

AP - 47

**ANNUAL
MONITORING REPORT**

YEAR(S):

2002

RICE Operating Company

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

CERTIFIED MAIL

RETURN RECEIPT NO. 7000 1530 0005 9895 4992

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
BD SWD SYSTEM
LEA COUNTY, NEW MEXICO

Mr. Olson:

Rice Operating Company (ROC) takes this opportunity to submit the 2002 Monitor Well Report for the Blinbry-Drinkard (BD) Salt Water Disposal System. There are 4 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.

Site Name	Unit Letter	Section	Township/Range
J-26 jct.	J	26	T21S, R37E
Zachary Hinton jct.	O	12	T22S, R37E
F-17 jct.	F	17	T21S, R37E
I-27 jct.	I	27	T22S, R37E

In 2002, the Zachary Hinton monitor well was sampled by Environmental Plus, Inc. of Eunice, and also by ROC. The 2002 sampling events for J-26, F-17, and I-27 were conducted by ROC. 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 and R. T. Hicks Consultants, Ltd. of Albuquerque have been contracted by ROC to prioritize the junction box disclosure sites and to generate work plans for remediation of the vadose zone. 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 BD Salt Water Disposal System and has not ownership of any portion of pipeline, well, or facility. The BD 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

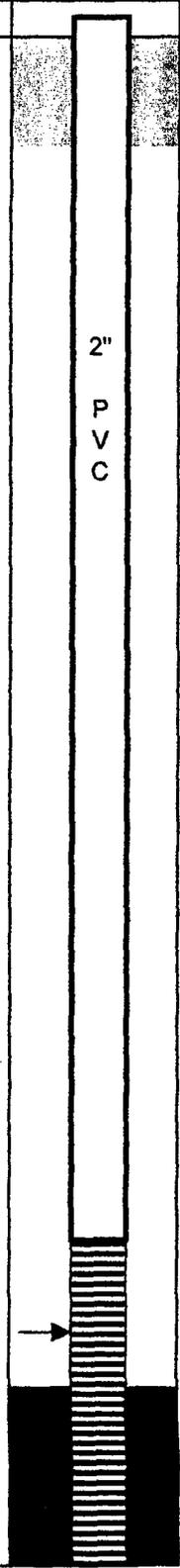
Kristin Farris
Project Scientist

Enclosures: Summary table & graph for each site
Analytical results

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

DRILLING LOG	Site Name/Location	BORING/WELL INFORMATION			Logged by: Eades
RICE Operating Company 122 West Taylor Hobbs, New Mexico 88240 (505) 393-0174	Jct. F-17 17-T21S-R37E BD SWD System Lea County, NM	Well No. MW 1	Date Drilled: 11-18-02	Driller: Eades	Completion: Packed with bentonite; grouted at surface.
		Well Depth: 85'	Boring Depth: 85'	Well Material: PVC	
		Casing Length: 88'	Boring Diameter: 2"	Casing Size: 2"	
		Screen Length: 20'	Drilling Method: Air Rotary	Slot Size: N/A	

DEPTH	SUBSURFACE LITHOLOGY	SAMPLE TYPE	Test Results (ppm)		REMARKS	Boring
			CI	TPH		
0	Ground surface		Titrate	EPA 418.1		
	Top Soil					
5	Caliche	Grab	2,212		grout	
10	Tan caliche and loam chunks	Grab	492			
15	Sand	Grab	2,412			
20	Red sand	Grab	5,197			
21	Sand and Sandstone Stringers					
25	Red Sand	Grab	3,152			
30	Tan caliche powder	Grab	4,628			
34	Sand					
35	Tan sand	Grab	2,508			
36	Sand and Sandstone Stringers				bentonite	
40	Tan Sand	Grab	352			
45	Tan Sand	Grab	2,420			
50	Reddish-brown sand	Grab	2,133			
55	Sandy Gravel	Grab	2,665			
60	Reddish-brown sand	Grab	1,905			
64	Sand and Sandstone Stringer					
65	Tan sand and Caliche	Grab	1,800			
70	Tan sand and caliche moist	Grab	1,209		screen	
75	Tan sand with rocks, moist	Grab	425			
80					water	
85	Sand and Sandstone Stringers					

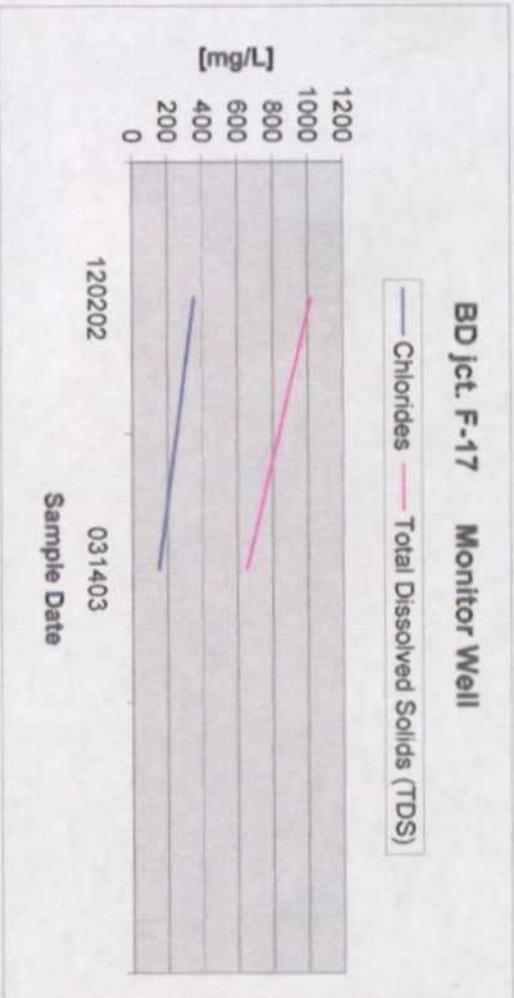


BD jct. F-17
F. 17, 21S, 37E

Rice Operating Co. Monitor Well Data Sheet

All parameter concentrations are in mg/L

MW #	WATER LEVEL (ft)	TOTAL DEPTH	(gal)		SAMPLE DATE	TIME	CL-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES
			WELL VOLUME	VOLUME BAILED								
1	75.73	87.12	1,822	5.50	120202	1045	354	1020	<0.001	<0.001	<0.001	<0.001
1	75.67	85.39	1,550	4.80	031403	1400	151	653	<0.001	<0.001	<0.001	<0.001



sandy

ANALYTICAL REPORT

Prepared for:

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

Project: BD F-17
PO#: 505
Order#: G0305983
Report Date: 03/21/2003

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#: G0305983
 Project:
 Project Name: BD F-17
 Location: BD F-17

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 Collected</u>	<u>Date / Time Received</u>	<u>Container</u>	<u>Preservative</u>
0305983-01	MW-1	WATER	3/14/03	3/14/03 19:30	See COC	See COC
<u>Lab Testing:</u>		Rejected: No	Temp: 2.0C			
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#: G0305983
 Project:
 Project Name: BD F-17
 Location: BD F-17

Lab ID: 0305983-01
 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>	<u>Analyst</u>	<u>Method</u>
0005010-02		3/20/03 15:26	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	88%	80	120
Bromofluorobenzene	86%	80	120

Approval: Raland K. Tuttle 3-25-03
 Raland K. Tuttle, Lab Director, QA Officer Date
 Celey D. Keene, Org. Tech. Director
 Jeanne McMurry, 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#: G0305983
 Project:
 Project Name: BD F-17
 Location: BD F-17

Lab ID: 0305983-01
 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	182	mg/L	1	2.00	310.1	3/17/03	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	3/17/03	SB
Chloride	151	mg/L	1	5.00	9253	3/17/03	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	3/17/03	SB
SULFATE, 375.4	98.4	mg/L	2	1.0	375.4	3/17/03	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	51.0	mg/L	10	0.10	6010B	3/19/03	SM
Magnesium	23.5	mg/L	10	0.010	6010B	3/19/03	SM
Potassium	9.19	mg/L	1	0.050	6010B	3/19/03	SM
Sodium	98.0	mg/L	100	1.0	6010B	3/19/03	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)	653	mg/L	1	5.0	160.1	3/17/03	TAL

Approval: Raland K. Tuttle 3-25-03
 Raland K. Tuttle, Lab Director, QA Officer Date
 Celey D. Keene, Org. Tech. Director
 Jeannette McMurrey, Inorg. Tech. Director
 Sandra Biezugbe, Lab Tech.
 Sara Molina, Lab Tech.

ENVIRONMENTAL LAB OF TEXAS**QUALITY CONTROL REPORT****8021B/5030 BTEX****Order#: G0305983**

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Benzene-mg/L		0005010-02			<0.001		
Toluene-mg/L		0005010-02			<0.001		
Ethylbenzene-mg/L		0005010-02			<0.001		
p/m-Xylene-mg/L		0005010-02			<0.001		
o-Xylene-mg/L		0005010-02			<0.001		
CONTROL		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Benzene-mg/L		0005010-03		0.1	0.109	109.%	
Toluene-mg/L		0005010-03		0.1	0.115	115.%	
Ethylbenzene-mg/L		0005010-03		0.1	0.112	112.%	
p/m-Xylene-mg/L		0005010-03		0.2	0.231	115.5%	
o-Xylene-mg/L		0005010-03		0.1	0.111	111.%	
CONTROL DUP		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Benzene-mg/L		0005010-04		0.1	0.113	113.%	3.6%
Toluene-mg/L		0005010-04		0.1	0.115	115.%	0.%
Ethylbenzene-mg/L		0005010-04		0.1	0.115	115.%	2.6%
p/m-Xylene-mg/L		0005010-04		0.2	0.227	113.5%	1.7%
o-Xylene-mg/L		0005010-04		0.1	0.113	113.%	1.8%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Benzene-mg/L		0005010-05		0.1	0.107	107.%	
Toluene-mg/L		0005010-05		0.1	0.112	112.%	
Ethylbenzene-mg/L		0005010-05		0.1	0.109	109.%	
p/m-Xylene-mg/L		0005010-05		0.2	0.224	112.%	
o-Xylene-mg/L		0005010-05		0.1	0.104	104.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0305983

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0004955-01			,2.00		
Carbonate Alkalinity-mg/L		0004957-01			<0.10		
Chloride-mg/L		0004953-01			<5.00		
Hydroxide Alkalinity-mg/L		0004959-01			<0.10		
SULFATE, 375.4-mg/L		0004961-01			<0.50		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0305981-01	226		225		0.4%
Carbonate Alkalinity-mg/L		0305981-01	0		<0.10		0.9%
Hydroxide Alkalinity-mg/L		0305981-01	0		<0.10		0.9%
SULFATE, 375.4-mg/L		0305966-02	319		311		2.5%
MS	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0305981-01	53.2	100	152	98.8%	
MSD	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0305981-01	53.2	100	151	97.8%	0.7%
SRM	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0004955-04		0.05	0.0496	99.2%	
Carbonate Alkalinity-mg/L		0004957-04		0.05	0.0496	99.2%	
Chloride-mg/L		0004953-04		5000	4960	99.2%	
Hydroxide Alkalinity-mg/L		0004959-04		0.05	0.0496	99.2%	
SULFATE, 375.4-mg/L		0004961-04		50	52	104.9%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0305983

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Calcium-mg/L		0004974-02			<0.010		
Magnesium-mg/L		0004974-02			<0.001		
Potassium-mg/L		0004974-02			<0.050		
Sodium-mg/L		0004974-02			<0.010		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Calcium-mg/L		0305966-01	12.8		13.0		1.6%
Magnesium-mg/L		0305966-01	2.5		2.57		2.8%
Potassium-mg/L		0305966-01	5.38		5.44		1.1%
Sodium-mg/L		0305966-01	360		365		1.4%
SRM	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Calcium-mg/L		0004974-05		2	2.19	109.5%	
Magnesium-mg/L		0004974-05		2	2.06	103.%	
Potassium-mg/L		0004974-05		2	1.87	93.5%	
Sodium-mg/L		0004974-05		2	1.96	98.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0305983

<i>BLANK</i>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
		0004969-01			<5.0		
<i>DUPLICATE</i>	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
		0305984-01	2310		2330		0.9%

ANALYTICAL REPORT

Prepared for:

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

Project: F-17 Jct.
PO#: 505
Order#: G0205154
Report Date: 12/11/2002

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#: G0205154
Project: None Given
Project Name: F-17 Jct.
Location: BD

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 Collected</u>	<u>Date / Time Received</u>	<u>Container</u>	<u>Preservative</u>
0205154-01	MW 1	WATER	12/2/02 10:45	12/2/02 20:40	See COC	See COC
	<u>Lab Testing:</u>	Rejected: No		Temp: 3.5 C		
	Cations					
	Alkalinity, Bicarbonate					
	Alkalinity, Carbonate					
	Alkalinity, Hydroxide					
	Chloride					
	SULFATE, 375.4					
	Total Dissolved Solids (TDS)					
0205154-02	MW 1	WATER	12/2/02 10:45	12/2/02 20:40	See COC	See COC
	<u>Lab Testing:</u>	Rejected: No		Temp: 3.5 C		
	8021B/5030 BTEX					

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0205154
Project: None Given
Project Name: F-17 Jct.
Location: BD

Lab ID: 0205154-02
Sample ID: MW 1

8021B/5030 BTEX

<u>Method</u>	<u>Date</u>	<u>Date</u>	<u>Sample</u>	<u>Dilution</u>	<u>Analyst</u>	<u>Method</u>
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>		
0004008-02		12/9/02 14:39	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	96%	80	120
Bromofluorobenzene	94%	80	120

Approval: Raland K Tuttle 12-10-02
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#: G0205154
Project: None Given
Project Name: F-17 Jct.
Location: BD

Lab ID: 0205154-01
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	76.7	mg/L	10	0.10	6010B	12/10/2002	12/10/02	SM
Magnesium	32.9	mg/L	10	0.010	6010B	12/10/2002	12/10/02	SM
Potassium	7.08	mg/L	10	0.50	6010B	12/10/2002	12/10/02	SM
Sodium	158	mg/L	100	1.0	6010B	12/10/2002	12/10/02	SM

Approval: Raland K Tuttle 12-11-02
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#: G0205154
Project: None Given
Project Name: F-17 Jct.
Location: BD

Lab ID: 0205154-01
Sample ID: MW 1

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>
Alkalinity, Bicarbonate	144	mg/L as CaCO	1	2.00	310.1	12/10/02	SB
Alkalinity, Carbonate	<0.100	mg/L as CaCO	1	0.100	310.1	12/10/02	SB
Alkalinity, Hydroxide	<0.10	mg/L as CaCO	1	0.10	310.1	12/10/02	SB
Chloride	354	mg/L	1	5.00	9253	12/4/02	SB
SULFATE, 375.4	114	mg/L	10	5.0	375.4	12/10/02	SB
Total Dissolved Solids (TDS)	1020	mg/L	1	5.0	160.1	12/3/02	TAL

Approval: Raland K Tuttle 12-11-02
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#: G0205154

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Benzene-mg/L		0004008-02			<0.001		
Ethylbenzene-mg/L		0004008-02			<0.001		
Toluene-mg/L		0004008-02			<0.001		
p/m-Xylene-mg/L		0004008-02			<0.001		
o-Xylene-mg/L		0004008-02			<0.001		
MS		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Benzene-mg/L		0205197-10	0	0.1	0.100	100.0%	
Ethylbenzene-mg/L		0205197-10	0	0.1	0.102	102.0%	
Toluene-mg/L		0205197-10	0	0.1	0.102	102.0%	
p/m-Xylene-mg/L		0205197-10	0	0.2	0.215	107.5%	
o-Xylene-mg/L		0205197-10	0	0.1	0.103	103.0%	
MSD		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Benzene-mg/L		0205197-10	0	0.1	0.100	100.0%	0.0%
Ethylbenzene-mg/L		0205197-10	0	0.1	0.100	100.0%	2.0%
Toluene-mg/L		0205197-10	0	0.1	0.101	101.0%	1.0%
p/m-Xylene-mg/L		0205197-10	0	0.2	0.207	103.5%	3.8%
o-Xylene-mg/L		0205197-10	0	0.1	0.101	101.0%	2.0%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Benzene-mg/L		0004008-05		0.1	0.097	97.0%	
Ethylbenzene-mg/L		0004008-05		0.1	0.100	100.0%	
Toluene-mg/L		0004008-05		0.1	0.100	100.0%	
p/m-Xylene-mg/L		0004008-05		0.2	0.214	107.0%	
o-Xylene-mg/L		0004008-05		0.1	0.104	104.0%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0205154

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0004013-02			<0.010		
Magnesium-mg/L		0004013-02			<0.001		
Potassium-mg/L		0004013-02			<0.050		
Sodium-mg/L		0004013-02			<0.010		
DUPLICATE		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0205154-01	76.7		77.7		1.3%
Magnesium-mg/L		0205154-01	32.9		32.8		0.3%
Potassium-mg/L		0205154-01	7.08		7.16		1.1%
Sodium-mg/L		0205154-01	158		158		0.0%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0004013-05		2	2.07	103.5%	
Magnesium-mg/L		0004013-05		2	2.22	111.0%	
Potassium-mg/L		0004013-05		2	1.79	89.5%	
Sodium-mg/L		0004013-05		2	1.80	90.0%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0205154

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
WATER							
Alkalinity, Bicarbonate-mg/L as CaCO		0004025-01			<2.00		
Alkalinity, Carbonate-mg/L as CaCO		0004026-01			<0.100		
Alkalinity, Hydroxide-mg/L as CaCO		0004027-01			<0.10		
Chloride-mg/L		0003965-01			<5.00		
SULFATE, 375.4-mg/L		0004028-01			<0.5		
Total Dissolved Solids (TDS)-mg/L		0003957-01			<5.0		
DUPLICATE		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
WATER							
Alkalinity, Bicarbonate-mg/L as CaCO		0205153-01	360		359		0.3%
Alkalinity, Carbonate-mg/L as CaCO		0205153-01	0		<0.100		0.0%
Alkalinity, Hydroxide-mg/L as CaCO		0205153-01	0		<0.10		0.0%
SULFATE, 375.4-mg/L		0205153-01	244		250		2.4%
Total Dissolved Solids (TDS)-mg/L		0205153-01	1200		1170		2.5%
MS		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
WATER							
Chloride-mg/L		0205115-01	461	500	948	97.4%	
MSD		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
WATER							
Chloride-mg/L		0205115-01	461	500	957	99.2%	0.9%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
WATER							
Alkalinity, Bicarbonate-mg/L as CaCO		0004025-04		0.05	0.0496	99.2%	
Alkalinity, Carbonate-mg/L as CaCO		0004026-04		0.05	0.0496	99.2%	
Alkalinity, Hydroxide-mg/L as CaCO		0004027-04		0.05	0.0496	99.2%	
Chloride-mg/L		0003965-04		5000	4960	99.2%	
SULFATE, 375.4-mg/L		0004028-04		50	51.6	103.2%	

RICE OPERATING COMPANY
JUNCTION BOX DISCLOSURE FORM

COPY

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
BD	F-17	F	17	21S	37E	Lea	Box Has Not Been Built Yet		

LAND TYPE: BLM _____ STATE _____ FEE LANDOWNER Millard Deck Estate OTHER _____

Depth to Groundwater 75 feet NMOCD SITE ASSESSMENT RANKING SCORE: 10

Date Started 9/17/2002 Date Completed not complete OCD Witness No

Soil Excavated 0 cubic yards Excavation Length 0 Width 0 Depth 0 feet

Soil Disposed 0 cubic yards Offsite Facility n/a Location n/a

FINAL ANALYTICAL RESULTS: Sample Date n/a Sample Depth n/a

Procure 5-point composite sample of bottom and 4-point composite sample of sidewalls. TPH, BTEX and Chloride laboratory test results completed by using an approved lab and testing procedures pursuant to NMOCD guidelines.

Sample Location	Benzene mg/kg	Toluene mg/kg	Ethyl Benzene mg/kg	Total Xylenes mg/kg	GRO mg/kg	DRO mg/kg	Chlorides mg/kg
Vadose Zone Samples Will Be Included With Final Closure Report							

General Description of Remedial Action: Site was delineated vertically and laterally with a backhoe. Chloride impact was consistent vertically, while TPH was visible to 11' bgs.

The site was bored on 11/18/02 and chloride was found to impact groundwater with no indications of TPH. A cased monitor well was installed and the groundwater has been sampled and analyzed quarterly (see annual groundwater report for results). ROC has contracted a hydrologic consultant to assist ROC in developing a remediation plan for the vadose zone at groundwater-impacted sites with the ultimate objective being final closure.

CHLORIDE FIELD TESTS

LOCATION	DEPTH (ft)	ppm
Vertical	3	6001
	5	1591
	11	1749
	13	3273
10' S *	7	2401
	11	4278
Soil Bore	20	5197
	50	2133
	70	1209
	75	425

* During excavation of this trench, an older box site was found; The bore was conducted close to this

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DATE 1/21/2003 PRINTED NAME Kristin Farris
SIGNATURE *Kristin Farris* TITLE Project Scientist

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 0995

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

RE: 2002 MONITOR WELL REPORT/SAMPLING SUMMARY
BD SWD SYSTEM
LEA COUNTY, NEW MEXICO

Mr. Olson:

Rice Operating Company (ROC) takes this opportunity to submit the 2002 Monitor Well Report for the Blinebry-Drinkard (BD) Salt Water Disposal System. There are 4 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.

Site Name	Unit/Letter	Section	Township/Range
J-26 jct.	J	26	T21S, R37E
Zachary Hinton jct.	O	12	T22S, R37E
F-17 jct.	F	17	T21S, R37E
I-27 jct.	I	27	T22S, R37E

In 2002, the Zachary Hinton monitor well was sampled by Environmental Plus, Inc. of Eunice, and also by ROC. The 2002 sampling events for J-26, F-17, and I-27 were conducted by ROC. 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 and R. T. Hicks Consultants, Ltd. of Albuquerque have been contracted by ROC to prioritize the junction box disclosure sites and to generate work plans for remediation of the vadose zone. 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 BD Salt Water Disposal System and has not ownership of any portion of pipeline, well, or facility. The BD 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

ANALYTICAL REPORT

Prepared for:

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

Project: F-17 Jct.
PO#: 505
Order#: G0205154
Report Date: 12/11/2002

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#: G0205154
Project: None Given
Project Name: F-17 Jct.
Location: BD

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>
0205154-01	MW 1	WATER	12/2/02 10:45	12/2/02 20:40	See COC	See COC
	<u>Lab Testing:</u>	Rejected: No		Temp: 3.5 C		
	Cations					
	Alkalinity, Bicarbonate					
	Alkalinity, Carbonate					
	Alkalinity, Hydroxide					
	Chloride					
	SULFATE, 375.4					
	Total Dissolved Solids (TDS)					
0205154-02	MW 1	WATER	12/2/02 10:45	12/2/02 20:40	See COC	See COC
	<u>Lab Testing:</u>	Rejected: No		Temp: 3.5 C		
	8021B/5030 BTEX					

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0205154
 Project: None Given
 Project Name: F-17 Jct.
 Location: BD

Lab ID: 0205154-02

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
0004008-02		12/9/02 14:39	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	96%	80	120
Bromofluorobenzene	94%	80	120

Approval: *Raland K Tuttle* 12-10-02
 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#: G0205154
Project: None Given
Project Name: F-17 Jct.
Location: BD

Lab ID: 0205154-01
Sample ID: MW 1

Cations

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution</u> <u>Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date</u> <u>Prepared</u>	<u>Date</u> <u>Analyzed</u>	<u>Analyst</u>
Calcium	76.7	mg/L	10	0.10	6010B	12/10/2002	12/10/02	SM
Magnesium	32.9	mg/L	10	0.010	6010B	12/10/2002	12/10/02	SM
Potassium	7.08	mg/L	10	0.50	6010B	12/10/2002	12/10/02	SM
Sodium	158	mg/L	100	1.0	6010B	12/10/2002	12/10/02	SM

Approval: *Raland K Tuttle* 12-11-02
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#: G0205154
Project: None Given
Project Name: F-17 Jct.
Location: BD

Lab ID: 0205154-01
Sample ID: MW 1

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>
Alkalinity, Bicarbonate	144	mg/L as CaCO	1	2.00	310.1	12/10/02	SB
Alkalinity, Carbonate	<0.100	mg/L as CaCO	1	0.100	310.1	12/10/02	SB
Alkalinity, Hydroxide	<0.10	mg/L as CaCO	1	0.10	310.1	12/10/02	SB
Chloride	354	mg/L	1	5.00	9253	12/4/02	SB
SULFATE, 375.4	114	mg/L	10	5.0	375.4	12/10/02	SB
Total Dissolved Solids (TDS)	1020	mg/L	1	5.0	160.1	12/3/02	TAL

Approval: Raland K Tuttle 12-11-02
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#: G0205154

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Benzene-mg/L		0004008-02			<0.001		
Ethylbenzene-mg/L		0004008-02			<0.001		
Toluene-mg/L		0004008-02			<0.001		
p/m-Xylene-mg/L		0004008-02			<0.001		
o-Xylene-mg/L		0004008-02			<0.001		
MS		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Benzene-mg/L		0205197-10	0	0.1	0.100	100.0%	
Ethylbenzene-mg/L		0205197-10	0	0.1	0.102	102.0%	
Toluene-mg/L		0205197-10	0	0.1	0.102	102.0%	
p/m-Xylene-mg/L		0205197-10	0	0.2	0.215	107.5%	
o-Xylene-mg/L		0205197-10	0	0.1	0.103	103.0%	
MSD		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Benzene-mg/L		0205197-10	0	0.1	0.100	100.0%	0.0%
Ethylbenzene-mg/L		0205197-10	0	0.1	0.100	100.0%	2.0%
Toluene-mg/L		0205197-10	0	0.1	0.101	101.0%	1.0%
p/m-Xylene-mg/L		0205197-10	0	0.2	0.207	103.5%	3.8%
o-Xylene-mg/L		0205197-10	0	0.1	0.101	101.0%	2.0%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Benzene-mg/L		0004008-05		0.1	0.097	97.0%	
Ethylbenzene-mg/L		0004008-05		0.1	0.100	100.0%	
Toluene-mg/L		0004008-05		0.1	0.100	100.0%	
p/m-Xylene-mg/L		0004008-05		0.2	0.214	107.0%	
o-Xylene-mg/L		0004008-05		0.1	0.104	104.0%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0205154

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0004013-02			<0.010		
Magnesium-mg/L		0004013-02			<0.001		
Potassium-mg/L		0004013-02			<0.050		
Sodium-mg/L		0004013-02			<0.010		
DUPLICATE		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0205154-01	76.7		77.7		1.3%
Magnesium-mg/L		0205154-01	32.9		32.8		0.3%
Potassium-mg/L		0205154-01	7.08		7.16		1.1%
Sodium-mg/L		0205154-01	158		158		0.0%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0004013-05		2	2.07	103.5%	
Magnesium-mg/L		0004013-05		2	2.22	111.1%	
Potassium-mg/L		0004013-05		2	1.79	89.5%	
Sodium-mg/L		0004013-05		2	1.80	90.0%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0205154

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Alkalinity, Bicarbonate-mg/L as CaCO		0004025-01			<2.00		
Alkalinity, Carbonate-mg/L as CaCO		0004026-01			<0.100		
Alkalinity, Hydroxide-mg/L as CaCO		0004027-01			<0.10		
Chloride-mg/L		0003965-01			<5.00		
SULFATE, 375.4-mg/L		0004028-01			<0.5		
Total Dissolved Solids (TDS)-mg/L		0003957-01			<5.0		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Alkalinity, Bicarbonate-mg/L as CaCO		0205153-01	360		359		0.3%
Alkalinity, Carbonate-mg/L as CaCO		0205153-01	0		<0.100		0.0%
Alkalinity, Hydroxide-mg/L as CaCO		0205153-01	0		<0.10		0.0%
SULFATE, 375.4-mg/L		0205153-01	244		250		2.4%
Total Dissolved Solids (TDS)-mg/L		0205153-01	1200		1170		2.5%
MS	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0205115-01	461	500	948	97.4%	
MSD	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0205115-01	461	500	957	99.2%	0.9%
SRM	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Alkalinity, Bicarbonate-mg/L as CaCO		0004025-04		0.05	0.0496	99.2%	
Alkalinity, Carbonate-mg/L as CaCO		0004026-04		0.05	0.0496	99.2%	
Alkalinity, Hydroxide-mg/L as CaCO		0004027-04		0.05	0.0496	99.2%	
Chloride-mg/L		0003965-04		5000	4960	99.2%	
SULFATE, 375.4-mg/L		0004028-04		50	51.6	103.2%	

DRILLING LOG	Site Name/Location	BORING/WELL INFORMATION			Logged by: Eades
RICE Operating Company 122 West Taylor Hobbs, New Mexico 88240 (505) 393-9174	Jct. F-17 17-T21S-R37E BD SWD System Lea County, NM	Well No. MW 1	Date Drilled: 11-18-02	Driller: Eades	Completion: Packed with bentonite; grouted at surface.
		Well Depth: 85'	Boring Depth: 85'	Well Material: PVC	
		Casing Length: 88'	Boring Diameter: 2"	Casing Size: 2"	
		Screen Length: 20'	Drilling Method: Air Rotary	Slot Size: N/A	

DEPTH	SUBSURFACE LITHOLOGY	SAMPLE TYPE	Test Results (ppm)		REMARKS	Boring
			Cl ⁻	TPH		
0	Ground surface		Titrate	EPA 418.1		
	Top Soil					
5	Caliche	Grab	2,212		grout	
10	Tan caliche and loam chunks	Grab	492			
15	Sand	Grab	2,412			
20	Red sand	Grab	5,197			
21	Sand and Sandstone Stringers					2" P V C
25	Red Sand	Grab	3,152			
30	Tan caliche powder	Grab	4,628			
34	Sand					
35	Tan sand	Grab	2,508		bentonite	
36	Sand and Sandstone Stringers					
40	Tan Sand	Grab	352			
45	Tan Sand	Grab	2,420			
50	Reddish-brown sand	Grab	2,133			
55	Sandy Gravel	Grab	2,665			
60	Reddish-brown sand	Grab	1,905			
64	Sand and Sandstone Stringer					
65	Tan sand and Caliche	Grab	1,800			
70	Tan sand and caliche moist	Grab	1,209		screen	
75	Tan sand with rocks, moist	Grab	425			
80					water	
85	Sand and Sandstone Stringers					