

AP - 59

G-35

**ANNUAL GW MONITORING
REPORT**

**DATE:
2003**

RICE Operating Company

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

AP-59
G-35 Annual GW Mon
Report
2003

CERTIFIED MAIL

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**Oil Conservation Division
Environmental Bureau**

February 9, 2004

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

**RE: 2003 MONITOR WELL REPORT/SAMPLING SUMMARY
VACUUM SWD SYSTEM
SEC. 35, T17S, R35E**

Mr. Olson:

Rice Operating Company (ROC) takes this opportunity to submit the 2003 Monitor Well Report for the Vacuum Salt Water Disposal System. There are 2 sites in this system that have monitor wells that are sampled quarterly pursuant to NMOCD guidelines. These groundwater impacts became evident during the removal of redwood tanks.

Site Name	Unit Letter	Section	Township/Range
F-35	F	35	T17S, R35E
G-35	G	35	T17S, R35E

The 2003 sampling was conducted by ROC. These samples were analyzed by Environmental Lab of Texas, of Odessa. In 2004, ROC will continue to sample these monitor wells with Environmental Lab of Texas providing the water analysis. Closure advancement for the F-35 and G-35 sites is currently suspended due to System Partner negotiations.

ROC is the service provider (operator) for the Vacuum Salt Water Disposal System and has not ownership of any portion of pipeline, well, or facility. The Vacuum 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 COMPANY

Kristin Farris

Kristin Farris
Project Scientist

Enclosures: Summary table & graph for each site
Analytical results

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

Vacuum G-35
G, 35, 17S, 35E SWD facility

Rice Operating Co. Monitor Well Data Sheet

All parameter concentrations are in mg/L.

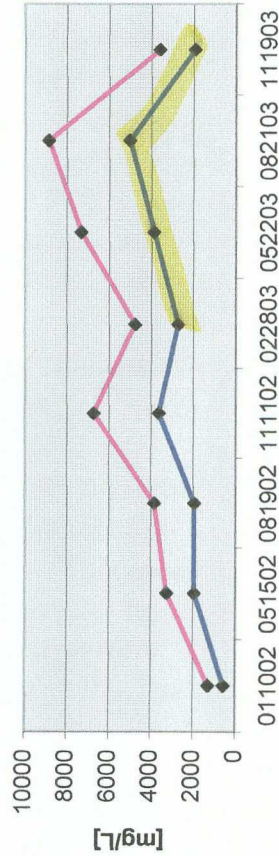
MW #	WATER LEVEL (ft)	TOTAL DEPTH	WELL VOLUME	VOLUME BAILED	SAMPLE DATE	TIME	CL-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES
1	53.60	64.30	1.800	5.30	011002	1605	568	1284	0.011	0.022	0.034	0.055
1	52.89	65.03	1.940	6.00	051502	1445	1950	3260	0.414	0.057	0.131	0.065
1	53.02	64.75	1.877	5.75	081902	1235	1950	3850	0.705	0.598	0.209	0.253
1	53.08	64.70	1.859	5.60	111102	1210	3630	6740	0.921	0.078	0.154	0.131
1	53.06	64.19	1.780	5.30	022803	1245	2730	4770	0.713	0.010	0.018	0.027
1	53.20	64.20	1.750	5.28	052203	1012	3860	7320	0.583	0.002	0.12	0.027
1	53.21	64.10	1.740	5.20	082103	0935	5010	8850	0.689	0.004	0.307	0.032
1	53.29	64.20	1.746	5.20	111903	0940	1930	3590	0.012	0.002	0.09	0.003

oil skim

oil skim/yellow

Vacuum G-35 SWD facility Monitor Well

— TDS — Cl-



Sample Well

* Depth to water is measured from the top of the casing
Casing is 2.458 ft

ANALYTICAL REPORT

Prepared for:

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

Project: Vacuum G-35

PO#:

Order#: G0305853

Report Date: 03/05/2003

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#: G0305853
Project:
Project Name: Vacuum G-35
Location: Vacuum

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>
0305853-01	MW 1	WATER	2/28/03	2/28/03 19:40	See COC	See COC
<u>Lab Testing:</u>		Rejected: No	Temp:	3.5 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#: G0305853
Project:
Project Name: Vacuum G-35
Location: Vacuum

Lab ID: 0305853-01

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
0004817-02		3/3/03 20:49	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	0.713	0.001
Toluene	0.010	0.001
Ethylbenzene	0.018	0.001
p/m-Xylene	0.013	0.001
o-Xylene	0.014	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	137%	80	120
Bromofluorobenzene	115%	80	120

Approval:

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

3-05-03
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#: G0305853
Project:
Project Name: Vacuum G-35
Location: Vacuum

Lab ID: 0305853-01
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	216	mg/L	1	2.00	310.1	3/3/03	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	3/3/03	SB
Chloride	2730	mg/L	1	5.00	9253	3/3/03	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	3/3/03	SB
SULFATE, 375.4	24.6	mg/L	1	0.5	375.4	3/4/03	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	646	mg/L	100	1.0	6010B	3/3/03	SM
Magnesium	123	mg/L	100	0.10	6010B	3/3/03	SM
Potassium	10.9	mg/L	10	0.50	6010B	3/3/03	SM
Sodium	810	mg/L	100	1.0	6010B	3/3/03	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)	4770	mg/L	1	5.0	160.1	3/3/03	TAL

Approval: Raland K Tuttle 3-05-03
Raland K. Tuttle, Lab Director, QA Officer Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0305853

BLANK							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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	RPD
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	RPD
Benzene-mg/L		0004817-04		0.1	0.095	95.0%	5.1%
Toluene-mg/L		0004817-04		0.1	0.095	95.0%	6.1%
Ethylbenzene-mg/L		0004817-04		0.1	0.094	94.0%	6.2%
p/m-Xylene-mg/L		0004817-04		0.2	0.193	96.5%	6.5%
o-Xylene-mg/L		0004817-04		0.1	0.094	94.0%	5.2%
SRM							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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#: G0305853

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0004837-01			<2.00		
Carbonate Alkalinity-mg/L		0004833-01			<0.10		
Chloride-mg/L		0004836-01			<5.00		
Hydroxide Alkalinity-mg/L		0004834-01			<0.10		
SULFATE, 375.4-mg/L		0004835-01			<0.50		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0305850-01	440		441		0.2%
Carbonate Alkalinity-mg/L		0305850-01	0		<0.10		0.0%
Hydroxide Alkalinity-mg/L		0305850-01	0		<0.10		0.0%
SULFATE, 375.4-mg/L		0305850-01	501		493		1.6%
MS	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0305850-01	3470	1000	4450	98.8%	
MSD	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0305850-01	3470	1000	4470	100.0%	0.4%
SRM	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0004837-04		0.05	0.0496	99.2%	
Carbonate Alkalinity-mg/L		0004833-04		0.05	0.0496	99.2%	
Chloride-mg/L		0004836-04		5000	4960	99.2%	
Hydroxide Alkalinity-mg/L		0004834-04		0.05	0.0496	99.2%	
SULFATE, 375.4-mg/L		0004835-04		50	48.9	97.8%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0305853

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0004810-01			<0.010		
Magnesium-mg/L		0004810-01			<0.001		
Potassium-mg/L		0004810-01			<0.050		
Sodium-mg/L		0004810-01			<0.010		
DUPLICATE		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0305851-01	95.8		98.8		3.1%
Magnesium-mg/L		0305851-01	54.3		53.5		1.5%
Potassium-mg/L		0305851-01	9.4		9.42		0.2%
Sodium-mg/L		0305851-01	265		261		1.5%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0004810-04		2	2.08	104.%	
Magnesium-mg/L		0004810-04		2	2.22	111.%	
Potassium-mg/L		0004810-04		2	1.72	86.%	
Sodium-mg/L		0004810-04		2	1.79	89.5%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0305853

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0004824-01			<5.0		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0305850-01	6870		6880		0.1%

CASE NARRATIVE

ENVIRONMENTAL LAB OF TEXAS

Prepared for:

Rice Operating
122 W. Taylor
Hobbs, NM 88240

Order#: G0305853

Project: Vacuum G-35

The following samples were received as indicated below and on the attached Chain of Custody record. All analyses were performed within the holding time and with acceptable quality control results unless otherwise noted.

SAMPLE ID	LAB ID	MATRIX	Date Collected	Date Received
MW 1	0305853-01	WATER	02/28/2003	02/28/2003

Surrogate recoveries on the 8021B BTEX are outside control limits due to matrix interference from coeluting compounds. (0305853-01)

The enclosed results of analyses are representative of the samples as received by the laboratory. Environmental Lab of Texas makes no representations or certifications as to the methods of sample collection, sample identification, or transportation handling procedures used prior to our receipt of samples. To the best of my knowledge, the information contained in this report is accurate and complete.

Approved By:

Rolando J. Jasso

Environmental Lab of Texas I, Ltd.

Date:

3-05-03

ANALYTICAL REPORT

Prepared for:

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

Project: G-35
PO#: 570
Order#: G0306570
Report Date: 05/28/2003

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#: G0306570
Project:
Project Name: G-35
Location: Vacuum

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>
0306570-01	MW1	WATER	5/22/03 11:39	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#: G0306570
Project:
Project Name: G-35
Location: Vacuum

Lab ID: 0306570-01
Sample ID: MW1

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
0005645-02		5/27/03 13:25	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	0.583	0.001
Toluene	0.002	0.001
Ethylbenzene	0.120	0.001
p/m-Xylene	0.009	0.001
o-Xylene	0.018	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	117%	80	120
Bromofluorobenzene	117%	80	120

Approval:

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

Date

5-29-03

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0306570
Project:
Project Name: G-35
Location: Vacuum

Lab ID: 0306570-01
Sample ID: MW1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	440	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	3860	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	5.30	mg/L	1	0.5	375.4	5/23/03	SB

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	239	mg/L	100	1.0	6010B	5/28/03	SM
Magnesium	61.3	mg/L	10	0.010	6010B	5/28/03	SM
Potassium	15.7	mg/L	10	0.50	6010B	5/28/03	SM
Sodium	3270	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)	7320	mg/L	1	5.0	160.1	5/27/03	CK

Approval:

Raland K. Tuttle *5-29-03*
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

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0306570

BLANK							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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	RPD
Benzene-mg/L		0005645-03		0.1	0.103	103.0%	
Toluene-mg/L		0005645-03		0.1	0.099	99.0%	
Ethylbenzene-mg/L		0005645-03		0.1	0.090	90.0%	
p/m-Xylene-mg/L		0005645-03		0.2	0.185	92.5%	
o-Xylene-mg/L		0005645-03		0.1	0.086	86.0%	
CONTROL DUP							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0005645-04		0.1	0.097	97.0%	6.0%
Toluene-mg/L		0005645-04		0.1	0.094	94.0%	5.2%
Ethylbenzene-mg/L		0005645-04		0.1	0.086	86.0%	4.5%
p/m-Xylene-mg/L		0005645-04		0.2	0.178	89.0%	3.9%
o-Xylene-mg/L		0005645-04		0.1	0.084	84.0%	2.4%
SRM							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0005645-05		0.1	0.104	104.0%	
Toluene-mg/L		0005645-05		0.1	0.101	101.0%	
Ethylbenzene-mg/L		0005645-05		0.1	0.091	91.0%	
p/m-Xylene-mg/L		0005645-05		0.2	0.187	93.5%	
o-Xylene-mg/L		0005645-05		0.1	0.085	85.0%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0306570

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#: G0306570

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#: G0306570

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%

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
Project Name: G-35
Company Name: RICE Operating
Project #: _____
Company Address: 122 W. Taylor
Project Loc: Vacuum
City/State/Zip: Hobbs, NM 88240
PO #: 570
Telephone No: (505) 393-9174
Fax No: (505) 397-1471
Sampler Signature: Israel Juarez

LAB # (Not for Analysis)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative				Matrix				TDS / Anions + Cations	TPH 418.1	TPH TX 1005/1006	TPH 8015M GRO/DRO	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semi-volatiles	BTEX 80218/5030	Analyze For:	Standard TAT	RUSH TAT (Pre-Schedule)	
					H ₂ O ₂	HNO ₃	HCl	NaOH	H ₂ SO ₄	None	Other (Specify)	Water												Sediment
0306570	MW1	5/22/03	11:39	1	X																			
0306570	MW1	5/22/03	11:39	2	X																			

Special Instructions: _____

Relinquished by: Israel Juarez Date: 5-22 Time: 11:39

Relinquished by: CD Harper Date: 5-22 Time: 20:10

Received by: _____ Date: _____ Time: _____

Received by ELOI: Red-ck ju Date: 5-22-03 Time: 10:20

Sample Containers Indict? _____
Temperature Upon Receipt: _____
Laboratory Comments: 4.0°C

ANALYTICAL REPORT

Prepared for:

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

Project: SWD G-35

PO#:

Order#: G0307311

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#: G0307311
Project:
Project Name: SWD G-35
Location: Vacuum

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>
0307311-01	MW1	WATER	8/21/03 9:35	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#: G0307311
Project:
Project Name: SWD G-35
Location: Vacuum

Lab ID: 0307311-01
Sample ID: MW1

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
0006638-02		8/25/03	1	1	JMM	8021B

Parameter	Result mg/L	RL
Benzene	0.689	0.001
Toluene	0.004	0.001
Ethylbenzene	0.307	0.001
p/m-Xylene	0.025	0.001
o-Xylene	0.007	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	129%	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.

Date

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0307311
Project:
Project Name: SWD G-35
Location: Vacuum

Lab ID: 0307311-01
Sample ID: MW1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	396	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	5010	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	3.50	mg/L	1	0.50	375.4	8/26/03	SB

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	353	mg/L	100	1.0	6010B	8/26/03	SM
Magnesium	80.3	mg/L	10	0.010	6010B	8/26/03	SM
Potassium	35.3	mg/L	10	0.50	6010B	8/26/03	SM
Sodium	3680	mg/L	1000	10.0	6010B	8/26/03	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	8850	mg/L	1	5.0	160.1	8/25/03	TAL

Approval:

Celey D. Keene 08/28/03
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

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0307311

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#: G0307311

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	99.9%	
MSD	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0307300-01	2060	1000	3070	101.1%	0.7%
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#: G0307311

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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#: G0307311

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%

CASE NARRATIVE

ENVIRONMENTAL LAB OF TEXAS

Prepared for:

Rice Operating
122 W. Taylor
Hobbs, NM 88240

Order#: G0307311

Project: SWD G-35

The following samples were received as indicated below and on the attached Chain of Custody record. All analyses were performed within the holding time and with acceptable quality control results unless otherwise noted.

SAMPLE ID	LAB ID	MATRIX	Date Collected	Date Received
MW1	0307311-01	WATER	08/21/2003	08/25/2003

Surrogate recoveries on BTEX are outside control limits due to matrix interference (0307311-01).

The enclosed results of analyses are representative of the samples as received by the laboratory. Environmental Lab of Texas makes no representations or certifications as to the methods of sample collection, sample identification, or transportation handling procedures used prior to our receipt of samples. To the best of my knowledge, the information contained in this report is accurate and complete.

Approved By: _____

Clyde D. Keene
Environmental Lab of Texas I, Ltd.

Date: _____

08/28/03

LABORATORY OF TEXAS, INC.

12600 West I-20 East
Odessa, Texas 79763

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

Project Manager: Kristin Farris

Project Name: SUD G-35

Company Name: RICE Operating

Project #:

Company Address: 122 W. Taylor

Project Loc: Vacuum

City/State/Zip: Hobbs, NM 88240

PO #:

Telephone No: (505) 393-9174

Fax No: (505) 397-1491

Sampler Signature:

FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative					Matrix			Analyze For:									
				HNO ₃	HCl	NaOH	None	Other (Specify)	Water	Silage	Soil	Other (Specify)	ICP	TOTAL	Metals: As, Ag, Ba, Cd, Cr, Pb, Hg, Se	Volatiles	Semivolatiles	BTX: Bz, E, T, X	RUSH TAT (Pre-Schedule)	Standard TAT	
0307311																					
LAB # 100156-0112																					
01	8/21/03	9:35	1				X														
MW1	8/21/03	9:35	2				X														
MW1																					

Special Instructions:

Major anions & cations, TDS

Relinquished by:	Relinquished by:	Relinquished by:	Relinquished by:
<u>David Murray</u>	<u>John Anderson</u>	<u>John Anderson</u>	<u>John Anderson</u>
Date: <u>8/21/03</u>	Date: <u>8/25/03</u>	Date: <u>8/25/03</u>	Date: <u>8/25/03</u>
Time: <u>2:18</u>	Time: <u>0900</u>	Time: <u>5:00p</u>	Time: <u>0500</u>

Sample Containers Intact? Yes
Temperature Upon Receipt 45.00
Laboratory Comment: 40 mL VOA
1 LHPPE

ANALYTICAL REPORT

Prepared for:

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

Project: G-35
PO#: 570
Order#: G0307979
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#: G0307979
Project:
Project Name: G-35
Location: Vacuum

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>
0307979-01	MW-1	WATER	11/19/03 9:40	11/19/03 19:40	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#: G0307979
Project:
Project Name: G-35
Location: Vacuum

Lab ID: 0307979-01
Sample ID: MW-1

8021B/5030 BTEX

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

Parameter	Result mg/L	RL
Benzene	0.012	0.001
Toluene	0.002	0.001
Ethylbenzene	0.090	0.001
p/m-Xylene	0.002	0.001
o-Xylene	0.001	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	106%	80	120
Bromofluorobenzene	102%	80	120

Approval: *Celestine D. Keene* 11/25/03
Raland K. Tuttle, Lab Director, QA Officer Date
Celestine 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#: G0307979
Project:
Project Name: G-35
Location: Vacuum

Lab ID: 0307979-01
Sample ID: MW-1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	468	mg/L	1	2.00	310.1	11/20/03	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/20/03	SB
Chloride	1930	mg/L	1	5.00	325	11/20/03	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/20/03	SB
SULFATE, 375.4	20.9	mg/L	1	0.5	375.4	11/24/03	SB

Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	81.0	mg/L	10	0.10	6010B	11/21/03	SM
Magnesium	20.1	mg/L	10	0.010	6010B	11/21/03	SM
Potassium	7.10	mg/L	10	0.50	6010B	11/21/03	SM
Sodium	1290	mg/L	1000	10.0	6010B	11/21/03	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	3590	mg/L	1	5.0	160.1	11/20/03	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

QUALITY CONTROL REPORT

Anions

Order#: G0307979

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0007510-01			<2.00		
Carbonate Alkalinity-mg/L		0007512-01			<0.10		
Chloride-mg/L		0007516-01			<5.00		
Hydroxide Alkalinity-mg/L		0007514-01			<0.10		
SULFATE, 375.4-mg/L		0007546-01			<0.50		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0307979-01	468		466		0.4%
Carbonate Alkalinity-mg/L		0307979-01	0		<0.10		0.0%
Hydroxide Alkalinity-mg/L		0307979-01	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	RPD
Chloride-mg/L		0307979-01	1930	500	2430	100.0%	
MSD	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0307979-01	1930	500	2420	98.0%	0.4%
SRM	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0007510-04		0.05	0.0496	99.2%	
Carbonate Alkalinity-mg/L		0007512-04		0.05	0.0496	99.2%	
Chloride-mg/L		0007516-04		5000	4960	99.2%	
Hydroxide Alkalinity-mg/L		0007514-04		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

8021B/5030 BTEX

Order#: G0307979

BLANK							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
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	RPD
Benzene-mg/L		0007531-03		0.1	0.096	96.0%	
Toluene-mg/L		0007531-03		0.1	0.092	92.0%	
Ethylbenzene-mg/L		0007531-03		0.1	0.091	91.0%	
p/m-Xylene-mg/L		0007531-03		0.2	0.182	91.0%	
o-Xylene-mg/L		0007531-03		0.1	0.090	90.0%	
CONTROL DUP							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0007531-04		0.1	0.101	101.0%	5.1%
Toluene-mg/L		0007531-04		0.1	0.097	97.0%	5.3%
Ethylbenzene-mg/L		0007531-04		0.1	0.092	92.0%	1.1%
p/m-Xylene-mg/L		0007531-04		0.2	0.183	91.5%	0.5%
o-Xylene-mg/L		0007531-04		0.1	0.087	87.0%	3.4%
SRM							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0007531-05		0.1	0.099	99.0%	
Toluene-mg/L		0007531-05		0.1	0.094	94.0%	
Ethylbenzene-mg/L		0007531-05		0.1	0.091	91.0%	
p/m-Xylene-mg/L		0007531-05		0.2	0.181	90.5%	
o-Xylene-mg/L		0007531-05		0.1	0.087	87.0%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0307979

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
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#: G0307979

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0007518-01			<5.00		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0307979-01	3590		3600		0.3%

Will convene in Hall 1, Room 101, 11/11/11.

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

Kristin Farris

RICE Operating

133 W. Taylor

Fla 665, NM 88240

(505) 393-9174

Israel f. mares

(505) 397-1471

(505) 397-1471

570

635

Project #:

$\sqrt{95443}$

Sample Signature:

Analyze For:

Preservative	Matrix
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1000

10. *Chlorophyll a* is the primary photosynthetic pigment in most plants. It is a green pigment that absorbs light energy and converts it into chemical energy. It is found in the chloroplasts of plants and algae.

Figure 1. A schematic diagram of the experimental setup. The subject is seated in a chair, viewing a screen. The screen displays a target (a red dot) and a starting point (a green dot). The subject's hand is positioned at the starting point. The distance between the starting point and the target is labeled as d . The subject's hand is moved towards the target, and the distance between the hand and the target is labeled as x . The subject's hand is stopped at the target, and the distance between the hand and the target is labeled as x_f .

1

1

2

revenue

Special Instructions:		Date		Time		Received by:	
Major, Anions, Cations, TDS		11-17-03		4:30		Dorothy	
Retiquished by:		4/9/03		19:00		C. H. H. H.	
Retiquished by:		11-19-03		19:40		Ralan dk 700	
Retiquished by:		11-19-03		19:40		Ralan dk 700	

 RICE Operating Company

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

CERTIFIED MAIL
RETURN RECIEPT NO. 7002 2410 0000 4940 0827

April 1, 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 07 2003

ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

RE: 2002 MONITOR WELL REPORT/SAMPLING SUMMARY
VACUUM SWD SYSTEM
SEC. 35, T17S, R35E

Mr. Olson:

Rice Operating Company (ROC) takes this opportunity to submit the 2002 Monitor Well Report for the Vacuum Salt Water Disposal System. There are 2 sites in this system that have monitor wells that are sampled quarterly pursuant to NMOCD guidelines. These groundwater impacts became evident during the removal of redwood tanks.

Site Name	Unit Letter	Section	Township/Range
F-35	F	35	T17S, R35E
G-35	G	35	T17S, R35E

First quarter monitor well sampling events of 2002 were conducted by Environmental Plus, Inc. of Eunice. Cardinal Laboratory of Hobbs performed the water analysis. ROC performed the remainder of the sampling for the 2002 year. These samples were analyzed by Environmental Lab of Texas, of Odessa.

In 2003, ROC will continue to sample these monitor wells with Environmental Lab of Texas providing the water analysis. Closure advancement for the F-35 and G-35 sites is currently suspended due to System Partner negotiations.

ROC is the service provider (operator) for the Vacuum Salt Water Disposal System and has not ownership of any portion of pipeline, well, or facility. The Vacuum 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 COMPANY

Kristin Farris

Kristin Farris
Project Scientist

Enclosures: Summary table & graph for each site
 Analytical results

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