

1R - 427-62

Annual GW Mon. REPORTS

DATE:
2007



Highlander Environmental Corp.

Midland, Texas

CERTIFIED MAIL

RETURN RECEIPT NO. 7002 3150 0005 0508 7713

March 7, 2008

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

RECEIVED
2008 MAR 31 PM 4 51

Re: 2007 Annual Groundwater Summary Report & Project Status Report, Rice Operating Company, Eunice Monument Eumont (EME) Saltwater Disposal System (SWD) A-2 Release, Unit A, Section 2, T-20-S, R-36-E, Lea County, New Mexico, NMOCD CASE #1R0427-62

Dear Mr. Price:

Highlander Environmental Corp. (Highlander) submits the following 2007 Annual Groundwater Summary Report for the Rice Operating Company (ROC), A-2 Release, located in the Eunice Monument Eumont (EME) Salt Water Disposal System.

Background

On August 26, 2003, a release was discovered, 1,055 feet west of the A-2 Junction. According to the form C-141 (Initial) filed with the NMOCD, the release was due to a crack on a 6-inch asbestos/concrete line. An estimated 15 barrels of produced water was released. Regional groundwater information indicated that the depth to groundwater is approximately 50-90 feet below ground surface (bgs).

Initial soil sampling performed in April 2004, indicated residual subsurface chloride impact. On January 2, 2004, a hollow stem auger unit was utilized to conduct one soil boring at the leak source area at the site. Chloride concentrations did not decline with depth, and the site was disclosed to the OCD as a site with potential groundwater impact on January 14, 2004. The soil boring was backfilled with bentonite and drill cuttings.

On July 21, 2006, ROC submitted an ICP to Mr. Wayne Price of the NMOCD-Santa Fe office for review. Mr. Price approved the ICP in a letter dated August 9, 2006.

Between October 10 and October 20, 2006, Highlander personnel were onsite to oversee the installation of three monitor wells (MW-1 through MW-3) within, up, and down gradient of the release area. Visual measurements of the site indicated the release area was approximately 25 feet by 25 feet. Soil samples were collected every 5 feet utilizing a split spoon sampler, and field screened for chlorides. Selected samples were placed in laboratory supplied containers and delivered under chain-of-custody control for chloride analysis by EPA method 300.0. Analytical results indicated the subsurface soils in monitor well MW-1 exhibited only slightly elevated chlorides, primarily confined to near surface. Monitor wells had soil concentrations of greater than 250 mg/kg at the saturated zone approximately 40 feet bgs, indicating an impact from the regional groundwater.

The initial groundwater sampling (November 1, 2006) for the three monitor wells showed elevated chloride levels ranging from 2,950 mg/L in MW-2 (downgradient) to 4,250 mg/L in MW-3 (upgradient). In addition, TDS ranged from 4,990 mg/L in MW-2 to 7,680 mg/L in MW-3. The BTEX concentrations were below reporting limits for each of the monitor wells. In comparing the chloride concentration analysis data with other water quality in the area, specifically the ROC EME D-1 (AP-67), which is directly downgradient of the Climax Chemical Plant Site, it appears the chloride concentrations at the site are consistent with regional groundwater in the area. The EME D-1 data indicates the background chloride concentrations range from 7,910 mg/L to 12,900 mg/L in areas outside the initial release area.

On May 22, 2007, ROC submitted a Corrective Action Plan (CAP) for the site to Mr. Wayne Price of the NMOCD-Santa Fe office for review. The CAP proposed preparation and revegetation of the surface soils in order to provide an infiltration barrier. Based on a visual inspection and subsurface drilling, the area of the release to be revegetated is approximately 25 feet by 25 feet. Mr. Price approved the CAP in a meeting with ROC and Highlander on July 18, 2007, with the exception that the clay liner be installed at a depth of 4 feet bgs instead of the proposed 3 feet bgs.

Between October 11 and October 29, 2007, ROC oversaw the excavation and removal of the overburden around the source release area. An area measuring 25 feet by 25 feet by 5 feet deep was excavated with approximately 96 cubic yards of soil transported offsite for disposal at the Sundance disposal facility in Eunice, New Mexico. The remaining excavated soils were blended with clean soil and tested for chlorides. The laboratory sample result indicated the chloride levels were 880 mg/kg, which is conducive for growing native grasses. Prior to backfilling of the excavation, a one foot thick clay layer was placed in the bottom of the excavation and compacted. The density of the compacted clay measured 94.9%. Upon completion of the compaction, the blended soils were placed back within the excavation and brought up to grade. On November 6, 2007, the entire disturbed area (approximately 9,000 square feet) was reseeded with native vegetation and is monitored for growth.



Monitor Well Sampling

The monitor wells were sampled on a quarterly basis. Prior to sampling, the monitor wells were gauged and approximately three casing volumes of water were purged from the wells prior to sampling. The pump and associated tubing were decontaminated with a laboratory grade detergent and rinsed with deionized water. Cumulative water level measurements and purge volumes for the monitor wells are included in the Tables Section of this report.

The wells were also inspected for the presence of phase-separated hydrocarbons (PSH). Groundwater samples were collected as soon as possible after the groundwater returned to its static level. Groundwater samples were collected using clean disposable polyethylene bailers and disposable line. The samples were transferred into labeled and preserved containers provided by the laboratory. The samples were delivered under proper chain-of-custody control to Environmental Labs of Texas, Inc., Odessa, Texas and/or Cardinal Labs of Hobbs, New Mexico. The groundwater samples were analyzed for major anions, by methods 310.1, 9253 and 375.4, cations by method 6010B, Total Dissolved Solids (TDS) by method 160.1 and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) by method EPA 8021B. Copies of the laboratory reports are enclosed in Appendix A.

Monitor Well Sample Results

The chloride concentrations for the three monitor wells were elevated throughout the year and have ranged from a low of 2,500 mg/L in downgradient MW-2 in December 2007 to 8,750 mg/L in upgradient MW-3 in February 2007. The chloride concentrations for the three wells were relatively stable throughout the year. The water quality shows background levels throughout the site with some upgradient groundwater degradation in MW-3. In comparing the chloride concentration analysis data with other water quality in the area, specifically the ROC EME D-1, it appears the chloride concentrations at the site are consistent with regional groundwater degradation in the area. The EME D-1 data indicates the TDS ranges from 7,910 mg/L to 12,900 mg/L in areas outside the initial release area.

In 2007, there were no BTEX constituents detected at or above reporting limits for any of the monitor wells. Cumulative analytical data is summarized in the Table Section of this report.

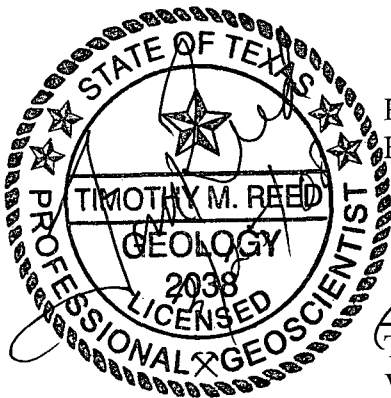
Conclusions

1. In 2007, there were no BTEX constituents at or above the New Mexico Water Quality Control Commission (WQCC) standards.
2. Chloride concentrations for the three monitor wells were elevated through the year and have ranged from a low of 2,500 mg/L in downgradient MW-2 to 8,750 mg/L in upgradient MW-3 throughout the year. The water quality shows background levels throughout the site with some upgradient



groundwater degradation in MW-3. In comparing the chloride concentration analysis data with other water quality in the area, specifically the ROC EME D-1 (AP-67), which is directly downgradient of the Climax Chemical Plant Site, it appears the chloride concentrations at the site are consistent with regional groundwater degradation in the area. The EME D-1 data indicates the background chloride concentrations range from 7,910 mg/L to 12,900 mg/L in areas outside the initial release area.

3. For 2008, quarterly monitoring at this site will continue and an annual report will be prepared and submitted to the NMOCD.



Respectfully Submitted,
HIGHLANDER ENVIRONMENTAL CORP.

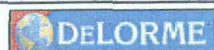
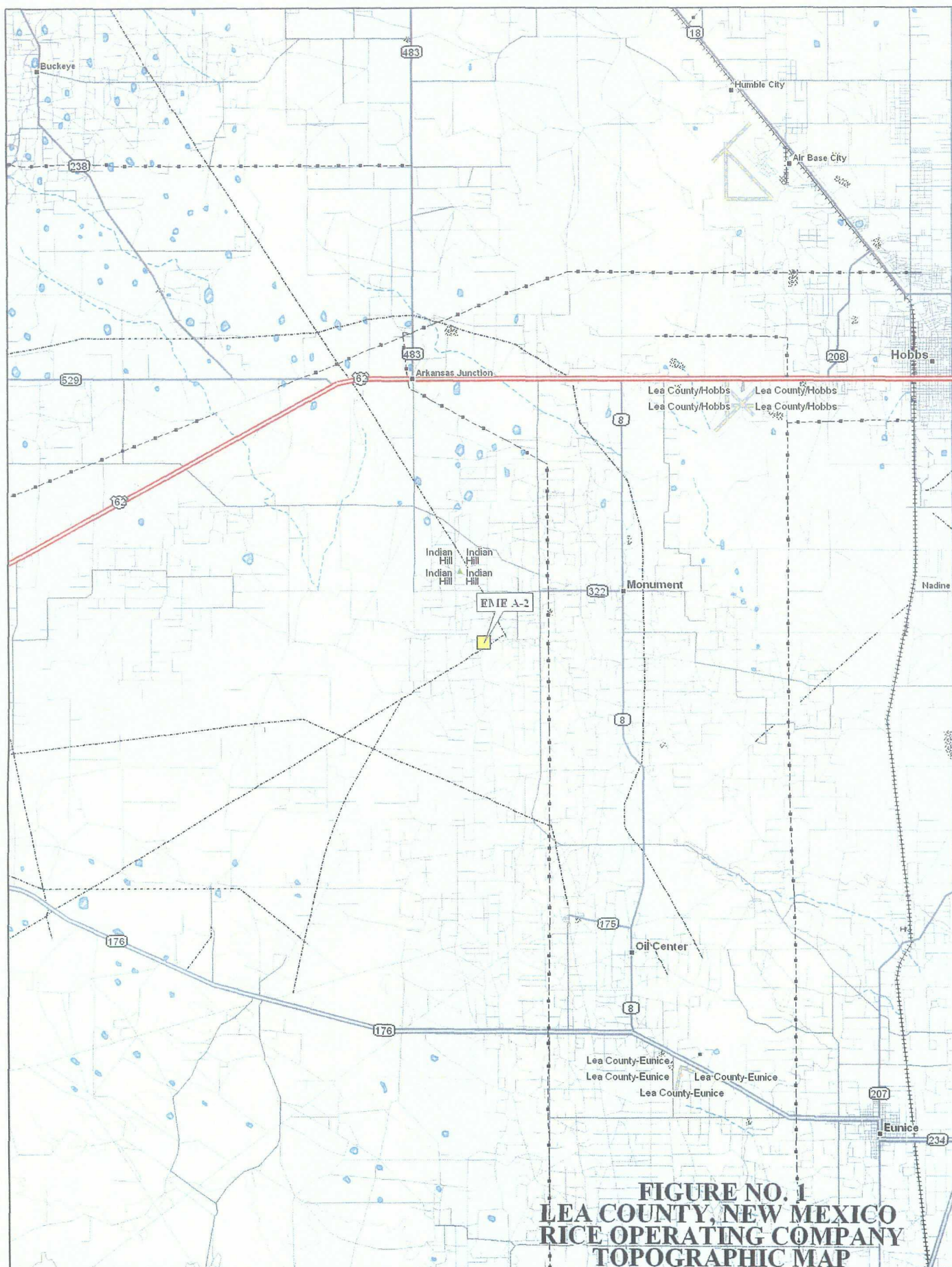
A handwritten signature in cursive script that reads "Tim Reed". The signature is written over a horizontal line.

Timothy M. Reed, P.G.
Vice President

cc: ROC, Edward Hansen – NMOCD
Enclosures: Figures, Tables, Laboratory Analysis



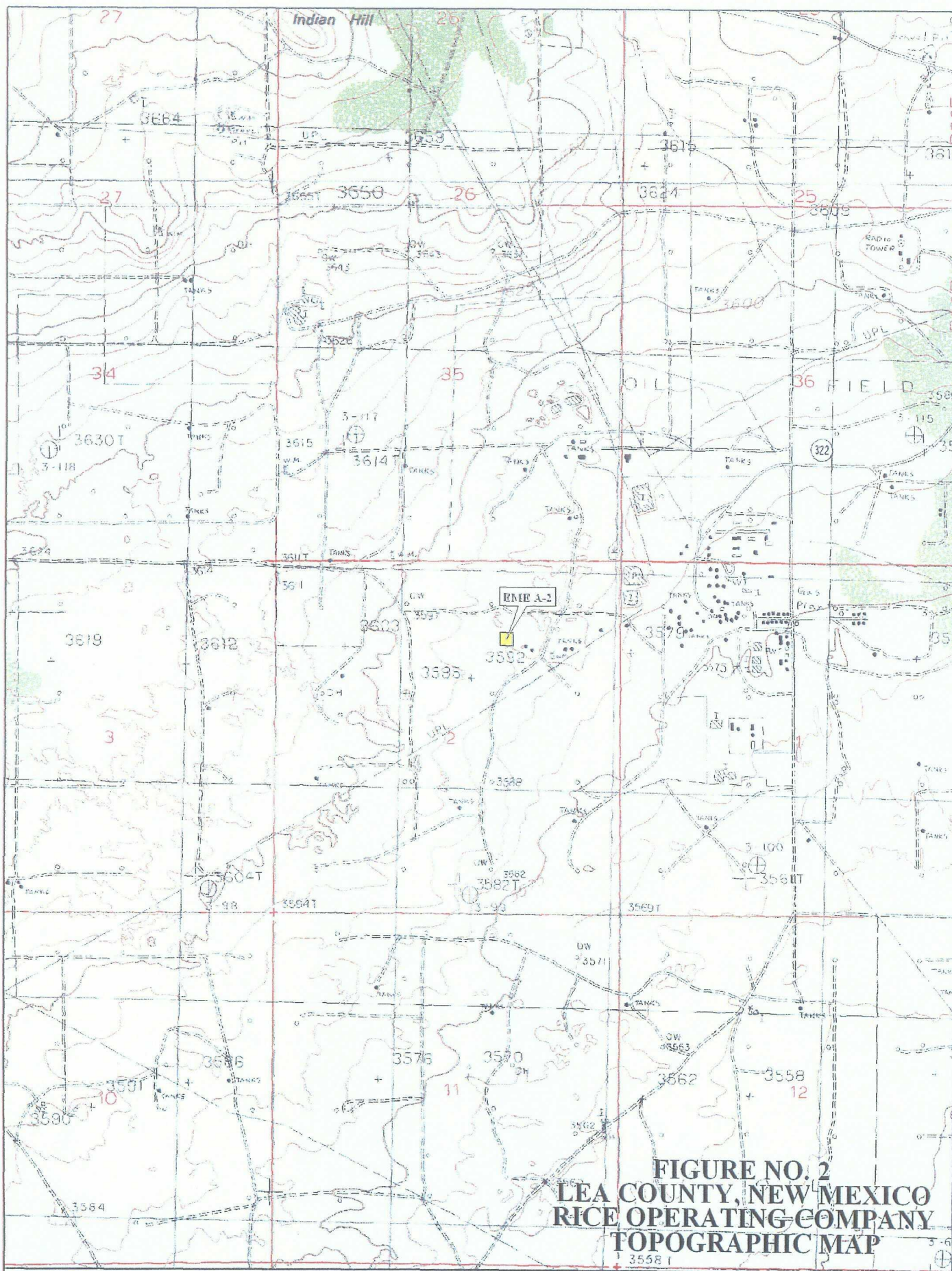
FIGURES



© 2002 DeLorme. 3-D TopoQuads ©. Data copyright of content owner.
www.delorme.com

Scale 1 : 200,000
 1" = 3.16 mi







PAD
APACHE STATE
"A" #7

MW-3

MW-1

MW-2

O-H POWER LINE

RICE BPL

O-H POWER LINE

FIGURE NO. 3

LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY
EME A-2 JUNCTION
SITE MAP

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE:
3/30/07

DWN. BY:
JJ

FILE:
C:\PROJECTS\EME A-2 JUNCTION SITE MAP

SCALE: 1" = 50'



⊙ MONITOR WELL LOCATIONS

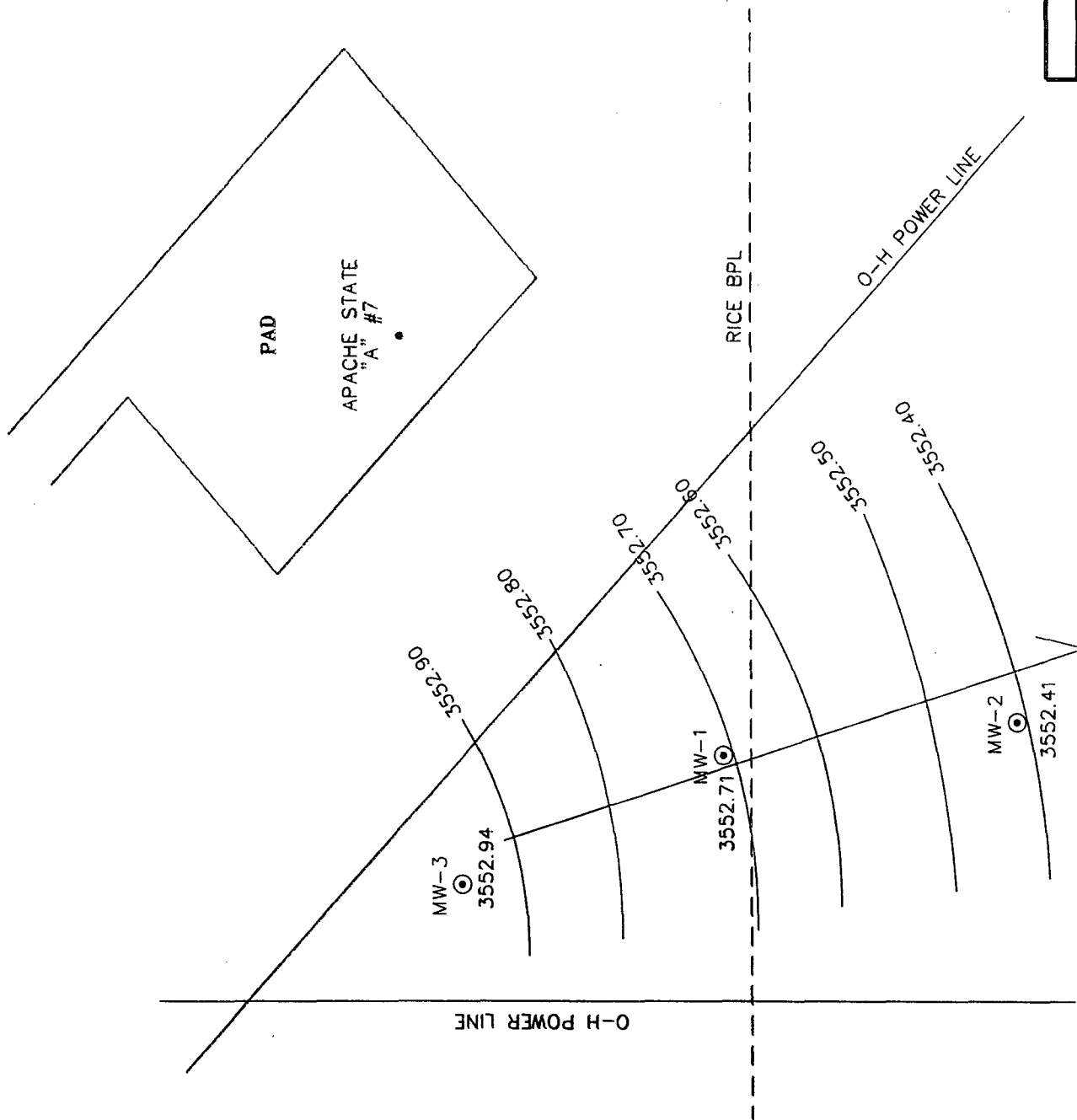


FIGURE NO. 4

LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY

EME A-2 JUNCTION
GROUNDWATER GRADIENT MAP
GAUGED ON 11-1-06

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DRAWN BY:
RC
FILE:
C:\PROJECTS\4-3
BPL MAP

SCALE: 1" = 50'
0 50'

⊙ MONITOR WELL LOCATIONS
C.I. = 0.10'

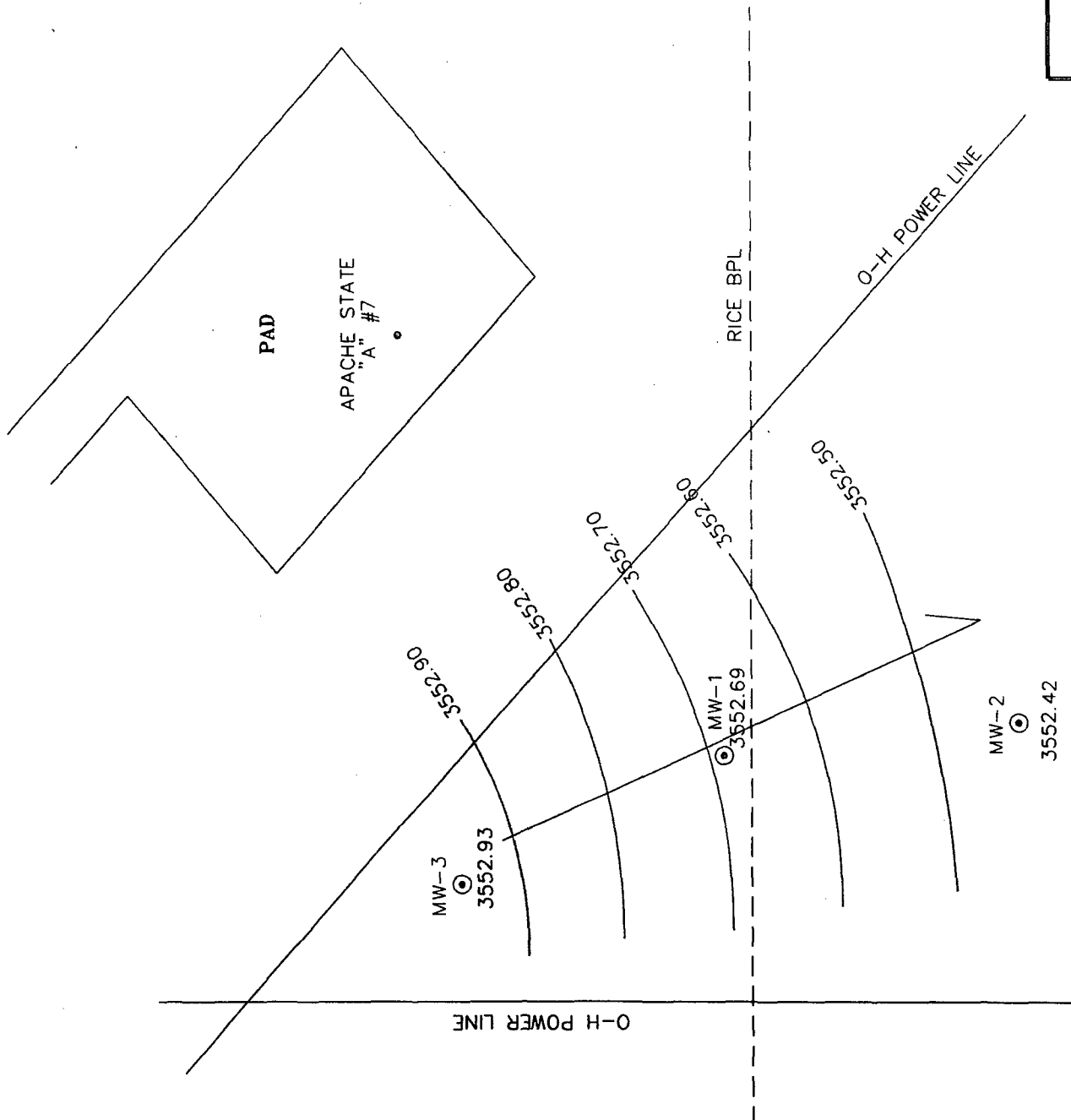


FIGURE NO. 5

LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY

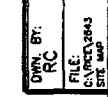
EME A-2 JUNCTION
GROUNDWATER GRADIENT MAP
GAUGED ON 2-13-07

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DWN. BY:
RC
FILE:
RCV: 2/13/07
SPE: MJD

SCALE: 1" = 50'
0 50'

⊙ MONITOR WELL LOCATIONS
C.I. = 0.10'



SCALE: 1" = 50'

LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY

EME A-2 JUNCTION
GROUNDWATER GRADIENT MAP
GAUGED ON 6-8-07

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

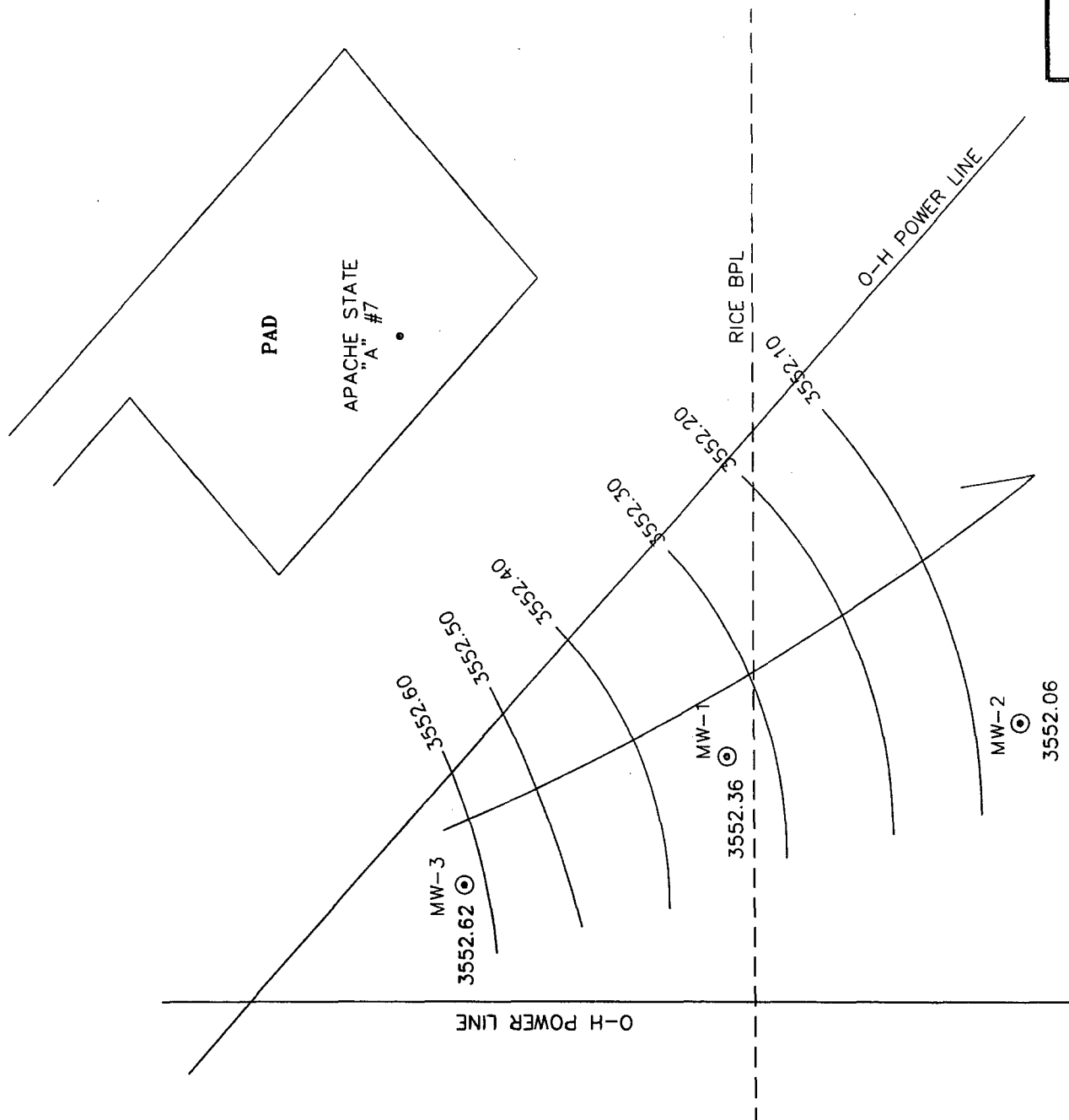


FIGURE NO. 7

LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY

EME A-2 JUNCTION
GROUNDWATER GRADIENT MAP
GAUGED ON 8-21-07

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DRAWN BY:
RC
FILE:
C:\PROJECTS\843
SITE MAP

SCALE: 1" = 50'
0 50'

● MONITOR WELL LOCATIONS
C.I. = 0.10'

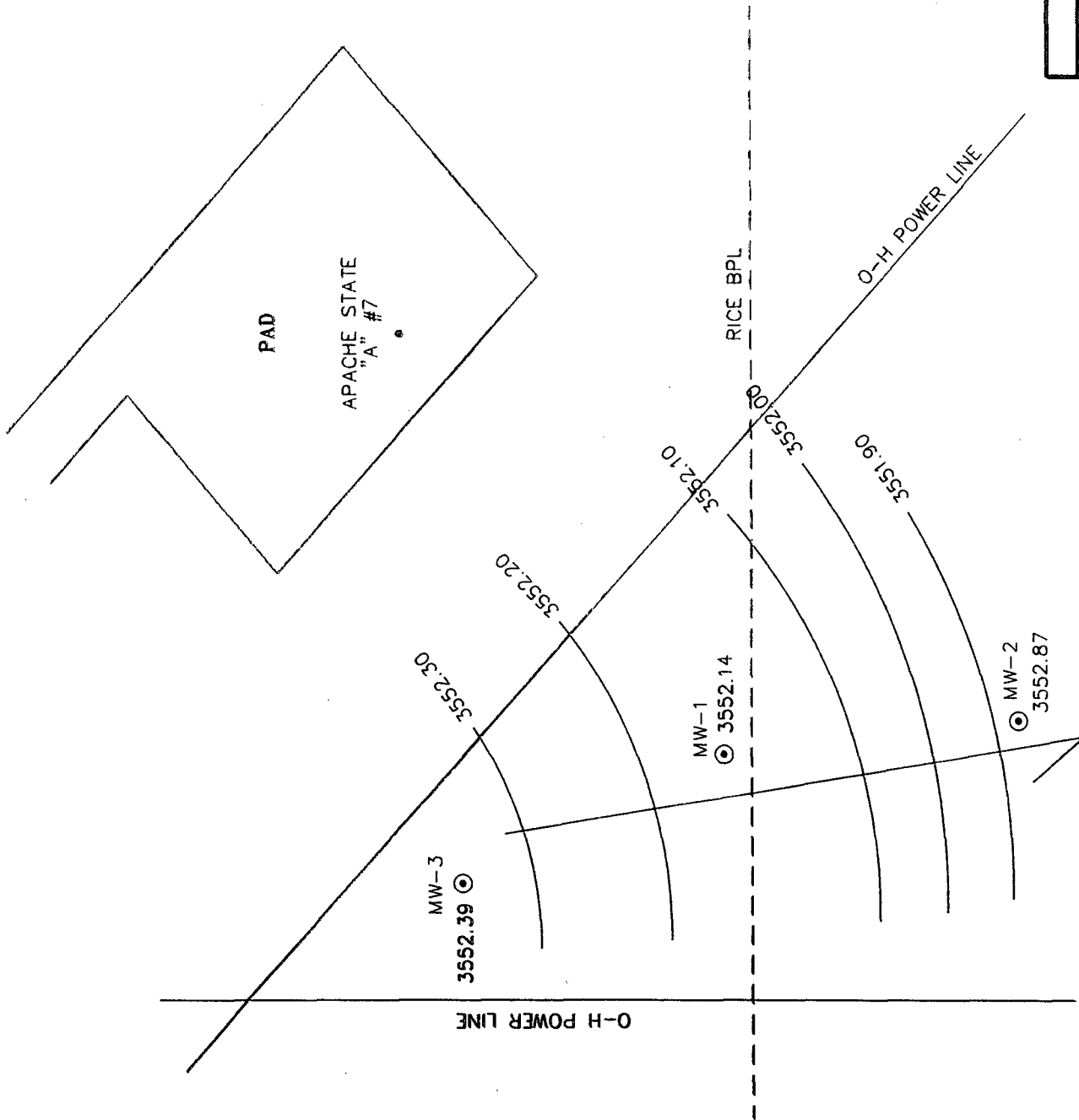


FIGURE NO. 8

LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY

EME A-2 JUNCTION
GROUNDWATER GRADIENT MAP

GAUGED ON 12-4-07

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

Dwn. By:
RC
FILE:
C:\projects\2003
BPL map

SCALE: 1" = 50'
0 50'

⊙ MONITOR WELL LOCATIONS
C.I. = 0.10'

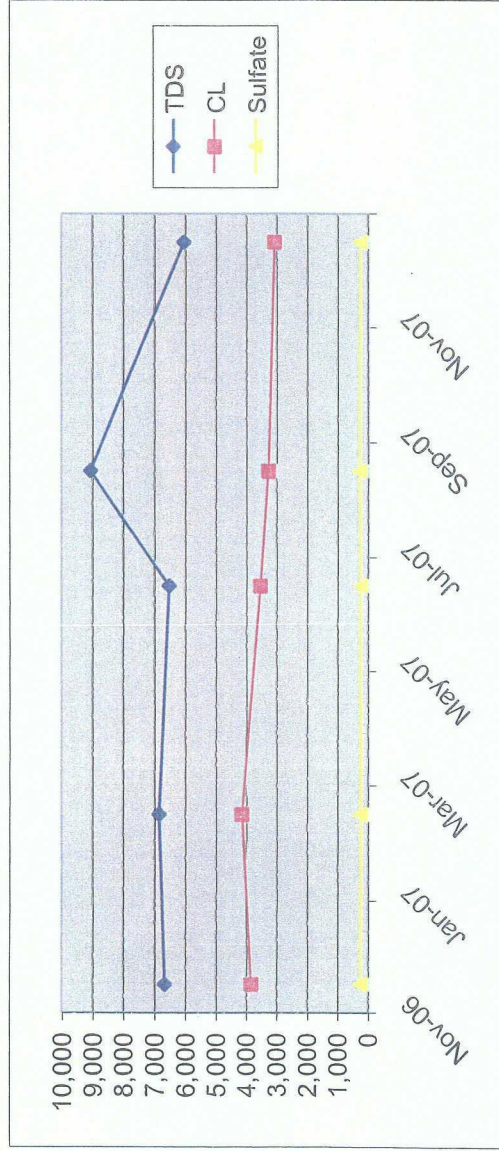
TABLES

Rice Engineering Operating

EME Jct. A-2

Lea County, New Mexico

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
1	43.74	54.18	1.70	6	11/01/06	3,820	6,650	<0.001	<0.001	<0.001	<0.001	225	Clear no odor
1	43.76	54.16	1.70	6	02/13/07	4,120	6,830	<0.001	<0.001	<0.001	<0.001	222	Clear no odor
1	43.81	54.16	1.70	6	06/08/07	3,510	6,510	<0.001	<0.001	<0.001	<0.001	225	Clear no odor
1	44.09	54.16	1.60	6	08/21/07	3,239	9,045	<0.004	<0.004	<0.004	<0.012	249	Clear no odor
1	44.31	54.16	1.60	6	12/04/07	3,050	6,033	<0.001	<0.001	<0.001	<0.003	235	Clear no odor



Rice Engineering Operating
EME Jct. A-2
Lea County, New Mexico

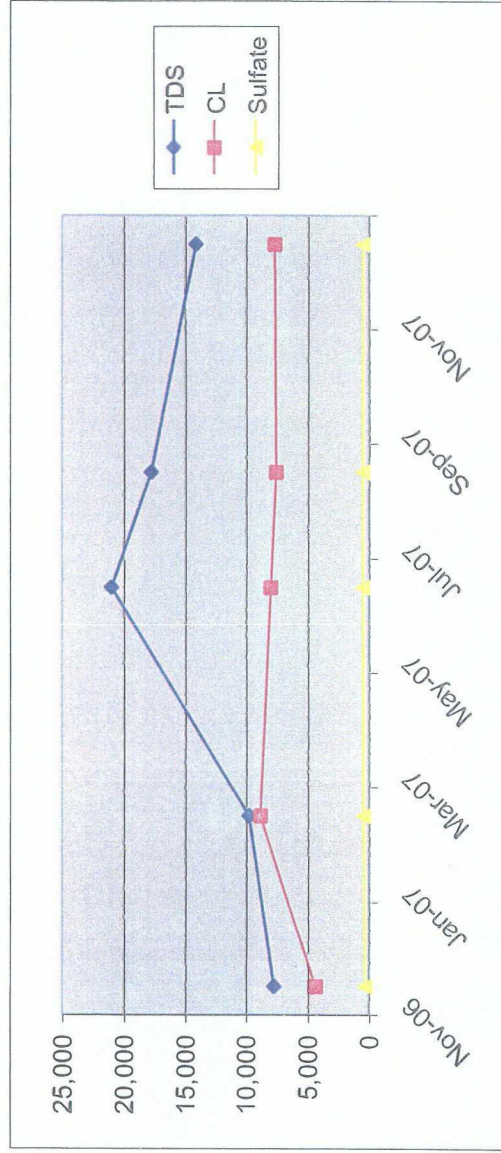
MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
2	43.08	54.34	1.80	6	11/01/06	2,950	4,990	<0.001	<0.001	<0.001	<0.001	241	Clear no odor
2	43.07	54.30	1.80	6	02/13/07	3,060	4,540	<0.001	<0.001	<0.001	<0.001	226	Clear no odor
2	43.14	54.30	1.80	6	06/08/07	2,630	6,600	<0.001	<0.001	<0.001	<0.001	740	Clear no odor
2	43.43	54.30	1.70	6	08/21/07	2,549	7,819	<0.004	<0.004	<0.004	<0.012	268	Clear no odor
2	43.62	54.30	1.70	6	12/04/07	2,500	5,111	<0.001	<0.001	<0.001	<0.003	292	Clear no odor



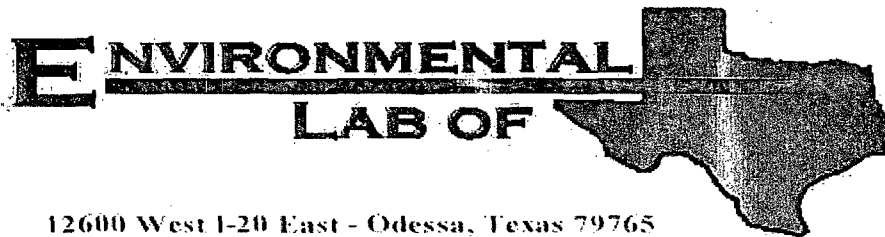
Rice Engineering Operating
EME Jct. A-2

Lea County, New Mexico

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate	Comments
3	42.34	55.14	2.00	8	11/01/06	4,250	7,680	<0.001	<0.001	<0.001	<0.001	232	Clear no odor
3	42.35	55.14	2.00	8	02/13/07	8,750	9,740	<0.001	<0.001	<0.001	<0.001	376	Clear no odor
3	42.40	55.14	2.00	8	06/08/07	7,900	21,000	<0.001	<0.001	<0.001	<0.001	450	Clear no odor
3	42.66	55.14	2.00	8	08/21/07	7,448	17,755	<0.004	<0.004	<0.004	<0.012	432	Clear no odor
3	42.89	55.14	2.00	8	12/04/07	7,600	14,088	<0.001	<0.001	<0.001	<0.003	411	Clear no odor



APPENDIX A



12600 West I-20 East - Odessa, Texas 79765

A Xenco Laboratories Company

Analytical Report

Prepared for:

Kristin Farris-Pope

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: EME A-2 Leak

Project Number: None Given

Location: T20S R36E Sec 2 A ~ Lea County New Mexico

Lab Order Number: 7B16008

Report Date: 02/28/07

Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #1	7B16008-01	Water	02/13/07 10:20	02-16-2007 09:40
Monitor Well #2	7B16008-02	Water	02/13/07 09:35	02-16-2007 09:40
Monitor Well #3	7B16008-03	Water	02/13/07 11:25	02-16-2007 09:40

Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 (7B16008-01) Water									
Benzene	ND	0.00100	mg/L	1	EB72104	02/21/07	02/22/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		110 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		119 %	80-120		"	"	"	"	
Monitor Well #2 (7B16008-02) Water									
Benzene	ND	0.00100	mg/L	1	EB72104	02/21/07	02/22/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		106 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		116 %	80-120		"	"	"	"	
Monitor Well #3 (7B16008-03) Water									
Benzene	ND	0.00100	mg/L	1	EB72104	02/21/07	02/22/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		105 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %	80-120		"	"	"	"	

Environmental Lab of Texas

A Xenco Laboratories Company

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 2 of 10

Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 (7B16008-01) Water									
Total Alkalinity	300	2.00	mg/L	1	EB71701	02/17/07	02/17/07	EPA 310.1M	
Chloride	4120	50.0	"	100	EB72203	02/22/07	02/22/07	EPA 300.0	
Total Dissolved Solids	6830	10.0	"	1	EB72001	02/16/07	02/17/07	EPA 160.1	
Sulfate	222	50.0	"	100	EB72203	02/22/07	02/22/07	EPA 300.0	
Monitor Well #2 (7B16008-02) Water									
Total Alkalinity	216	2.00	mg/L	1	EB71701	02/17/07	02/17/07	EPA 310.1M	
Chloride	3060	50.0	"	100	EB72203	02/22/07	02/22/07	EPA 300.0	
Total Dissolved Solids	4540	10.0	"	1	EB72001	02/16/07	02/17/07	EPA 160.1	
Sulfate	226	50.0	"	100	EB72203	02/22/07	02/22/07	EPA 300.0	
Monitor Well #3 (7B16008-03) Water									
Total Alkalinity	260	2.00	mg/L	1	EB71701	02/17/07	02/17/07	EPA 310.1M	
Chloride	8750	100	"	200	EB72203	02/22/07	02/22/07	EPA 300.0	
Total Dissolved Solids	9740	10.0	"	1	EB72001	02/16/07	02/17/07	EPA 160.1	
Sulfate	376	100	"	200	EB72203	02/22/07	02/22/07	EPA 300.0	

Environmental Lab of Texas

A Xenco Laboratories Company

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Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Total Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 (7B16008-01) Water									
Calcium	945	20.2	mg/L	250	EB72209	02/22/07	02/22/07	EPA 6010B	
Magnesium	364	9.00	"	"	"	"	"	"	
Potassium	17.7	3.00	"	50	"	"	"	"	
Sodium	921	10.8	"	250	"	"	"	"	
Monitor Well #2 (7B16008-02) Water									
Calcium	704	20.2	mg/L	250	EB72209	02/22/07	02/22/07	EPA 6010B	
Magnesium	202	1.80	"	50	"	"	"	"	
Potassium	13.2	0.600	"	10	"	"	"	"	
Sodium	823	10.8	"	250	"	"	"	"	
Monitor Well #3 (7B16008-03) Water									
Calcium	1990	81.0	mg/L	1000	EB72209	02/22/07	02/22/07	EPA 6010B	
Magnesium	791	9.00	"	250	"	"	"	"	
Potassium	21.9	3.00	"	50	"	"	"	"	
Sodium	1560	43.0	"	1000	"	"	"	"	

Environmental Lab of Texas

A Xenco Laboratories Company

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 4 of 10

Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EB72104 - EPA 5030C (GC)

Blank (EB72104-BLK1)

Prepared: 02/21/07 Analyzed: 02/22/07

Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	54.0		ug/l	50.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	59.2		"	50.0		118	80-120			

LCS (EB72104-BS1)

Prepared: 02/21/07 Analyzed: 02/22/07

Benzene	0.0592	0.00100	mg/L	0.0500		118	80-120			
Toluene	0.0557	0.00100	"	0.0500		111	80-120			
Ethylbenzene	0.0564	0.00100	"	0.0500		113	80-120			
Xylene (p/m)	0.111	0.00100	"	0.100		111	80-120			
Xylene (o)	0.0500	0.00100	"	0.0500		100	80-120			
Surrogate: a,a,a-Trifluorotoluene	55.5		ug/l	50.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	58.8		"	50.0		118	80-120			

Calibration Check (EB72104-CCV1)

Prepared: 02/21/07 Analyzed: 02/23/07

Benzene	50.0		ug/l	50.0		100	80-120			
Toluene	46.9		"	50.0		93.8	80-120			
Ethylbenzene	48.8		"	50.0		97.6	80-120			
Xylene (p/m)	95.2		"	100		95.2	80-120			
Xylene (o)	42.7		"	50.0		85.4	80-120			
Surrogate: a,a,a-Trifluorotoluene	47.7		"	50.0		95.4	80-120			
Surrogate: 4-Bromofluorobenzene	54.6		"	50.0		109	80-120			

Matrix Spike (EB72104-MS1)

Source: 7B16006-01

Prepared: 02/21/07 Analyzed: 02/23/07

Benzene	0.0507	0.00100	mg/L	0.0500	ND	101	80-120			
Toluene	0.0463	0.00100	"	0.0500	ND	92.6	80-120			
Ethylbenzene	0.0470	0.00100	"	0.0500	ND	94.0	80-120			
Xylene (p/m)	0.0930	0.00100	"	0.100	ND	93.0	80-120			
Xylene (o)	0.0408	0.00100	"	0.0500	ND	81.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	45.6		ug/l	50.0		91.2	80-120			
Surrogate: 4-Bromofluorobenzene	48.9		"	50.0		97.8	80-120			

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Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB72104 - EPA 5030C (GC)										
Matrix Spike Dup (EB72104-MSD1)		Source: 7B16006-01		Prepared: 02/21/07 Analyzed: 02/23/07						
Benzene	0.0513	0.00100	mg/L	0.0500	ND	103	80-120	1.96	20	
Toluene	0.0482	0.00100	"	0.0500	ND	96.4	80-120	4.02	20	
Ethylbenzene	0.0492	0.00100	"	0.0500	ND	98.4	80-120	4.57	20	
Xylene (p/m)	0.0969	0.00100	"	0.100	ND	96.9	80-120	4.11	20	
Xylene (o)	0.0426	0.00100	"	0.0500	ND	85.2	80-120	4.32	20	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	44.3		ug/l	50.0		88.6	80-120			
Surrogate: <i>4</i> -Bromofluorobenzene	53.3		"	50.0		107	80-120			

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Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB71701 - General Preparation (WetChem)										
Blank (EB71701-BLK1)			Prepared & Analyzed: 02/17/07							
Total Alkalinity	ND	2.00	mg/L							
LCS (EB71701-BS1)			Prepared & Analyzed: 02/17/07							
Total Alkalinity	192	2.00	mg/L				85-115			
Bicarbonate Alkalinity	230	2.00	"	200		115	85-115			
Duplicate (EB71701-DUP1)			Source: 7B16006-01		Prepared & Analyzed: 02/17/07					
Total Alkalinity	280	2.00	mg/L		290			3.51	20	
Reference (EB71701-SRM1)			Prepared & Analyzed: 02/17/07							
Total Alkalinity	264		mg/L	250		106	90-110			
Batch EB72001 - Filtration Preparation										
Blank (EB72001-BLK1)			Prepared: 02/16/07 Analyzed: 02/17/07							
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (EB72001-DUP1)			Source: 7B16006-01RE1		Prepared: 02/16/07 Analyzed: 02/17/07					
Total Dissolved Solids	6260	10.0	mg/L		5970			4.74	20	
Duplicate (EB72001-DUP2)			Source: 7B16009-03RE1		Prepared: 02/16/07 Analyzed: 02/17/07					
Total Dissolved Solids	16900	10.0	mg/L		16900			0.00	20	
Batch EB72203 - General Preparation (WetChem)										
Blank (EB72203-BLK1)			Prepared & Analyzed: 02/22/07							
Sulfate	ND	0.500	mg/L							
Chloride	ND	0.500	"							

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Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB72203 - General Preparation (WetChem)										
LCS (EB72203-BS1)				Prepared & Analyzed: 02/22/07						
Chloride	10.7	0.500	mg/L	10.0		107	80-120			
Sulfate	11.1	0.500	"	10.0		111	80-120			
Calibration Check (EB72203-CCV1)				Prepared & Analyzed: 02/22/07						
Sulfate	10.3		mg/L	10.0		103	80-120			
Chloride	10.3		"	10.0		103	80-120			
Duplicate (EB72203-DUP1)				Source: 7B16008-02		Prepared & Analyzed: 02/22/07				
Sulfate	237	50.0	mg/L		226			4.75	20	
Chloride	3040	50.0	"		3060			0.656	20	
Duplicate (EB72203-DUP2)				Source: 7B16010-01		Prepared & Analyzed: 02/22/07				
Chloride	573	12.5	mg/L		587			2.41	20	
Sulfate	246	12.5	"		249			1.21	20	
Matrix Spike (EB72203-MS1)				Source: 7B16008-02		Prepared & Analyzed: 02/22/07				
Sulfate	1270	50.0	mg/L	1000	226	104	80-120			
Chloride	4180	50.0	"	1000	3060	112	80-120			
Matrix Spike (EB72203-MS2)				Source: 7B16010-01		Prepared & Analyzed: 02/22/07				
Chloride	872	12.5	mg/L	250	587	114	80-120			
Sulfate	527	12.5	"	250	249	111	80-120			

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Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Total Metals by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB72209 - 6010B/No Digestion										
Blank (EB72209-BLK1)			Prepared & Analyzed: 02/22/07							
Calcium	ND	0.0810	mg/L							
Magnesium	ND	0.0360	"							
Potassium	ND	0.0600	"							
Sodium	ND	0.0430	"							
Calibration Check (EB72209-CCV1)			Prepared & Analyzed: 02/22/07							
Calcium	2.08		mg/L	2.00		104	85-115			
Magnesium	1.80		"	2.00		90.0	85-115			
Potassium	1.75		"	2.00		87.5	85-115			
Sodium	1.79		"	2.00		89.5	85-115			
Duplicate (EB72209-DUP1)			Source: 7B16006-01	Prepared & Analyzed: 02/22/07						
Calcium	346	20.2	mg/L		360			3.97	20	
Magnesium	182	1.80	"		183			0.548	20	
Potassium	50.4	0.600	"		38.2			27.5	20	
Sodium	1800	21.5	"		1980			9.52	20	R2

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Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Notes and Definitions

R2 The RPD exceeded the acceptance limit.
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference
LCS Laboratory Control Spike
MS Matrix Spike
Dup Duplicate

Report Approved By: Brent Barron

Date: 2/28/2007

Brent Barron, Laboratory Director/Corp. Technical Director
Celey D. Keene, Org. Tech Director
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer
Jeanne Mc Murrey, Inorg. Tech Director

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CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Phone: 432-563-1800
Fax: 432-563-1713

Project Name: EME A-2 Leak

Project #:

Project Loc: T20S R36E Sec2 A ~ Lea County New Mexico

洪口

Fax No: (505) 397-1471
e-mail: rozanne@valornet.com

Sampler Signature: Rozanne Johnson (505)631-9310.

[illegible]

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Rice
 Date/ Time: 2/16/07 0940
 Lab ID #: 7B16008
 Initials: DM

Sample Receipt Checklist

				Client Initials
#1 Temperature of container/ cooler?	<u>Yes</u>	No	-1.5 °C	
#2 Shipping container in good condition?	<u>Yes</u>	No		
#3 Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No		
#4 Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	Not Present	
#5 Chain of Custody present?	<u>Yes</u>	No	Not Present	
#6 Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7 Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8 Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No		
#9 Container label(s) legible and intact?	<u>Yes</u>	No	ID written on Cont./ Lid	
#10 Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No	Not Applicable	
#11 Containers supplied by ELOT?	<u>Yes</u>	No		
#12 Samples in proper container/ bottle?	<u>Yes</u>	No		
#13 Samples properly preserved?	<u>Yes</u>	No	See Below	
#14 Sample bottles intact?	<u>Yes</u>	No	See Below	
#15 Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16 Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17 Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
#18 All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19 Subcontract of sample(s)?	<u>Yes</u>	No	See Below	
#20 VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	
	<u>Yes</u>	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

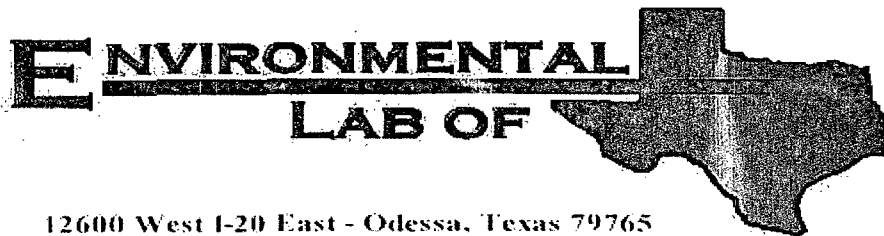
Regarding: _____

Corrective Action Taken:

Check all that Apply:

☐
☐
☐

See attached e-mail/ fax
 Client understands and would like to proceed with analysis
 Cooling process had begun shortly after sampling event



12600 West I-20 East - Odessa, Texas 79765

A Xenco Laboratories Company

Analytical Report

Prepared for:

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

Project: EME A-2 Leak

Project Number: None Given

Location: T20S R36E Sec2 A ~ Lea County New Mexico

Lab Order Number: 7F11016

Report Date: 06/27/07

Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Monitor Well #1	7F11016-01	Water	06/08/07 10:40	06-11-2007 16:30
Monitor Well #2	7F11016-02	Water	06/08/07 09:55	06-11-2007 16:30
Monitor Well #3	7F11016-03	Water	06/08/07 11:45	06-11-2007 16:30

Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 (7F11016-01) Water									
Benzene	ND	0.00100	mg/L	1	EF71312	06/13/07	06/15/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		99.0 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.6 %	80-120		"	"	"	"	
Monitor Well #2 (7F11016-02) Water									
Benzene	ND	0.00100	mg/L	1	EF71312	06/13/07	06/15/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		99.2 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.8 %	80-120		"	"	"	"	
Monitor Well #3 (7F11016-03) Water									
Benzene	ND	0.00100	mg/L	1	EF71312	06/13/07	06/15/07	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		101 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.8 %	80-120		"	"	"	"	

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Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 (7F11016-01) Water									
Total Alkalinity	230	2.00	mg/L	1	EF71403	06/14/07	06/14/07	EPA 310.1M	
Chloride	3510	50.0	"	100	EF71504	06/15/07	06/15/07	EPA 300.0	
Total Dissolved Solids	6510	10.0	"	1	EF71519	06/12/07	06/15/07	EPA 160.1	
Sulfate	225	50.0	"	100	EF71504	06/15/07	06/15/07	EPA 300.0	
Monitor Well #2 (7F11016-02) Water									
Total Alkalinity	280	2.00	mg/L	1	EF71403	06/14/07	06/14/07	EPA 310.1M	
Chloride	2630	500	"	1000	EF71504	06/15/07	06/15/07	EPA 300.0	
Total Dissolved Solids	6600	10.0	"	1	EF71520	06/13/07	06/15/07	EPA 160.1	
Sulfate	740	500	"	1000	EF71504	06/15/07	06/15/07	EPA 300.0	
Monitor Well #3 (7F11016-03) Water									
Total Alkalinity	190	2.00	mg/L	1	EF71403	06/14/07	06/14/07	EPA 310.1M	
Chloride	7900	100	"	200	EF71504	06/15/07	06/15/07	EPA 300.0	
Total Dissolved Solids	21000	10.0	"	1	EF71520	06/13/07	06/15/07	EPA 160.1	
Sulfate	450	100	"	200	EF71504	06/15/07	06/15/07	EPA 300.0	

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Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Total Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Monitor Well #1 (7F11016-01) Water									
Calcium	783	40.5	mg/L	500	EF71902	06/19/07	06/19/07	EPA 6010B	
Magnesium	295	3.60	"	100	"	"	"	"	
Potassium	12.3	0.600	"	10	"	"	"	"	
Sodium	667	21.5	"	500	"	"	"	"	
Monitor Well #2 (7F11016-02) Water									
Calcium	541	40.5	mg/L	500	EF71902	06/19/07	06/19/07	EPA 6010B	
Magnesium	213	1.80	"	50	"	"	"	"	
Potassium	8.16	3.00	"	"	"	"	"	"	
Sodium	453	21.5	"	500	"	"	"	"	
Monitor Well #3 (7F11016-03) Water									
Calcium	1680	40.5	mg/L	500	EF71902	06/19/07	06/19/07	EPA 6010B	
Magnesium	546	3.60	"	100	"	"	"	"	
Potassium	21.8	0.600	"	10	"	"	"	"	
Sodium	1830	21.5	"	500	"	"	"	"	

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Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF71312 - EPA 5030C (GC)										
Blank (EF71312-BLK1)										
				Prepared: 06/13/07 Analyzed: 06/15/07						
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	46.1		ug/l	50.0		92.2	80-120			
Surrogate: 4-Bromofluorobenzene	41.1		"	50.0		82.2	80-120			
LCS (EF71312-BS1)										
				Prepared: 06/13/07 Analyzed: 06/15/07						
Benzene	0.0508	0.00100	mg/L	0.0500		102	80-120			
Toluene	0.0522	0.00100	"	0.0500		104	80-120			
Ethylbenzene	0.0541	0.00100	"	0.0500		108	80-120			
Xylene (p/m)	0.0945	0.00100	"	0.100		94.5	80-120			
Xylene (o)	0.0527	0.00100	"	0.0500		105	80-120			
Surrogate: a,a,a-Trifluorotoluene	49.2		ug/l	50.0		98.4	80-120			
Surrogate: 4-Bromofluorobenzene	47.4		"	50.0		94.8	80-120			
Calibration Check (EF71312-CCV1)										
				Prepared: 06/13/07 Analyzed: 06/15/07						
Benzene	0.0493		mg/L	0.0500		98.6	80-120			
Toluene	0.0501		"	0.0500		100	80-120			
Ethylbenzene	0.0485		"	0.0500		97.0	80-120			
Xylene (p/m)	0.0906		"	0.100		90.6	80-120			
Xylene (o)	0.0506		"	0.0500		101	80-120			
Surrogate: a,a,a-Trifluorotoluene	48.6		ug/l	50.0		97.2	80-120			
Surrogate: 4-Bromofluorobenzene	46.8		"	50.0		93.6	80-120			
Matrix Spike (EF71312-MS1)										
				Source: 7F12005-03		Prepared: 06/13/07 Analyzed: 06/15/07				
Benzene	0.0494	0.00100	mg/L	0.0500	ND	98.8	80-120			
Toluene	0.0505	0.00100	"	0.0500	ND	101	80-120			
Ethylbenzene	0.0534	0.00100	"	0.0500	ND	107	80-120			
Xylene (p/m)	0.0936	0.00100	"	0.100	ND	93.6	80-120			
Xylene (o)	0.0523	0.00100	"	0.0500	ND	105	80-120			
Surrogate: a,a,a-Trifluorotoluene	50.4		ug/l	50.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	47.1		"	50.0		94.2	80-120			

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Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF71312 - EPA 5030C (GC)										
Matrix Spike Dup (EF71312-MSD1)		Source: 7F12005-03		Prepared: 06/13/07 Analyzed: 06/15/07						
Benzene	0.0478	0.00100	mg/L	0.0500	ND	95.6	80-120	3.29	20	
Toluene	0.0495	0.00100	"	0.0500	ND	99.0	80-120	2.00	20	
Ethylbenzene	0.0523	0.00100	"	0.0500	ND	105	80-120	1.89	20	
Xylene (p/m)	0.0913	0.00100	"	0.100	ND	91.3	80-120	2.49	20	
Xylene (o)	0.0506	0.00100	"	0.0500	ND	101	80-120	3.88	20	
Surrogate: a,a,a-Trifluorotoluene	49.5		ug/l	50.0		99.0	80-120			
Surrogate: 4-Bromofluorobenzene	47.1		"	50.0		94.2	80-120			

Environmental Lab of Texas

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Page 6 of 11

Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Notes
Batch EF71403 - General Preparation (WetChem)								
Blank (EF71403-BLK1)				Prepared & Analyzed: 06/14/07				
Total Alkalinity	ND	2.00	mg/L					
LCS (EF71403-BS1)				Prepared & Analyzed: 06/14/07				
Bicarbonate Alkalinity	170	2.00	mg/L	200		85.0 85-115		
Duplicate (EF71403-DUP1)				Source: 7F11010-01 Prepared & Analyzed: 06/14/07				
Total Alkalinity	320	2.00	mg/L		320		0.00 20	
Reference (EF71403-SRM1)				Prepared & Analyzed: 06/14/07				
Total Alkalinity	250		mg/L	250		100 90-110		
Batch EF71504 - General Preparation (WetChem)								
Blank (EF71504-BLK1)				Prepared & Analyzed: 06/15/07				
Chloride	ND	0.500	mg/L					
Sulfate	ND	0.500	"					
LCS (EF71504-BS1)				Prepared & Analyzed: 06/15/07				
Chloride	9.83	0.500	mg/L	10.0		98.3 80-120		
Sulfate	10.1	0.500	"	10.0		101 80-120		
Calibration Check (EF71504-CCV1)				Prepared & Analyzed: 06/15/07				
Sulfate	12.0		mg/L	10.0		120 80-120		
Chloride	9.07		"	10.0		90.7 80-120		
Duplicate (EF71504-DUP1)				Source: 7F11014-01 Prepared & Analyzed: 06/15/07				
Sulfate	104	12.5	mg/L		104		0.00 20	
Chloride	734	12.5	"		731		0.410 20	

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Page 7 of 11

Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch EF71504 - General Preparation (WetChem)									
Duplicate (EF71504-DUP2)		Source: 7F11017-01		Prepared & Analyzed: 06/15/07					
Sulfate	76.7	5.00	mg/L		77.6		1.17	20	
Chloride	67.9	5.00	"		69.9		2.90	20	
Matrix Spike (EF71504-MS1)		Source: 7F11014-01		Prepared & Analyzed: 06/15/07					
Sulfate	354	12.5	mg/L	250	104	100	80-120		
Chloride	992	12.5	"	250	731	104	80-120		
Matrix Spike (EF71504-MS2)		Source: 7F11017-01		Prepared & Analyzed: 06/15/07					
Chloride	168	5.00	mg/L	100	69.9	98.1	80-120		
Sulfate	174	5.00	"	100	77.6	96.4	80-120		
Batch EF71519 - General Preparation (WetChem)									
Blank (EF71519-BLK1)		Prepared: 06/12/07 Analyzed: 06/15/07							
Total Dissolved Solids	ND	10.0	mg/L						
Duplicate (EF71519-DUP1)		Source: 7F11009-01		Prepared: 06/12/07 Analyzed: 06/15/07					
Total Dissolved Solids	24600	10.0	mg/L		23000		6.72	20	
Duplicate (EF71519-DUP2)		Source: 7F11014-03		Prepared: 06/12/07 Analyzed: 06/15/07					
Total Dissolved Solids	1380	10.0	mg/L		1340		2.94	20	
Batch EF71520 - General Preparation (WetChem)									
Blank (EF71520-BLK1)		Prepared: 06/13/07 Analyzed: 06/15/07							
Total Dissolved Solids	ND	10.0	mg/L						

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Page 8 of 11

Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF71520 - General Preparation (WetChem)										
Duplicate (EF71520-DUP1)		Source: 7F11016-03		Prepared: 06/13/07 Analyzed: 06/15/07						
Total Dissolved Solids	21800	10.0	mg/L		21000			3.74	20	
Duplicate (EF71520-DUP2)		Source: 7F12005-05		Prepared: 06/13/07 Analyzed: 06/15/07						
Total Dissolved Solids	512	10.0	mg/L		546			6.43	20	

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Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Total Metals by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF71902 - 6010B/No Digestion

Blank (EF71902-BLK1)

Prepared & Analyzed: 06/19/07

Calcium	ND	0.0810	mg/L							
Magnesium	ND	0.0360	"							
Potassium	ND	0.0600	"							
Sodium	ND	0.0430	"							

Calibration Check (EF71902-CCV1)

Prepared & Analyzed: 06/19/07

Calcium	2.04		mg/L	2.00		102	85-115			
Magnesium	2.00		"	2.00		100	85-115			
Potassium	2.13		"	2.00		106	85-115			
Sodium	2.04		"	2.00		102	85-115			

Duplicate (EF71902-DUP1)

Source: 7F11010-01

Prepared & Analyzed: 06/19/07

Calcium	956	40.5	mg/L		940			1.69	20	
Magnesium	337	3.60	"		346			2.64	20	
Potassium	29.9	0.600	"		30.9			3.29	20	
Sodium	2970	21.5	"		2940			1.02	20	

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Page 10 of 11


Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: EME A-2 Leak
Project Number: None Given
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference
LCS Laboratory Control Spike
MS Matrix Spike
Dup Duplicate

Report Approved By: 

Date: 6/27/2007

Brent Barron, Laboratory Director/Corp. Technical Director
Celey D. Keene, Org. Tech Director
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer
Jeanne Mc Murrey, Inorg. Tech Director

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Page 11 of 11

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Rice
 Date/ Time: 6-11-07 4:30
 Lab ID #: 7F11016
 Initials: al

Sample Receipt Checklist

Client Initials

#1 Temperature of container/ cooler?	<u>Yes</u>	No	<u>5.0</u> °C	
#2 Shipping container in good condition?	<u>Yes</u>	No		
#3 Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	Not Present	
#4 Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	Not Present	
#5 Chain of Custody present?	<u>Yes</u>	No		
#6 Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7 Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8 Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11 Containers supplied by ELOT?	<u>Yes</u>	No		
#12 Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13 Samples properly preserved?	<u>Yes</u>	No	See Below	
#14 Sample bottles intact?	<u>Yes</u>	No		
#15 Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16 Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17 Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18 All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19 Subcontract of sample(s)?	<u>Yes</u>	No	Not Applicable	
#20 VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

- Check all that Apply:
- ☐ See attached e-mail/ fax
 - ☐ Client understands and would like to proceed with analysis
 - ☐ Cooling process had begun shortly after sampling event



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

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: KRISTIN FARRIS-POPE
122 W. TAYLOR STREET
HOBBS, NM 88240
FAX TO: (505) 397-1471

Receiving Date: 08/22/07
Reporting Date: 08/27/07
Project Number: NOT GIVEN
Project Name: EME A-2 LEAK
Project Location: T20S-R36E-SEC2 A ~ LEA COUNTY -
NEW MEXICO

Sampling Date: 08/21/07
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AB

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		08/23/07	08/23/07	08/23/07	08/23/07
H13153-1	MONITOR WELL #1	<0.004	<0.004	<0.004	<0.012
H13153-2	MONITOR WELL #2	<0.004	<0.004	<0.004	<0.012
H13153-3	MONITOR WELL #3	<0.004	<0.004	<0.004	<0.012
Quality Control		0.096	0.085	0.086	0.264
True Value QC		0.100	0.100	0.100	0.300
% Recovery		96	85	86	88
Relative Percent Difference		0.9	1.8	0.8	2.8

METHOD: EPA SW-846 8021B

Chemist

Burgess J. Cooke

Date

8/27/07

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ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: KRISTIN FARRIS-POPE
122 W. TAYLOR STREET
HOBBS, NM 88240
FAX TO: (505) 397-1471

Receiving Date: 08/22/07
Reporting Date: 08/28/07
Project Owner: NOT GIVEN
Project Name: EME A-2 LEAK
Project Location: T20S-R36E-SEC2 A~LEA COUNTY, NM

Sampling Date: 08/21/07
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: HM/KS

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (μ S/cm)	T-Alkalinity (mgCaCO ₃ /L)
ANALYSIS DATE:		08/23/07	08/23/07	08/23/07	08/23/07	08/23/07	08/23/07
H13153-1	MONITOR WELL #1	789	845	290	7.2	9,950	208
H13153-2	MONITOR WELL #2	683	652	238	6.1	8,010	232
H13153-3	MONITOR WELL #3	1764	1913	605	13.5	20,700	184
Quality Control		NR	51.9	49.2	1.94	1414	NR
True Value QC		NR	50.0	50.0	2.00	1413	NR
% Recovery		NR	104	98.4	97.0	100	NR
Relative Percent Difference		NR	8.0	6.3	2.1	0.6	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
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		Cl ⁻ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:		08/23/07	08/23/07	08/23/07	08/23/07	08/23/07	08/23/07
H13153-1	MONITOR WELL #1	3239	249	0	254	6.72	9,045
H13153-2	MONITOR WELL #2	2549	268	0	283	6.86	7,819
H13153-3	MONITOR WELL #3	7448	432	0	224	6.62	17,755
Quality Control		520	25.4	NR	939	6.95	NR
True Value QC		500	25.0	NR	1000	7.00	NR
% Recovery		104	101	NR	93.9	99.3	NR
Relative Percent Difference		3.9	1.1	NR	1.4	< 0.1	NR

METHODS:	SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1
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Hope S. Manno
Chemist

08-28-07
Date

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<h1 style="margin: 0;">Cardinal Laboratories, Inc.</h1> <p>101 East Marland - Hobbs, New Mexico 88240 Tel (505) 393-2326 Fax (505) 393-2475</p>				<h2 style="margin: 0;">CHAIN-OF-CUSTODY AND ANALYSIS REQUEST</h2> <p>LAB Order ID # _____</p>																					
Company Name: RICE Operating Company Project Manager: Kristin Farris-Pope, Project Scientist Address: (Street, City, Zip) 122 W Taylor Street - Hobbs, New Mexico 88240 Phone #: (505) 393-9174 Fax #: (505) 393-1471				BILL TO Company: RICE Operating Company Address: (Street, City, Zip) 122 W Taylor Street - Hobbs, New Mexico 88240 Phone #: (505) 393-9174 Fax #: (505) 393-1471				PO# _____ Project Name: EME A-2 Leak Project Location: T20S-R36E-Sec2 A ~ Lea County - New Mexico				ANALYSIS REQUEST (Circle or Specify Method No.)													
Project Location: T20S-R36E-Sec2 A ~ Lea County - New Mexico Sample Signature: Rozanne Johnson (505) 631-9310 rozanne@valdomet.com				Matrix WATER SOIL AIR SLUDGE				Preservative Method HCL (2.4M VOA) HNO ₃ NaHSO ₄ H ₂ SO ₄ ICE (1-Litler HDPE) NONE				Sampling DATE (2007) 8-21 10:25 8-21 9:30 8-21 11:20				Analysis Request Details Turn Around Time ~ 24 Hours Chlorides Total Dissolved Solids Anions (Cl, SO ₄ , CO ₃ , HCO ₃) Cations (Ca, Mg, Na, K) Moisture Content BOD, TSS, pH Pesticides 8081A/608 PCB's 8082/608 GC/MS Semi. Vol. 8270C/625 GC/MS Vol. 8260B/624 RCI TCLP Pesticides TCLP Semi Volatiles TCLP Volatiles TCLP Metals Ag As Ba Cd Cr Pb Se Hg Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 PAH 8270C TPH 418.1/TX1005 / TX1005 Extended (C35)									
Field Code Monitor Well #1 Monitor Well #2 Monitor Well #3				Containers # CONTAINERS 3 3 3				Received by: Date: 8-22-07 Time: 1340 Rozanne Johnson				Phone Results Yes No				Fax Results Yes No				Additional Fax Number: _____					
Relinquished by: Rozanne Johnson				Received By: (Laboratory Staff) Date: 8-22-07 Time: 1340 Rozanne Johnson				REMARKS:				Relinquished by: Date: 8-22-07 Time: 1340 Rozanne Johnson				Delivered By: (Circle One) Sampler - UPS - Bus - Other:									
Sample Condition Cool Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				Checked By: (Initials) 802/07/145				Relinquished by: Date: 8-22-07 Time: 1340 Rozanne Johnson				Delivered By: (Circle One) Sampler - UPS - Bus - Other:													



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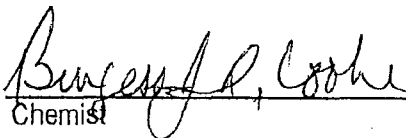
ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: KRISTIN FARRIS-POPE
122 W. TAYLOR STREET
HOBBS, NM 88240
FAX TO: (575) 397-1471

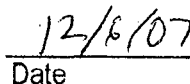
Receiving Date: 12/05/07
Reporting Date: 12/06/07
Project Number: NOT GIVEN
Project Name: EME A-2 LEAK
Project Location: T20S-R36E-SEC2 A ~ LEA COUNTY, NM

Sampling Date: 12/04/07
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: AB
Analyzed By: AB

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		12/06/07	12/06/07	12/06/07	12/06/07
H13851-1	MONITOR WELL #1	<0.001	<0.001	<0.001	<0.003
H13851-2	MONITOR WELL #2	<0.001	<0.001	<0.001	<0.003
H13851-3	MONITOR WELL #3	<0.001	<0.001	<0.001	<0.003
Quality Control		0.103	0.099	0.099	0.312
True Value QC		0.100	0.100	0.100	0.300
% Recovery		103	99	99	104
Relative Percent Difference		1.7	1.6	1.5	1.4

METHOD: EPA SW-846 8021B


Chemist


Date

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ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: KRISTIN FARRIS-POPE
122 W. TAYLOR STREET
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 12/05/07
Reporting Date: 12/11/07
Project Number: NOT GIVEN
Project Name: EME A-2 LEAK
Project Location: T20S-R36E-SEC2 A~LEA COUNTY, NM

Sampling Date: 12/04/07
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: AB
Analyzed By: HM/KS

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (u S/cm)	T-Alkalinity (mgCaCO ₃ /L)
ANALYSIS DATE:		12/10/07	12/10/07	12/10/07	12/10/07	12/07/07	12/07/07
H13851-1	MONITOR WELL #1	867	659	294	10.9	9,290	216
H13851-2	MONITOR WELL #2	779	559	234	9.30	7,880	240
H13851-3	MONITOR WELL #3	1,928	1,730	676	16.7	20,890	188
Quality Control		NR	49.2	50.8	2.88	1,404	NR
True Value QC		NR	50.0	50.0	3.00	1,413	NR
% Recovery		NR	98.5	102	96.0	99.4	NR
Relative Percent Difference		NR	< 0.1	1.6	12.4	1.3	NR

METHODS:	SM3500-Ca-D	3500-Mg E	8049	120.1	310.1
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	Cl ⁻ (mg/L)	SO ₄ (mg/L)	CO ₃ (mg/L)	HCO ₃ (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:	12/07/07	12/07/07	12/07/07	12/07/07	12/07/07	12/06/07
H13851-1	MONITOR WELL #1	3,050	235	0	264	6,033
H13851-2	MONITOR WELL #2	2,500	292	0	293	5,111
H13851-3	MONITOR WELL #3	7,600	411	0	229	14,088
Quality Control	500	23.4	NR	1000	7.04	NR
True Value QC	500	25.0	NR	1000	7.00	NR
% Recovery	100	93.5	NR	100	101	NR
Relative Percent Difference	< 0.1	18.0	NR	1.2	0.1	NR

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

12/11/07
Date

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