Sample ID: MW1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	372	mg/L	1	2.00	310.1	9/8/03	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	9/8/03	SB
Chloride	2130	mg/L	1	5.00	9253	9/8/03	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	9/8/03	SB
SULFATE, 375.4	679	mg/L	12.5	6.25	375.4	9/8/03	SB

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	218	mg/L	100	1.0	6010B	9/10/03	SM
Magnesium	167	mg/L	100	0.10	6010B	9/10/03	SM
Potassium	33.6	mg/L	10	0.50	6010B	9/10/03	SM
Sodium	1700	mg/L	1000	10.0	6010B	9/10/03	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	5240	mg/L	1	5.0	160.1	9/9/03	TAL

Approval:

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

Anions

Order#: G0307401

BLANK WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L	0006725-01			<2.00		
Carbonate Alkalinity-mg/L	0006726-01			<0.10		
Chloride-mg/L	0006718-01			<5.00		
Hydroxide Alkalinity-mg/L	0006727-01			<0.10		
SULFATE, 375.4-mg/L	0006715-01			<0.50		
DUPLICATE WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L	0307377-01	250		249		0.4%
Carbonate Alkalinity-mg/L	0307377-01	0		<0.10		0.0%
Hydroxide Alkalinity-mg/L	0307377-01	0		<0.10		0.0%
SULFATE, 375.4-mg/L	0307377-01	190		200		5.1%
MS WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L	0307383-01	7270	5000	12200	98.6%	
MSD WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L	0307383-01	7270	5000	12100	96.6%	0.8%
SRM WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L	0006725-04		0.05	0.0496	99.2%	
Carbonate Alkalinity-mg/L	0006726-04		0.05	0.0496	99.2%	
Chloride-mg/L	0006718-04		5000	4960	99.2%	
Hydroxide Alkalinity-mg/L	0006727-04		0.05	0.0496	99.2%	
SULFATE, 375.4-mg/L	0006715-04		50	52.2	104.4%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0307401

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0006753-01			<0.010	
Magnesium-mg/L		0006753-01			<0.001	
Potassium-mg/L		0006753-01			<0.050	
Sodium-mg/L		0006753-01			<0.010	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0307400-05	16.3		16.7	2.4%
Magnesium-mg/L		0307400-05	10.9		11.8	7.9%
Potassium-mg/L		0307400-05	13.5		12.6	6.9%
Sodium-mg/L		0307400-05	310		311	0.3%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0006753-04		2	2.04	102.%
Magnesium-mg/L		0006753-04		2	2.13	106.5%
Potassium-mg/L		0006753-04		2	1.93	96.5%
Sodium-mg/L		0006753-04		2	2.08	104.%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0307401

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0006735-01			<5.0		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0307400-01	1160		1170		0.9%

ANALYTICAL REPORT

Prepared for:

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

Project: A-20
PO#: 510
Order#: G0306665
Report Date: 06/09/2003

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#: G0306665
Project:
Project Name: A-20
Location: E.M.E.

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>
0306665-01	MW1	WATER	6/5/03 12:00	6/5/03 19:50	1 L HDPE	None
<u>Lab Testing:</u>		Rejected: No	Temp: 4.0 C			
Anions						
Cations						
Total Dissolved Solids (TDS)						

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0306665
Project:
Project Name: A-20
Location: E.M.E.

Lab ID: 0306665-01
Sample ID: MW1

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	380	mg/L	2	4.0	310.1	6/6/03	SB
Carbonate Alkalinity	< 0.20	mg/L	2	0.20	310.1	6/6/03	SB
Chloride	2130	mg/L	1	5.00	9253	6/6/03	SB
Hydroxide Alkalinity	< 0.20	mg/L	2	0.20	310.1	6/6/03	SB
SULFATE, 375.4	875	mg/L	25	12.5	375.4	6/6/03	SB

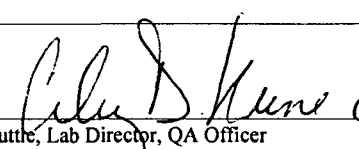
Cations

<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	239	mg/L	100	1.0	6010B	6/6/03	SM
Magnesium	202	mg/L	100	0.10	6010B	6/6/03	SM
Potassium	28.6	mg/L	10	0.50	6010B	6/6/03	SM
Sodium	1010	mg/L	1000	10.0	6010B	6/6/03	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)	4500	mg/L	1	5.0	160.1	6/9/03	SM

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

RL = Reporting Limit N/A = Not Applicable

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ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0306665

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Bicarbonate Alkalinity-mg/L		0005759-01			<2.00	
Carbonate Alkalinity-mg/L		0005760-01			<0.10	
Chloride-mg/L		0005758-01			<5.00	
Hydroxide Alkalinity-mg/L		0005761-01			<0.10	
SULFATE, 375.4-mg/L		0005762-01			<0.5	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Bicarbonate Alkalinity-mg/L		0306663-01	494		492	0.4%
Carbonate Alkalinity-mg/L		0306663-01	0		<0.10	0.0%
Hydroxide Alkalinity-mg/L		0306663-01	0		<0.10	0.0%
SULFATE, 375.4-mg/L		0306663-01	20.5		19.5	5.0%
MS						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Chloride-mg/L		0306663-01	2300	2500	4786	99.4%
MSD						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Chloride-mg/L		0306663-01	2300	2500	4830	101.2%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Bicarbonate Alkalinity-mg/L		0005759-04		0.05	0.0496	99.2%
Carbonate Alkalinity-mg/L		0005760-04		0.05	0.0496	99.2%
Chloride-mg/L		0005758-04		5000	4960	99.2%
Hydroxide Alkalinity-mg/L		0005761-04		0.05	0.0496	99.2%
SULFATE, 375.4-mg/L		0005762-04		50	51.8	103.6%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0306665

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0005755-02			<0.010	
Magnesium-mg/L		0005755-02			<0.001	
Potassium-mg/L		0005755-02			<0.050	
Sodium-mg/L		0005755-02			<0.010	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0306666-01	54.5		53.7	1.5%
Magnesium-mg/L		0306666-01	16.5		16.1	2.5%
Potassium-mg/L		0306666-01	37.6		37.6	0.0%
Sodium-mg/L		0306666-01	1080		1090	0.9%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0005755-05		2	2.00	100.0%
Magnesium-mg/L		0005755-05		2	2.12	106.0%
Potassium-mg/L		0005755-05		2	1.80	90.0%
Sodium-mg/L		0005755-05		2	1.92	96.0%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0306665

BLANK						
WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L	0005772-01			<5.0		
DUPLICATE						
WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L	0306663-01	4184		4312		3%

