

AP - 42

ANNUAL MONITORING REPORT

YEAR(S):
2003

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 1282

March 4, 2004

IR 0 727-93

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

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

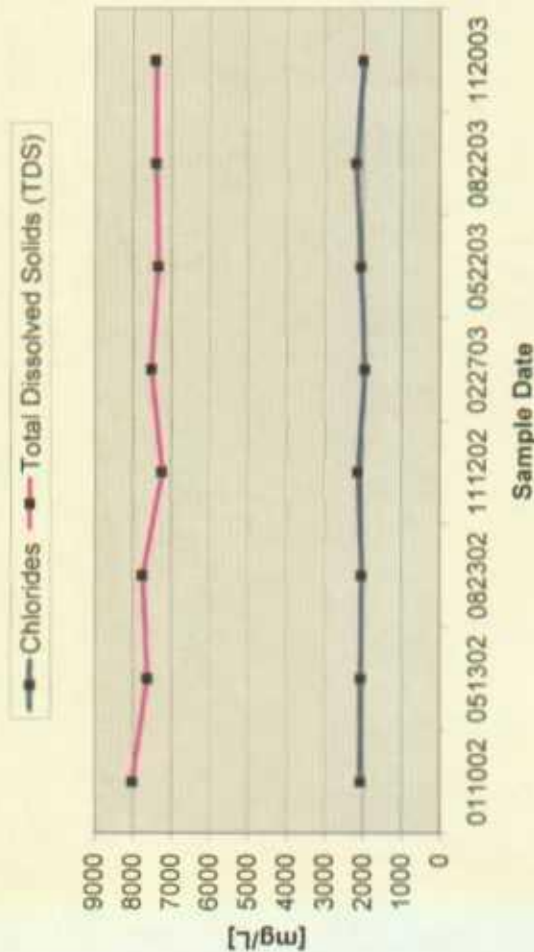
EME Jct. M-16-1
M, 16-1

Rice Operating Co. Monitor Well Data Sheet

All parameter concentrations are in mg/L

MW #	WATER LEVEL* (ft)	TOTAL DEPTH	WELL VOLUME	VOLUME BAILED	SAMPLE DATE	TIME	CL-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES
1	22.60	35.10	2.000	6.10	011002	1300	2079	8016	<0.002	<0.002	<0.002	<0.006
1	23.78	25.81	0.325	1.00	051302	1230	2070	7620	<0.001	<0.001	<0.001	<0.001
1	23.08	34.80	1.875	5.75	082302	1410	2040	7740	<0.001	<0.001	<0.001	<0.001
1	23.53	34.69	1.786	5.50	111202	1035	2130	7230	<0.001	<0.001	<0.001	<0.001
1	23.20	34.49	1.800	5.40	022703	1215	1960	7520	<0.001	<0.001	<0.001	<0.001
1	23.10	34.50	1.824	5.40	052203	1428	2060	7350	<0.001	<0.001	<0.001	<0.001
1	23.83	34.25	1.660	5.00	082203	1630	2170	7390	<0.001	<0.001	<0.001	<0.001
1	24.07	34.34	1.640	4.90	112003	1030	1990	7400	<0.001	<0.001	<0.001	<0.001

EME Jct. M-16-1 Monitor Well



* Depth to water is measured from the top of the casing
Casing is 2.958 ft

ANALYTICAL REPORT

Prepared for:

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

Project: M-16-1

PO#:

Order#: G0305839

Report Date: 03/04/2003

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#: G0305839
Project:
Project Name: M-16-1
Location: EME

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

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0305839-01	MW 1	WATER	2/27/03	2/27/03 19:36	See COC	See COC
<u>Lab Testing:</u>		Rejected: No	Temp: -2 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#: G0305839
Project:
Project Name: M-16-1
Location: EME

Lab ID: 0305839-01
Sample ID: MW 1

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0004817-02		3/3/03 17:28	1	1	CK	8021B

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

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	101%	80	120
Bromofluorobenzene	101%	80	120

Approval:

Raland K. Tuttle 3-04-03
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.

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0305839
Project:
Project Name: M-16-1
Location: EME

Lab ID: 0305839-01

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	354	mg/L	1	2.00	310.1	2/28/03	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	2/28/03	SB
Chloride	1960	mg/L	1	5.00	9253	2/28/03	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	2/28/03	SB
SULFATE, 375.4	1980	mg/L	25	12.5	375.4	2/28/03	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	275	mg/L	100	1.0	6010B	2/28/03	SM
Magnesium	183	mg/L	100	0.10	6010B	2/28/03	SM
Potassium	33.4	mg/L	10	0.50	6010B	2/28/03	SM
Sodium	1320	mg/L	1000	10.0	6010B	2/28/03	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)	7520	mg/L	1	5.0	160.1	2/28/03	TAL

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 I, LTD.

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

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0305839

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0004817-02			<0.001	
Toluene-mg/L		0004817-02			<0.001	
Ethylbenzene-mg/L		0004817-02			<0.001	
p/m-Xylene-mg/L		0004817-02			<0.001	
o-Xylene-mg/L		0004817-02			<0.001	
CONTROL						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0004817-03		0.1	0.100	100.0%
Toluene-mg/L		0004817-03		0.1	0.101	101.0%
Ethylbenzene-mg/L		0004817-03		0.1	0.100	100.0%
p/m-Xylene-mg/L		0004817-03		0.2	0.206	103.0%
o-Xylene-mg/L		0004817-03		0.1	0.099	99.0%
CONTROL DUP						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0004817-04		0.1	0.095	95.0%
Toluene-mg/L		0004817-04		0.1	0.095	95.0%
Ethylbenzene-mg/L		0004817-04		0.1	0.094	94.0%
p/m-Xylene-mg/L		0004817-04		0.2	0.193	96.5%
o-Xylene-mg/L		0004817-04		0.1	0.094	94.0%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0004817-05		0.1	0.093	93.0%
Toluene-mg/L		0004817-05		0.1	0.095	95.0%
Ethylbenzene-mg/L		0004817-05		0.1	0.094	94.0%
p/m-Xylene-mg/L		0004817-05		0.2	0.194	97.0%
o-Xylene-mg/L		0004817-05		0.1	0.094	94.0%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0305839

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0004788-01			<2.00		
Carbonate Alkalinity-mg/L		0004789-01			<0.10		
Chloride-mg/L		0004796-01			<5.00		
Hydroxide Alkalinity-mg/L		0004792-01			<0.10		
SULFATE, 375.4-mg/L		0004795-01			<0.50		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0305831-27	186		185		0.5%
Carbonate Alkalinity-mg/L		0305831-27	0		<0.10		0.0%
Hydroxide Alkalinity-mg/L		0305831-27	0		<0.10		0.0%
SULFATE, 375.4-mg/L		0305820-01	98.2		96.0		2.3%
MS	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0305831-27	137	250	386	99.6%	
MSD	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0305831-27	137	250	381	97.6%	1.3%
SRM	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0004788-04		0.05	0.0496	99.2%	
Carbonate Alkalinity-mg/L		0004789-04		0.05	0.0496	99.2%	
Chloride-mg/L		0004796-04		5000	4960	99.2%	
Hydroxide Alkalinity-mg/L		0004792-04		0.05	0.0496	99.2%	
SULFATE, 375.4-mg/L		0004795-04		50	50.8	101.6%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0305839

BLANK							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Calcium-mg/L		0004785-02			<0.010		
Magnesium-mg/L		0004785-02			<0.001		
Potassium-mg/L		0004785-02			<0.050		
Sodium-mg/L		0004785-02			<0.010		
DUPLICATE							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Calcium-mg/L		0305820-01	104		106		1.9%
Magnesium-mg/L		0305820-01	16.3		16.0		1.9%
Potassium-mg/L		0305820-01	6.67		6.58		1.4%
Sodium-mg/L		0305820-01	67.1		68.6		2.2%
SRM							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Calcium-mg/L		0004785-05		2	2.08	104. %	
Magnesium-mg/L		0004785-05		2	2.20	110. %	
Potassium-mg/L		0004785-05		2	1.76	88. %	
Sodium-mg/L		0004785-05		2	1.73	86.5 %	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0305839

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0004809-01			<5.0		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0305837-01	2070		2120		2.4%

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Kristin Farris

Company Name

RICE Operating

Company Address:

122 W. Taylor

City/State/Zip:

Hobbs, NM 88240

Telephone No.

(505) 393-9174

Fax No.:

(505) 397-1471

Sampler Signature:

Joe Frost

[illegible]

ANALYTICAL REPORT

Prepared for:

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

Project: Jct M-16-1

PO#: 510

Order#: G0306571

Report Date: 05/30/2003

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#: G0306571
Project:
Project Name: Jct M-16-1
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>
0306571-01	MW1	WATER	5/22/03 15:26	5/22/03 20:10	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#: G0306571
Project:
Project Name: Jct M-16-1
Location: E.M.E.

Lab ID: 0306571-01
Sample ID: MW1

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>		
0005645-02		5/27/03 18:45	1	1	CK	8021B

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

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	91%	80	120
Bromofluorobenzene	87%	80	120

Approval:

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

05/30/03
Date

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

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ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0306571
Project:
Project Name: Jct M-16-1
Location: E.M.E.

Lab ID: 0306571-01

Sample ID: MW1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	352	mg/L	1	2.00	310.1	5/23/03	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	5/23/03	SB
Chloride	2060	mg/L	1	5.00	9253	5/23/03	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	5/23/03	SB
SULFATE, 375.4	2470	mg/L	50	25.0	375.4	5/23/03	SB

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	270	mg/L	100	1.0	6010B	5/28/03	SM
Magnesium	198	mg/L	100	0.10	6010B	5/28/03	SM
Potassium	38.7	mg/L	10	0.50	6010B	5/28/03	SM
Sodium	1570	mg/L	1000	10.0	6010B	5/28/03	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	7350	mg/L	1	5.0	160.1	5/27/03	CK

Approval:

Cele D. Keene
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

05/30/03

RL = Reporting Limit N/A = Not Applicable

Page 1 of 1

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0306571

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0005645-02			<0.001	
Toluene-mg/L		0005645-02			<0.001	
Ethylbenzene-mg/L		0005645-02			<0.001	
p/m-Xylene-mg/L		0005645-02			<0.001	
o-Xylene-mg/L		0005645-02			<0.001	
CONTROL						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0005645-03		0.1	0.103	103.%
Toluene-mg/L		0005645-03		0.1	0.099	99.%
Ethylbenzene-mg/L		0005645-03		0.1	0.090	90.%
p/m-Xylene-mg/L		0005645-03		0.2	0.185	92.5%
o-Xylene-mg/L		0005645-03		0.1	0.086	86.%
CONTROL DUP						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0005645-04		0.1	0.097	97.%
Toluene-mg/L		0005645-04		0.1	0.094	94.%
Ethylbenzene-mg/L		0005645-04		0.1	0.086	86.%
p/m-Xylene-mg/L		0005645-04		0.2	0.178	89.%
o-Xylene-mg/L		0005645-04		0.1	0.084	84.%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0005645-05		0.1	0.104	104.%
Toluene-mg/L		0005645-05		0.1	0.101	101.%
Ethylbenzene-mg/L		0005645-05		0.1	0.091	91.%
p/m-Xylene-mg/L		0005645-05		0.2	0.187	93.5%
o-Xylene-mg/L		0005645-05		0.1	0.085	85.%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0306571

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Bicarbonate Alkalinity-mg/L		0005639-01			<2.00	
Carbonate Alkalinity-mg/L		0005638-01			<0.10	
Chloride-mg/L		0005640-01			<5.00	
Hydroxide Alkalinity-mg/L		0005637-01			<0.10	
SULFATE, 375.4-mg/L		0005636-01			<0.50	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Bicarbonate Alkalinity-mg/L		0306564-01	176		177	0.6%
Carbonate Alkalinity-mg/L		0306564-01	0		<0.10	0.0%
Hydroxide Alkalinity-mg/L		0306564-01	0		<0.10	0.0%
SULFATE, 375.4-mg/L		0306564-01	874		900	2.9%
MS						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Chloride-mg/L		0306564-01	496	500	984	97.6%
MSD						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Chloride-mg/L		0306564-01	496	500	993	99.4%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Bicarbonate Alkalinity-mg/L		0005639-04		0.05	0.0496	99.2%
Carbonate Alkalinity-mg/L		0005638-04		0.05	0.0496	99.2%
Chloride-mg/L		0005640-04		5000	4960	99.2%
Hydroxide Alkalinity-mg/L		0005637-04		0.05	0.0496	99.2%
SULFATE, 375.4-mg/L		0005636-04		50	51.30	102.6%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0306571

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Calcium-mg/L		0005651-02			<0.010	
Magnesium-mg/L		0005651-02			<0.001	
Potassium-mg/L		0005651-02			<0.050	
Sodium-mg/L		0005651-02			<0.010	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Calcium-mg/L		0306564-01	311		313	0.6%
Magnesium-mg/L		0306564-01	87.2		88.7	1.7%
Potassium-mg/L		0306564-01	11.1		11.5	3.5%
Sodium-mg/L		0306564-01	321		325	1.2%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Calcium-mg/L		0005651-05		2	1.99	99.5%
Magnesium-mg/L		0005651-05		2	2.14	107.%
Potassium-mg/L		0005651-05		2	1.75	87.5%
Sodium-mg/L		0005651-05		2	2.14	107.%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0306571

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0005649-01			<5.00		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0306569-01	2350		2360		0.4%

ANALYTICAL REPORT

Prepared for:

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

Project: EME

PO#:

Order#: G0307305

Report Date: 08/27/2003

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#: G0307305
Project:
Project Name: EME
Location: M-16-1

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>
0307305-01	MW1	WATER	8/22/03 16:30	8/25/03 9:03	See COC	See COC
<u>Lab Testing:</u>		Rejected: No	Temp: 4.5 C			
8021B/5030 BTEX						
Anions						
Cations						
Total Dissolved Solids (TDS)						

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0307305
Project:
Project Name: EME
Location: M-16-1

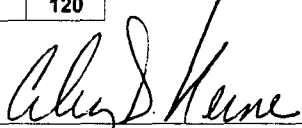
Lab ID: 0307305-01
Sample ID: MW1

8021B/5030 BTEX

Method	Date	Date	Sample	Dilution	Analyst	Method
Blank	Prepared	Analyzed	Amount	Factor		
0006638-02		8/25/03	1	1	JMM	8021B

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

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	118%	80	120
Bromofluorobenzene	107%	80	120

Approval:  08/27/03
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#: G0307305
Project:
Project Name: EME
Location: M-16-1

Lab ID: 0307305-01

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	338	mg/L	2	4.0	310.1	8/25/03	SB
Carbonate Alkalinity	< 0.20	mg/L	2	0.20	310.1	8/25/03	SB
Chloride	2170	mg/L	1	5.00	9253	8/27/03	SB
Hydroxide Alkalinity	< 0.20	mg/L	2	0.20	310.1	8/25/03	SB
SULFATE, 375.4	2170	mg/L	50	25.0	375.4	8/26/03	SB

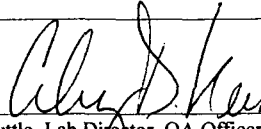
Cations

<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	317	mg/L	100	1.0	6010B	8/26/03	SM
Magnesium	190	mg/L	100	0.10	6010B	8/26/03	SM
Potassium	57.2	mg/L	10	0.50	6010B	8/26/03	SM
Sodium	3770	mg/L	1000	10.0	6010B	8/26/03	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)	7390	mg/L	1	5.0	160.1	8/25/03	TAL

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

8021B/5030 BTEX

Order#: G0307305

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Benzene-mg/L		0006638-02			<0.001	
Toluene-mg/L		0006638-02			<0.001	
Ethylbenzene-mg/L		0006638-02			<0.001	
p/m-Xylene-mg/L		0006638-02			<0.001	
o-Xylene-mg/L		0006638-02			<0.001	
CONTROL						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Benzene-mg/L		0006638-03		0.1	0.111	111.%
Toluene-mg/L		0006638-03		0.1	0.114	114.%
Ethylbenzene-mg/L		0006638-03		0.1	0.105	105.%
p/m-Xylene-mg/L		0006638-03		0.2	0.222	111.%
o-Xylene-mg/L		0006638-03		0.1	0.100	100.%
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Benzene-mg/L		0307295-06	0		<0.001	0.%
Toluene-mg/L		0307295-06	0		<0.001	0.%
Ethylbenzene-mg/L		0307295-06	0		<0.001	0.%
p/m-Xylene-mg/L		0307295-06	0		<0.001	0.%
o-Xylene-mg/L		0307295-06	0		<0.001	0.%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Benzene-mg/L		0006638-05		0.1	0.109	109.%
Toluene-mg/L		0006638-05		0.1	0.114	114.%
Ethylbenzene-mg/L		0006638-05		0.1	0.104	104.%
p/m-Xylene-mg/L		0006638-05		0.2	0.227	113.5%
o-Xylene-mg/L		0006638-05		0.1	0.104	104.%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0307305

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Bicarbonate Alkalinity-mg/L		0006617-01			<2.00	
Carbonate Alkalinity-mg/L		0006618-01			<0.10	
Chloride-mg/L		0006640-01			<5.00	
Hydroxide Alkalinity-mg/L		0006619-01			<0.10	
SULFATE, 375.4-mg/L		0006634-01			<0.50	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Bicarbonate Alkalinity-mg/L		0307300-01	500		502	0.4%
Carbonate Alkalinity-mg/L		0307300-01	0		< 0.20	0.0%
Hydroxide Alkalinity-mg/L		0307300-01	0		< 0.20	0.0%
SULFATE, 375.4-mg/L		0307300-01	4.9		5.00	2.0%
MS						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Chloride-mg/L		0307300-01	2060	1000	3050	99.0%
MSD						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Chloride-mg/L		0307300-01	2060	1000	3070	101.0%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery RPD
Bicarbonate Alkalinity-mg/L		0006617-04		0.05	0.0496	99.2%
Carbonate Alkalinity-mg/L		0006618-04		0.05	0.0496	99.2%
Chloride-mg/L		0006640-04		5000	4960	99.2%
Hydroxide Alkalinity-mg/L		0006619-04		0.05	0.0496	99.2%
SULFATE, 375.4-mg/L		0006634-04		50	50.7	101.4%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0307305

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0006632-01			<0.010	
Magnesium-mg/L		0006632-01			<0.001	
Potassium-mg/L		0006632-01			<0.050	
Sodium-mg/L		0006632-01			<0.010	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0307300-01	78.1		77.3	1.0%
Magnesium-mg/L		0307300-01	30.4		29.8	2.0%
Potassium-mg/L		0307300-01	5.82		4.95	16.2%
Sodium-mg/L		0307300-01	1150		1160	0.9%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0006632-04		2	2.05	102.5%
Magnesium-mg/L		0006632-04		2	2.04	102.0%
Potassium-mg/L		0006632-04		2	1.73	86.5%
Sodium-mg/L		0006632-04		2	1.73	86.5%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0307305

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0006633-01			<5.0		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0307303-01	2550		2830		10.4%

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Name: EME

Project #:

Project Loc: M-16-

PO #:

Fax No: (505) 397-1471

Sample Signature:

[illegible]

•

Anions & Cations

Received by: _____

Received by: Edith D. St.
 Delivery Point: Edmund Anderson

Date	Time
8/22/03	05:00 pm
Date	Time
8/25/03	09:03

Sample Container's Intact?
Temperature Upon Receipt
Laboratory Comments:

45°C
40 mL VOA
1 L HDPE

ANALYTICAL REPORT

Prepared for:

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

Project: M-16-1
PO#: 510
Order#: G0308000
Report Date: 11/25/2003

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#: G0308000
Project:
Project Name: M-16-1
Location: EME

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

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0308000-01	MW-1	WATER	11/20/03 10:30	11/20/03 20:30	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#: G0308000
Project:
Project Name: M-16-1
Location: EME

Lab ID: 0308000-01
Sample ID: MW-1

8021B/5030 BTEX

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
0007531-02		11/22/03	1	1	CK	8021B

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

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	96%	80	120
Bromofluorobenzene	93%	80	120

Approval:

Coley D. Keene 11/25/03
Raland K. Tuttle, Lab Director, QA Officer
Coley D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

Date

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

Page 1 of 1

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0308000
Project:
Project Name: M-16-1
Location: EME

Lab ID: 0308000-01
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	330	mg/L	1	2.00	310.1	11/21/03	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/21/03	SB
Chloride	1990	mg/L	1	5.00	325	11/21/03	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/21/03	SB
SULFATE, 375.4	2300	mg/L	50	25.0	375.4	11/24/03	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	311	mg/L	100	1.0	6010B	11/21/03	SM
Magnesium	201	mg/L	100	0.10	6010B	11/21/03	SM
Potassium	36.0	mg/L	10	0.50	6010B	11/21/03	SM
Sodium	1690	mg/L	1000	10.0	6010B	11/21/03	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)	7400	mg/L	1	5.0	160.1	11/22/03	SB

Approval:

Celey D. Keene
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 I, LTD.

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

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0308000

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0007531-02			<0.001	
Toluene-mg/L		0007531-02			<0.001	
Ethylbenzene-mg/L		0007531-02			<0.001	
p/m-Xylene-mg/L		0007531-02			<0.001	
o-Xylene-mg/L		0007531-02			<0.001	
CONTROL						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0007531-03		0.1	0.096	96.%
Toluene-mg/L		0007531-03		0.1	0.092	92.%
Ethylbenzene-mg/L		0007531-03		0.1	0.091	91.%
p/m-Xylene-mg/L		0007531-03		0.2	0.182	91.%
o-Xylene-mg/L		0007531-03		0.1	0.090	90.%
CONTROL DUP						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0007531-04		0.1	0.101	101.%
Toluene-mg/L		0007531-04		0.1	0.097	97.%
Ethylbenzene-mg/L		0007531-04		0.1	0.092	92.%
p/m-Xylene-mg/L		0007531-04		0.2	0.183	91.5%
o-Xylene-mg/L		0007531-04		0.1	0.087	87.%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0007531-05		0.1	0.099	99.%
Toluene-mg/L		0007531-05		0.1	0.094	94.%
Ethylbenzene-mg/L		0007531-05		0.1	0.091	91.%
p/m-Xylene-mg/L		0007531-05		0.2	0.181	90.5%
o-Xylene-mg/L		0007531-05		0.1	0.087	87.%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0308000

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Bicarbonate Alkalinity-mg/L		0007511-01			<2.00	
Carbonate Alkalinity-mg/L		0007513-01			<0.10	
Chloride-mg/L		0007517-01			<5.00	
Hydroxide Alkalinity-mg/L		0007515-01			<0.10	
SULFATE, 375.4-mg/L		0007546-01			<0.50	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Bicarbonate Alkalinity-mg/L		0308005-01	362		364	0.6%
Carbonate Alkalinity-mg/L		0308005-01	0		<0.10	0.0%
Hydroxide Alkalinity-mg/L		0308005-01	0		<0.10	0.0%
SULFATE, 375.4-mg/L		0307979-01	20.9		21.6	3.3%
MS						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Chloride-mg/L		0308000-01	1990	1000	2980	99.9%
MSD						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Chloride-mg/L		0308000-01	1990	1000	3000	101.0%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Bicarbonate Alkalinity-mg/L		0007511-04		0.05	0.0496	99.2%
Carbonate Alkalinity-mg/L		0007513-04		0.05	0.0496	99.2%
Chloride-mg/L		0007517-04		5000	4960	99.2%
Hydroxide Alkalinity-mg/L		0007515-04		0.05	0.0496	99.2%
SULFATE, 375.4-mg/L		0007546-04		50	49.0	98.0%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0308000

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0007495-02			<0.010	
Magnesium-mg/L		0007495-02			<0.001	
Potassium-mg/L		0007495-02			<0.050	
Sodium-mg/L		0007495-02			<0.010	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0307979-01	81		81.6	0.7%
Magnesium-mg/L		0307979-01	20.1		19.9	1.1%
Potassium-mg/L		0307979-01	7.1		7.25	2.1%
Sodium-mg/L		0307979-01	1290		1280	0.8%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Calcium-mg/L		0007495-05		2	1.76	88.1%
Magnesium-mg/L		0007495-05		2	2.17	108.5%
Potassium-mg/L		0007495-05		2	1.93	96.5%
Sodium-mg/L		0007495-05		2	2.21	110.5%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0308000

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0007522-01			<5.00		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0308000-01	7400		7360		0.5%

Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Kristin Farris

Company Name

RICE Operating

Company Address:

122 W. Taylor

City/State/Zip:

60665, NM 88240

Telephone No (505) 393-9174

Fax No: (505) 397-1471

Sampler Signature:

Barrel Finches

Special Instructions:		Received by:				Time		Date		Time		Date	
Relinquished by:		Date		Time		Date		Time		Date		Time	
Major, Arions, Cation IDS		11-20-03		3:08		11-20-03		2030		11-20-03		2030	
C. D. Hays		11-20-03		3:08		11-20-03		2030		11-20-03		2030	
C. D. Hays		11-20-03		3:08		11-20-03		2030		11-20-03		2030	

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

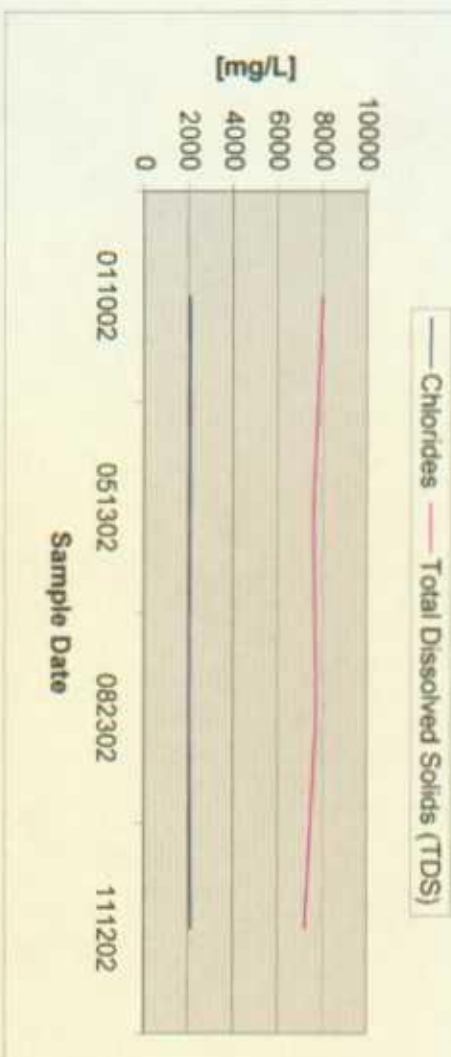
EME Jct M-16-1
M, 16-1

Rice Operating Co. Monitor Well Data Sheet

All parameter concentrations are in mg/L

MW #	WATER (ft)		TOTAL (gal)		SAMPLE DATE	TIME	CL-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES
	LEVEL	DEPTH	WELL VOLUME	BAILED VOLUME								
1	22.60	35.10	2.000	6.10	011002	1300	2079	8016	<0.002	<0.002	<0.002	<0.006
1	23.78	25.81	0.325	1.00	051302	1230	2070	7620	<0.001	<0.001	<0.001	<0.001
1	23.08	34.80	1.875	5.75	082302	1410	2040	7740	<0.001	<0.001	<0.001	<0.001
1	23.53	34.69	1.786	5.50	111202	1035	2130	7230	<0.001	<0.001	<0.001	<0.001

EME Jct M-16-1 Monitor Well



ANALYTICAL REPORT

Prepared for:

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

Project: Jct. M-16-1
PO#: 510
Order#: G0205002
Report Date: 11/19/2002

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#: G0205002
Project:
Project Name: Jct. M-16-1
Location: EME

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

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0205002-01	MW 1	WATER	11/12/02 10:35	11/12/02 19:15	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#: G0205002
Project:
Project Name: Jct. M-16-1
Location: EME

Lab ID: 0205002-01
Sample ID: MW 1

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003799-02		11/18/02 19:56	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	<0.001	0.001
o-Xylene	<0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	84%	80	120
Bromofluorobenzene	92%	80	120

Approval: Jeanne McMurrey 11-20-02
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#: G0205002
Project:
Project Name: Jct. M-16-1
Location: EME

Lab ID: 0205002-01
Sample ID: MW 1

Cations

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Calcium	296	mg/L	100	1.0	6010B	11/15/2002	11/15/02	SM
Magnesium	23.1	mg/L	100	0.10	6010B	11/15/2002	11/15/02	SM
Potassium	34.6	mg/L	10	0.50	6010B	11/15/2002	11/15/02	SM
Sodium	1640	mg/L	1000	10.0	6010B	11/15/2002	11/15/02	SM

Approval: Jeanne McMurrey 11-20-02
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.

N/A = Not Applicable RL = Reporting Limit

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

ANALYTICAL REPORT

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

Order#: G0205002
Project:
Project Name: Jct. M-16-1
Location: EME

Lab ID: 0205002-01
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	336	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	2460	mg/L	50	25.0	375.4	11/14/02	SB

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)	7230	mg/L	1	5.0	160.1	11/13/02	TAL

Approval: Jeanne McMurrey 11-20-02
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#: G0205002

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0003799-02			<0.001	
Ethylbenzene-mg/L		0003799-02			<0.001	
Toluene-mg/L		0003799-02			<0.001	
p/m-Xylene-mg/L		0003799-02			<0.001	
o-Xylene-mg/L		0003799-02			<0.001	
CONTROL						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0003799-03		0.1	0.099	99.0%
Ethylbenzene-mg/L		0003799-03		0.1	0.103	103.0%
Toluene-mg/L		0003799-03		0.1	0.102	102.0%
p/m-Xylene-mg/L		0003799-03		0.2	0.218	109.0%
o-Xylene-mg/L		0003799-03		0.1	0.105	105.0%
CONTROL DUP						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0003799-04		0.1	0.098	98.0%
Ethylbenzene-mg/L		0003799-04		0.1	0.102	102.0%
Toluene-mg/L		0003799-04		0.1	0.101	101.0%
p/m-Xylene-mg/L		0003799-04		0.2	0.215	107.5%
o-Xylene-mg/L		0003799-04		0.1	0.104	104.0%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
Benzene-mg/L		0003799-05		0.1	0.101	101.0%
Ethylbenzene-mg/L		0003799-05		0.1	0.104	104.0%
Toluene-mg/L		0003799-05		0.1	0.103	103.0%
p/m-Xylene-mg/L		0003799-05		0.2	0.219	109.5%
o-Xylene-mg/L		0003799-05		0.1	0.106	106.0%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0205002

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%
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#: G0205002

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
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						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
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						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
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#: G0205002

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%

12600 West I-20 East
Odessa, Texas 79763

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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Kristin Farris

Company Name

RICE Operating

Company Address:

122 W. Taylor

City/State/Zip:

Hobbs, NM 88240

Telephone No. {

(505) 393-9174

Fax No:

(505) 397-1471

Sampler Signature:

Christin Larens

[illegible]

ANALYTICAL REPORT

Prepared for:

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

M-16-1

Project: MW 1
PO#:
Order#: G0204339
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#: G0204339
Project:
Project Name: MW 1
Location: EME M-16-1

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>
0204339-01	MW 1	WATER	8/23/02 14:10	8/23/02 19:25	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#: G0204339
Project:
Project Name: MW 1
Location: EME M-16-1

Lab ID: 0204339-01
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>		
0002969-02		8/26/02 22:42	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	104%	80	120
Bromofluorobenzene	109%	80	120

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.

9-04-02
Date

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0204339
Project:
Project Name: MW 1
Location: EME M-16-1

Lab ID: 0204339-01

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	358	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	2040	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	2380	mg/L	1	0.5	375.4	8/28/02	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	293	mg/L	100	1.0	6010B	9/3/02	SM
Magnesium	224	mg/L	100	0.10	6010B	9/3/02	SM
Potassium	40.5	mg/L	10	0.50	6010B	9/3/02	SM
Sodium	2,200	mg/L	1000	10.0	6010B	9/3/02	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)	7740	mg/L	1	5.0	160.1	8/26/02	SB

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.

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

8021B/5030 BTEX

Order#: G0204339

BLANK							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0002969-02			<0.001		
Ethylbenzene-mg/L		0002969-02			<0.001		
Toluene-mg/L		0002969-02			<0.001		
p/m-Xylene-mg/L		0002969-02			<0.001		
o-Xylene-mg/L		0002969-02			<0.001		
MS							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0204252-01	0	0.1	0.097	97.%	
Ethylbenzene-mg/L		0204252-01	0	0.1	0.098	98.%	
Toluene-mg/L		0204252-01	0	0.1	0.099	99.%	
p/m-Xylene-mg/L		0204252-01	0	0.2	0.205	102.5%	
o-Xylene-mg/L		0204252-01	0	0.1	0.098	98.%	
MSD							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0204252-01	0	0.1	0.091	91.%	6.4%
Ethylbenzene-mg/L		0204252-01	0	0.1	0.092	92.%	6.3%
Toluene-mg/L		0204252-01	0	0.1	0.093	93.%	6.3%
p/m-Xylene-mg/L		0204252-01	0	0.2	0.192	96.%	6.5%
o-Xylene-mg/L		0204252-01	0	0.1	0.092	92.%	6.3%
SRM							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0002969-05		0.1	0.094	94.%	
Ethylbenzene-mg/L		0002969-05		0.1	0.094	94.%	
Toluene-mg/L		0002969-05		0.1	0.095	95.%	
p/m-Xylene-mg/L		0002969-05		0.2	0.196	98.%	
o-Xylene-mg/L		0002969-05		0.1	0.094	94.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0204339

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	101.1%	
MSD						
WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L	0204339-01	2040	1000	3030	99.5%	0.7%
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#: G0204339

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	0.0%
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#: G0204339

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. Farris
Company Name: Rice Operating
Company Address: 122 W. Taylor
City/State/Zip: Hobbs, NM 88240

Project Name: MW 1
Project #:
Project Loc: EME M-16-1
PO #:

Telephone No: (505) 393-9174 Fax No: (505) 397-1471

Sampler Signature: XO 12710 7/21/12

[illegible]

ANALYTICAL REPORT

Prepared for:

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

Project: M-16-1
Order#: G0203356
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#: G0203356
Project:
Project Name: M-16-1
Location: EME SWD

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

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0203356-01	MW 1	WATER	5/13/02 12:30	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#: G0203356
Project:
Project Name: M-16-1
Location: EME SWD

Lab ID: 0203356-01
Sample ID: MW 1

8021B/5030 BTEX

Method	Date	Date	Sample	Dilution	Analyst	Method
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>		
0001724-02		5/ 5/02 17:58	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:

Cele D. Keene 5/18/02
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.

Date

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0203356
Project:
Project Name: M-16-1
Location: EME SWD

Lab ID: 0203356-01
Sample ID: MW 1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	360	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	2070	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	2220	mg/L	50	25.0	375.4	5/17/02	SB

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	288	mg/L	50	0.500	6010B	5/16/02	SM
Magnesium	191	mg/L	50	0.050	6010B	5/16/02	SM
Potassium	39.5	mg/L	10	0.500	6010B	5/16/02	SM
Sodium	1890	mg/L	500	5.00	6010B	5/16/02	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	7520	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.

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

8021B/5030 BTEX

Order#: G0203356

BLANK						
	WATER	LAB-ID #	Sample Concetr.	Spike Concetr.	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 Concetr.	Spike Concetr.	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 Concetr.	Spike Concetr.	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 Concetr.	Spike Concetr.	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#: G0203356

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#: G0203356

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	0.0%
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
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%



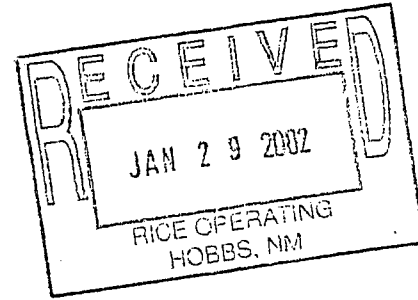
ENVIRONMENTAL PLUS, INC.
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

Micro-Blaze

Micro-Blaze Ltd.™

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) 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: 01/11/02
Reporting Date: 01/16/02
Project Owner: RICE OPERATING CO.
Project Name: M16-1
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 (uS/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
H6429-1 R011002M161MW	2212	432	241	27.7	11285	424
Quality Control	NR	55.0	48.6	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	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:	01/15/02	01/15/02	01/15/02	01/15/02	01/15/02	01/15/02
H6429-1 R011002M161MW	2079	3420	0	518	7.47	8016
Quality Control	1040	52.66	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	0.6	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.

H6429A.XLS



ARDINAL LABORATORIES

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

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

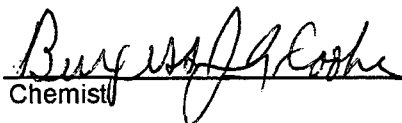
ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ATTN: DONNIE ANDERSON
122 W. TAYLOR
HOBBS, NM 88240
FAX TO:

Receiving Date: 01/11/02
Reporting Date: 01/12/02
Project Owner: RICE OPERATING CO.
Project Name: M16-1
Project Location: NOT GIVEN

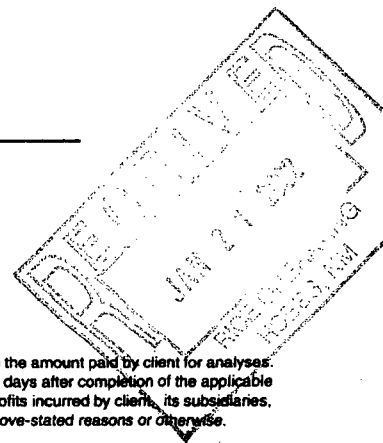
Sampling Date: 01/10/02
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

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
H6429-1	R011002M161MW	<0.002	<0.002	<0.002	<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.

H6429B.XLS

Cardinal Laboratories Inc.

2111 Beechwood, Abilene, TX 79603

915-673-7001 Fax 915-673-7020

101 East Marland, Hobbs, NM 88240

505-393-2326 Fax 505-393-2476

Company Name				Rice Operating Company				Bill To				Analysis Request																											
Project Manager				Donnie Anderson				Environmental Plus Inc P.O. Box 1558 Eunice NM, 88231				PRESERV.				MATRIX				# CONTAINERS		(C)RAB OR (C)OMP.		LAB I.D.		SAMPLER NAME		PROJECT LOCATION		PROJECT # / OWNER		PHONE # / FAX #		CITY, STATE, ZIP		ADDRESS			
Project Manager				Donnie Anderson								ACID/BASE		ICE/COOL		OTHER		GROUND WATER		WASTEWATER																			
Address				122 West Taylor								SOIL		CUDR OIL		SLUDGE		OTHER:																					
City, State, Zip				Hobbs, NM, 88240																																			
Phone # / Fax #				505-393-9174																																			
Project # / Owner				Rice Operating Company																																			
Project Name				M/K - 1																																			
Project Location																																							
Sampler Name				Bradley Blevins																																			
LAB I.D.		SAMPLE I.D.																																					
H04291		R011002 M/G 1 MW																																					
		R011002 M/G 1 MW																																					

Sampler Relinquished: <i>Bradley Blanton</i>		Received By: Date <i>1-11-02</i> Time <i>2:35</i>		Received By: (lab staff) Date _____ Time _____		Checked By: Date _____ Time _____	
Relinquished by: _____		Sample Cool & Intact Yes _____ No _____		Delivered by Sampler _____		_____	