

AP - 43

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

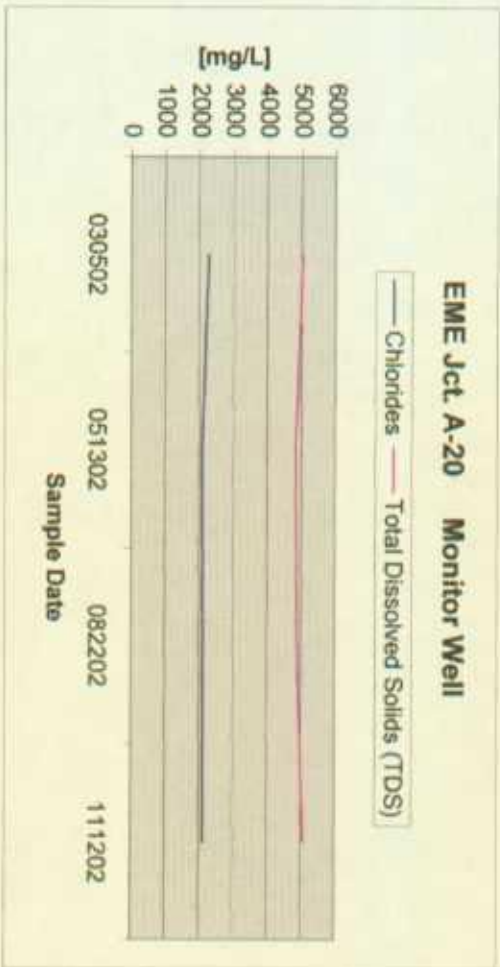
Cc: LBG, CDH, file, Wayne Price, Chris Williams
NMOCD, District I Office
1625 N. French Drive
Hobbs, NM 88240

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

Rice Operating Co. Monitor Well Data Sheet

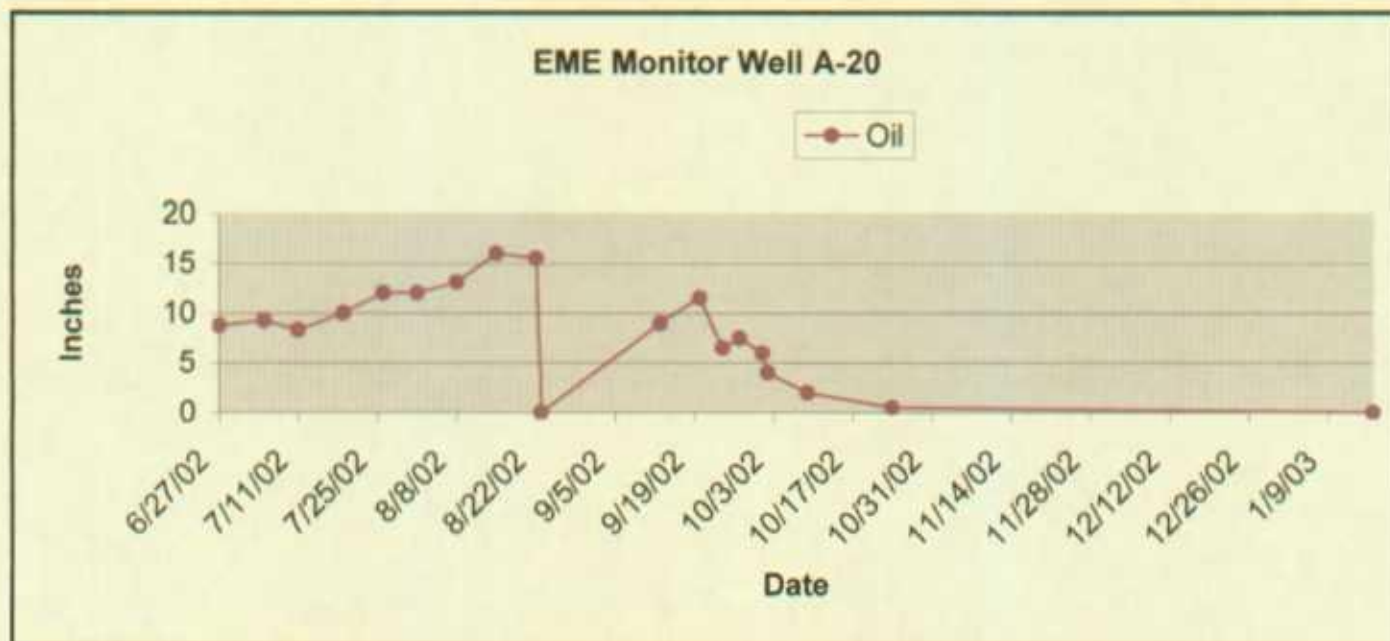
All parameter concentrations are in mg/L

MW #	WATER LEVEL (ft)	TOTAL DEPTH	WELL VOLUME (gal)	VOLUME BAILED	SAMPLE DATE	TIME	CL.	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL 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	12" oil
1	26.00	38.25	1.960	6.00	082202	1625	2130	4890	XXX	XXX	XXX	XXX	15.5" oil
1	24.97	38.25	2.125	6.50	111202	1500	2130	5070	XXX	XXX	XXX	XXX	oil film



EME A-20
Monitor Well

Date	Height of oil (in.)	Depth to water (ft.)	Comments
6/27/02	8.75	25.40	
7/5/02	9.25	25.36	
7/11/02	8.30	25.30	
7/19/02	10.00	25.32	
7/26/02	12.00	25.48	
8/1/02	12.00	25.64	
8/8/02	13.10	26.70	
8/15/02	16.00	25.84	
8/22/02	15.50	26.00	Bailed oil until only a skim remained
8/23/02	0.00	26.00	
9/13/02	9.00	xxx	
9/20/02	11.50	25.83	Dropped absorbant pads in well
9/24/02	6.50	25.50	Removed saturated pads
9/27/02	7.50	25.79	Dropped absorbant pads in well
10/1/02	6.00	25.54	Removed pads and added another
10/2/02	4.00	25.25	Removed pads
10/9/02	2.00	25.83	
10/24/02	0.50	25.08	
1/17/03	0 (sheen)	xxx	



ANALYTICAL REPORT

Prepared for:

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

Project: Jct. A-20
PO#: 510
Order#: G0205003
Report Date: 11/16/2002

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#: G0205003
Project:
Project Name: Jct. 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>
0205003-01	MW 1	WATER	11/12/02 15:00	11/12/02 19:15	L HDPE	Ice
<u>Lab Testing:</u>		Rejected: No	Temp: 4 C			
Anions						
Cations						
Total Dissolved Solids (TDS)						

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0205003
Project:
Project Name: Jct. A-20
Location: EME

Lab ID: 0205003-01
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	450	mg/L	1	2.00	310.1	11/13/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/13/02	SB
Chloride	2130	mg/L	1	5.00	9253	11/13/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/13/02	SB
SULFATE, 375.4	780	mg/L	25	12.5	375.4	11/14/02	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	240	mg/L	100	1.0	6010B	11/15/02	SM
Magnesium	23.1	mg/L	100	0.10	6010B	11/15/02	SM
Potassium	22.9	mg/L	10	0.50	6010B	11/15/02	SM
Sodium	1130	mg/L	1000	10.0	6010B	11/15/02	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)	5070	mg/L	1	5.0	160.1	11/13/02	TAL

Approval:

Raland K. Tuttle 11-18-02
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

Anions

Order#: G0205003

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Bicarbonate Alkalinity-mg/L		0003746-01			<2.00	
Carbonate Alkalinity-mg/L		0003747-01			<0.10	
Chloride-mg/L		0003750-01			<5.00	
Hydroxide Alkalinity-mg/L		0003748-01			<0.10	
SULFATE, 375.4-mg/L		0003767-01			<0.50	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Bicarbonate Alkalinity-mg/L		0204999-01	512		510	0.4%
Carbonate Alkalinity-mg/L		0204999-01	0		<0.10	0.0%
Hydroxide Alkalinity-mg/L		0204999-01	0		<0.10	0.0%
SULFATE, 375.4-mg/L		0204999-01	2.8		2.9	3.5%
MS						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Chloride-mg/L		0204999-01	3720	5000	8680	99.2%
MSD						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Chloride-mg/L		0204999-01	3720	5000	8600	97.6% 0.9%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Bicarbonate Alkalinity-mg/L		0003746-04		0.05	0.0496	99.2%
Carbonate Alkalinity-mg/L		0003747-04		0.05	0.0496	99.2%
Chloride-mg/L		0003750-04		5000	4960	99.2%
Hydroxide Alkalinity-mg/L		0003748-04		0.05	0.0496	99.2%
SULFATE, 375.4-mg/L		0003767-04		50	53.2	106.4%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0205003

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0003781-02			<0.010		
Magnesium-mg/L		0003781-02			<0.001		
Potassium-mg/L		0003781-02			<0.050		
Sodium-mg/L		0003781-02			<0.010		
DUPLICATE		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0204999-01	171		172		0.6%
Magnesium-mg/L		0204999-01	6.77		7.47		9.8%
Potassium-mg/L		0204999-01	11		11.6		5.3%
Sodium-mg/L		0204999-01	1940		1900		2.1%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0003781-05		2	2.09	104.5%	
Magnesium-mg/L		0003781-05		2	1.89	94.5%	
Potassium-mg/L		0003781-05		2	1.75	87.5%	
Sodium-mg/L		0003781-05		2	1.88	94.4%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0205003

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0003753-01			<5.0		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0204999-01	6020		6070		0.8%

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

ject. A-20

Project #:

Project Loc: EME

PO #: 510

Fax No: (505) 397-1471

[illegible]

ANALYTICAL REPORT

Prepared for:

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

A-20

Project: MW 1
PO#:
Order#: G0204340
Report Date: 09/04/2002

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#: G0204340
Project:
Project Name: MW 1
Location: EME A-20

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>
0204340-01	MW 1	WATER	8/22/02 16:25	8/23/02 19:25	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#: G0204340
Project:
Project Name: MW 1
Location: EME A-20

Lab ID: 0204340-01
Sample ID: MW 1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	386	mg/L	1	2.00	310.1	8/26/02	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	8/26/02	SB
Chloride	2130	mg/L	1	5.00	9253	8/28/02	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	8/26/02	SB
SULFATE, 375.4	822	mg/L	1	0.5	375.4	8/28/02	SB

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	250	mg/L	100	1.0	6010B	9/3/02	SM
Magnesium	217	mg/L	100	0.10	6010B	9/3/02	SM
Potassium	26.4	mg/L	10	0.50	6010B	9/3/02	SM
Sodium	1,340	mg/L	1000	10.0	6010B	9/3/02	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	4890	mg/L	1	5.0	160.1	8/26/02	SB

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

Page 1 of 1

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0204340

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Bicarbonate Alkalinity-mg/L		0002990-01			<2.00	
Carbonate Alkalinity-mg/L		0002981-01			<0.10	
Chloride-mg/L		0002987-01			<5.00	
Hydroxide Alkalinity-mg/L		0002982-01			<0.10	
SULFATE, 375.4-mg/L		0002991-01			<0.50	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Bicarbonate Alkalinity-mg/L		0204339-01	358		360	0.6%
Carbonate Alkalinity-mg/L		0204339-01	0		<0.10	0.0%
Hydroxide Alkalinity-mg/L		0204339-01	0		<0.10	0.0%
SULFATE, 375.4-mg/L		0204339-01	2380		2360	0.8%
MS						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Chloride-mg/L		0204339-01	2040	1000	3050	101.0%
MSD						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Chloride-mg/L		0204339-01	2040	1000	3030	99.0%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Bicarbonate Alkalinity-mg/L		0002990-04		0.05	0.0496	99.2%
Carbonate Alkalinity-mg/L		0002981-04		0.05	0.0496	99.2%
Chloride-mg/L		0002987-04		5000	4960	99.2%
Hydroxide Alkalinity-mg/L		0002982-04		0.05	0.0496	99.2%
SULFATE, 375.4-mg/L		0002991-04		50	49.1	98.2%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0204340

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0003026-01			<0.010	
Magnesium-mg/L		0003026-01			<0.001	
Potassium-mg/L		0003026-01			<0.050	
Sodium-mg/L		0003026-01			<0.010	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0204340-01	250		260	3.9%
Magnesium-mg/L		0204340-01	217		210	3.3%
Potassium-mg/L		0204340-01	26.4		26.2	0.8%
Sodium-mg/L		0204340-01	1340		1,330	0%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Calcium-mg/L		0003026-04		2	2.07	103.5%
Magnesium-mg/L		0003026-04		2	2.19	109.5%
Potassium-mg/L		0003026-04		2	1.75	87.5%
Sodium-mg/L		0003026-04		2	1.93	96.5%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0204340

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0002985-01			<5.00		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0204339-01	7740		7770		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: K. Tarris

Project Name: MW

Company Name

Company Name Rice Operating

Company Address:

122 W. Taylor

City/State/Zip:

City/State/Zip: Hobbs NM 88240

Telephone No. 1

505) 393-9174

Fax No. (505) 397-1471

Sampler Signature:

Howard Fairclough

[illegible]

ANALYTICAL REPORT

Prepared for:

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

Project: A-20
Order#: G0203353
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#: G0203353
Project:
Project Name: A-20
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>
0203353-01	MW 1	WATER	5/13/02 11:45	5/15/02 10:00	L HDPE	None
<u>Lab Testing:</u>		Rejected: No	Temp: 18.5 C			
Anions						
Cations						
Total Dissolved Solids (TDS)						

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0203353
Project:
Project Name: A-20
Location: EME SWD

Lab ID: 0203353-01
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	328	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	2100	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	793	mg/L	25	125	375.4	5/17/02	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	245	mg/L	50	0.500	6010B	5/16/02	SM
Magnesium	174	mg/L	50	0.050	6010B	5/16/02	SM
Potassium	23.0	mg/L	10	0.500	6010B	5/16/02	SM
Sodium	1010	mg/L	250	2.50	6010B	5/16/02	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)	4840	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

ENVIRONMENTAL LAB OF TEXAS I, LTD.

12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0203353

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#: G0203353

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#: G0203353

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

Sampler Signature: Kurtin J. J. J.

Fax No: (505) 397-1471

PO #:

716

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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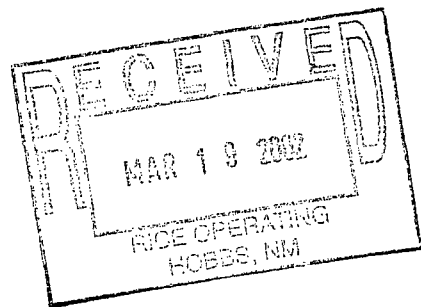
ENVIRONMENTAL PLUS, INC.
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

Micro-Blaze

Micro-Blaze Cat™

March 10, 2002

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



Subject: Zachary Hinton #5 and A-20 Monitor Well Sampling

Dear Mr. Anderson,

Included below is the development and sampling information collected by Environmental Plus, Inc. (EPI) on 3-5-02 for the Zachary Hinton and A-20 monitor wells.

RICE OPERATING
ZACHARY HINTON AND A-20 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	PURGE WATER OBSERVATIONS
ZACHARY HINTON	3/5/2002	2	56.1	67.0	1.8	5.3	NO OIL SHEEN ON PURGE WATER
A-20	3/5/2002	2	24.7	38.4	2.2	6.7	OIL SHEEN ON PURGE WATER

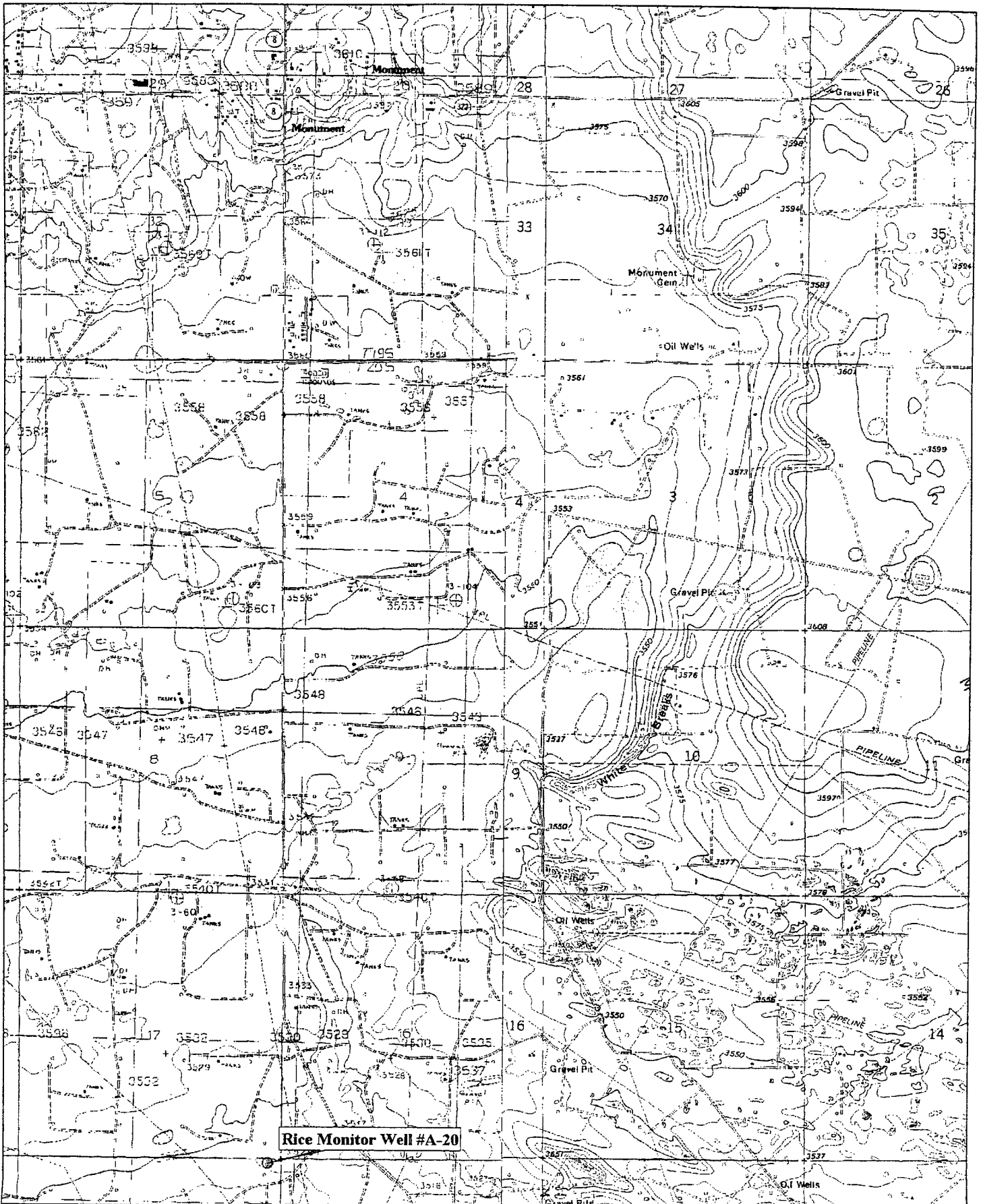
If you have any questions or require more information please call Mr. Ben Miller or myself at the office or at 505.390.0288 or 505.390.7864, respectively.

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) 673-7001 • 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: 03/05/02
Reporting Date: 03/08/02
Project Owner: RICE
Project Name: RICE A-20
Project Location: NOT GIVEN

Sampling Date: 03/05/02
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 (mS/cm)	T-Alkalinity (mgCaCO ₃ /L)
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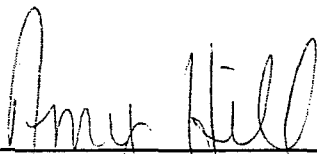
ANALYSIS DATE:	03/08/02	03/08/02	03/08/02	03/08/02	03/08/02	03/08/02
H6563-1 WROA203502MW	1405	295	200	19.5	8029	297
Quality Control	NR	55	49	5.27	1489	NR
True Value QC	NR	50	50	5.00	1413	NR
% Recovery	NR	110	97.2	105	105	NR
Relative Percent Difference	NR	0	6.0	0	0.3	NR

METHODS:	SM3500-Ca-D	3500-Mg E	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:	03/08/02	03/08/02	03/08/02	03/08/02	03/08/02	03/06/02
H6563-1 WROA203502MW	2279	1087	0	363	7.42	5044
Quality Control	1040	52.66	NR	975	7.11	NR
True Value QC	1000	50.00	NR	1000	7.00	NR
% Recovery	104	105	NR	97.5	102	NR
Relative Percent Difference	2.0	0.6	NR	2.7	0.4	5.1

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

3-8-02
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.

H6563



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

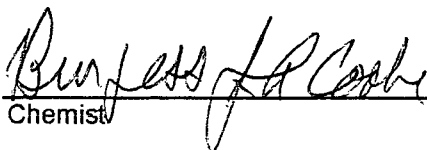
ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ATTN: DONNIE ANDERSON
122 W. TAYLOR
HOBBS, NM 88240
FAX TO:

Receiving Date: 03/05/02
Reporting Date: 03/06/02
Project Owner: RICE OPERATING
Project Name: RICE A-20
Project Location: NOT GIVEN

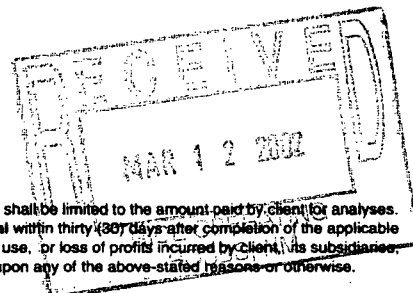
Sampling Date: 03/05/02
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

LAB NO.	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		03/05/02	03/05/02	03/05/02	03/05/02
H6563-1	WROA203502MW	<0.002	0.003	0.006	0.014
Quality Control		0.098	0.096	0.092	0.260
True Value QC		0.100	0.100	0.100	0.300
% Recovery		97.6	96.0	91.7	86.7
Relative Percent Difference		2.5	4.1	9.1	15.2

METHOD: EPA SW-846 8260


Chemist

3/6/02
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.

H6563B.XLS

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