

1R - 427-177

**GENERAL  
CORRESPONDENCE**

**YEAR(S):**  
2007

**SENDER: COMPLETE THIS SECTION**

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- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece or on the front if space permits.

1. Article Addressed to:

Kristin Farris Pope  
Rice Operating Company  
122 West Taylor  
Hobbs, NM 88240

2. Article Number

(Transfer from service label)

7001 1940 0004 3929 4432

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✓ Maria Harrington 3/29/07

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# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**Mark E. Fesmire, P.E.**

Director

**Oil Conservation Division**

**CERTIFIED MAIL  
RETURN RECEIPT NO: 3929 4432**

**March 26, 2007**

Kristin Farris Pope  
Rice Operating Company  
122 West Taylor  
Hobbs, New Mexico 88240

**RE: REQUIREMENT TO SUBMIT ABATEMENT PLAN**

Dear Ms. Pope:

The New Mexico Oil Conservation Division (OCD) has determined after reviewing your Notification of Groundwater Impact for each of the following six sites:

- 1) Rice EME Sarah Phillips EOL  
Unit K, Section 33, T19S, R37E  
Lea County, New Mexico  
OCD Case #1R0427-17
- 2) Rice EME A-2  
Unit A, Section 2, T20S, R36E  
Lea County, New Mexico  
OCD Case #1R0427-62
- 3) Rice EME Jct. A-2-1  
Unit A, Section 2, T20S, R36E  
Lea County, New Mexico  
OCD Case #1R0427-177
- 4) Rice BD K-4  
Unit K, Section 4, T18S, R38E  
Lea County, New Mexico  
OCD Case #1R0459

- 5) Rice EME C-16 (1)  
Unit C, Section 16, T20S, R37E  
Lea County, New Mexico  
OCD Case #1R0476
- 6) Rice EME C-16 (2)  
Unit C, Section 16, T20S, R37E  
Lea County, New Mexico  
OCD Case #1R0477

that the Rice Operating Company (ROC) must submit for each of the six sites a separate Stage 1 Abatement Plan in accordance with OCD Rule 19 (19.15.1.19 NMAC) to investigate the ground water contamination at each of these sites. The Stage 1 Abatement Plans must be submitted to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office and must meet all the requirements specified in OCD Rule 19 (19.15.1.19 NMAC), including, but not limited to, the public notice and participation requirements specified in Rule 19G. The Stage 1 Abatement Plan is due sixty (60) days from the receipt by ROC of this written notice.

ROC's Stage 1 Abatement Plans must specifically meet all of the requirements specified in OCD Rule 19E.3, including, but not limited to, a site investigation work plan and monitoring program that will enable it to characterize the release using an appropriate number of isoconcentration maps and cross sections that depict the contamination that has been released from the sites and to provide the data necessary to select and design an effective abatement option. ROC may, if it chooses, concurrently submit a Stage 2 Abatement Plan that addresses appropriate proactive abatement options.

ROC should submit one paper copy and an electronic copy on CD for each of the Plans and for all future workplans and/or reports for each of the Plans. Please be sure to include the current corresponding OCD Case # on each of the respective Abatement Plans. An Abatement Plan # will be assigned as each of the Plans are submitted to the OCD. If you have any questions, please contact Edward J. Hansen of my staff at (505) 476-3489 or <mailto:edwardj.hansen@state.nm.us>.

Sincerely,



Wayne Price  
Environmental Bureau Chief

WP:EJH:ejh

cc: Chris Williams, OCD Hobbs District Supervisor  
Larry Johnson, OCD Hobbs

# **RICE** *Operating Company*

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

## **CERTIFIED MAIL**

**RETURN RECEIPT NO. 7005 3110 0000 2019 6388**

January 15, 2007

Mr. Wayne Price  
New Mexico Energy, Minerals, & Natural Resources  
Oil Conservation Division, Environmental Bureau  
1220 S. St. Francis Drive  
Santa Fe, New Mexico 87505

**RE: NOTIFICATION OF GROUNDWATER IMPACT**  
**Jct. A-2-1**  
**Eunice-Monument-Eumont (EME) SWD System**  
**Unit 'A', Sec. 2, T20S, R36E**

Mr. Price:

Rice Operating Company (ROC) notifies the Director of the New Mexico Oil Conservation Division (OCD), Environmental Bureau of groundwater impact at the above-referenced site in accordance with NM Rule 116. The remediation of this site may be subject to NM Rule 19 procedures.

As a result of the Junction Box Upgrade initial delineation conducted by ROC, OCD was notified of the potential for groundwater impact at this site on June 29, 2005. A Junction Box Disclosure Report was submitted to OCD on March 27, 2006.

ROC retained Highlander Environmental (Highlander) of Midland, Texas to address this site. On October 4, 2006 Highlander submitted an Investigation & Characterization Plan to OCD for additional delineation which was approved by OCD the same day. On October 11 and 13, delineation soil borings and three 2-inch monitoring wells were installed at the site. Groundwater was encountered at approximately 37 feet below ground surface. After appropriate development, the wells were sampled pursuant to OCD guidelines by a third party and Environmental Lab of Texas performed the analyses. Chloride, Sulfate, and Total Dissolved Solids (TDS) concentrations in all 3 wells exceed New Mexico Water Quality Control Commission standards; however, concentrations are highest in the background well (MW-2), up-gradient from the junction box site.

Hydrocarbon constituents (BTEX) were also detected in MW-1, but not in concentrations above the WQCC Human Health Standards. Highlander will present a remedy for this site in the submission of a Corrective Action Plan.

ROC is the service provider (agent) for the EME Salt Water Disposal System and has no ownership of any portion of the pipelines, wells, or facilities. The EME System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. Environmental remediation projects of this magnitude require System Partner AFE approval and work begins as funds are received.

Please accept this notification for the above-referenced site. Should you have any questions or concerns regarding this site, please do not hesitate to contact me.

RICE OPERATING COMPANY

A handwritten signature in black ink that reads "Kristin Farris Pope". The signature is written in a cursive, flowing style.

Kristin Farris Pope  
Project Scientist

enclosures: water analyses, well logs, survey map

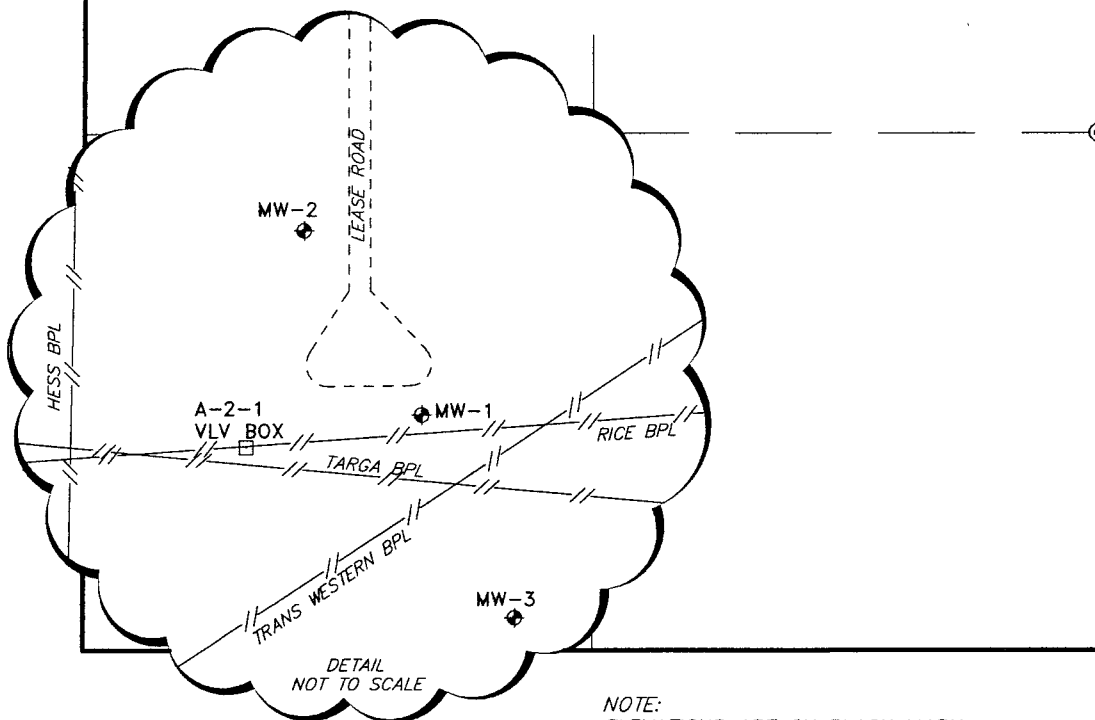
cc: SC, CDH, Highlander, file,

Mr. Chris Williams  
NMOCD, District 1 Office  
1625 N. French Drive  
Hobbs, NM 88240

SECTION 2, TOWNSHIP 20 SOUTH, RANGE 36 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.

T-19-S  
T-20-S

OWNER: STATE OF NEW MEXICO  
LESSEE: JAMES F. BYRD, et al.

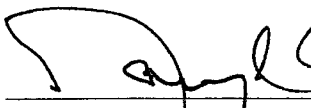


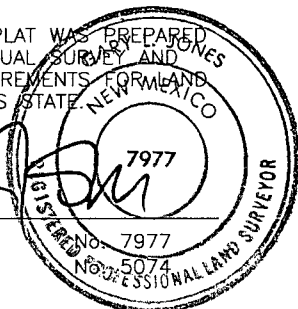
NEW MEXICO STATE PLANE COORDINATES (NAD83)  
TOP CASING

NOTE:  
ELEVATIONS ARE ON BLACK MARK  
ON NORTH SIDE OF PVC CASING.

WELL	NORTHING	EASTING	LATITUDE	LONGITUDE	ELEV.(PVC)	GROUND	ELEV.(CONC)
MW-1	585872.8	854134.9	N 32°36'23.5"	W 103°19'03.2"	3588.50'	3585.65'	3585.96'
MW-2	585957.2	854079.2	N 32°36'24.3"	W 103°19'03.9"	3587.86'	3585.58'	3585.79'
MW-3	585780.1	854179.3	N 32°36'22.5"	W 103°19'02.7"	3586.49'	3583.92'	3583.98'

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED  
FROM FIELD NOTES OF AN ACTUAL SURVEY AND  
MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND  
SURVEYS AS SPECIFIED BY THIS STATE.

  
GARY L. JONES N.M. P.S.  
TEXAS P.L.S.



1000 0 1000 2000 FEET  


## RICE OPERATING COMPANY

REF: A-2-1 MONITOR WELLS

MONITOR WELLS LOCATED IN

SECTION 2, TOWNSHIP 20 SOUTH, RANGE 36 EAST,  
N.M.P.M., LEA COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 17530 Drawn By: K. GOAD

Date: 12-22-2006 Disk: KJG - RC17530.DWG

Survey Date: 12-21-2006

Sheet 1 of 1 Sheets



## Analytical Report

**Prepared for:**

Kristin Farris-Pope

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: EME Jct. A-2-1

Project Number: None Given

Location: T20S R36E Sec 2 A- Lea County, NM

Lab Order Number: 6K08010

Report Date: 11/17/06

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

Project: EME Jct. A-2-1  
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	6K08010-01	Water	11/06/06 11:50	11-08-2006 14:50
Monitor Well #2	6K08010-02	Water	11/06/06 10:25	11-08-2006 14:50
Monitor Well #3	6K08010-03	Water	11/06/06 09:15	11-08-2006 14:50

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

Project: EME Jct. A-2-1  
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
<b>Monitor Well #1 (6K08010-01) Water</b>									
Benzene	0.00331	0.00100	mg/L	1	EK60808	11/10/06	11/11/06	EPA 8021B	
Toluene	0.00158	0.00100	"	"	"	"	"	"	
Ethylbenzene	0.00337	0.00100	"	"	"	"	"	"	
Xylene (p/m)	0.00307	0.00100	"	"	"	"	"	"	
Xylene (o)	1 [0.000348]	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		103 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.0 %	80-120		"	"	"	"	
<b>Monitor Well #2 (6K08010-02) Water</b>									
Benzene	ND	0.00100	mg/L	1	EK60808	11/10/06	11/10/06	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		91.2 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		82.0 %	80-120		"	"	"	"	
<b>Monitor Well #3 (6K08010-03) Water</b>									
Benzene	ND	0.00100	mg/L	1	EK60808	11/10/06	11/10/06	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		92.8 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		82.0 %	80-120		"	"	"	"	

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

Project: EME Jct. A-2-1  
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
<b>Monitor Well #1 (6K08010-01) Water</b>									
<b>Total Alkalinity</b>	<b>656</b>	4.00	mg/L	2	EK61307	11/14/06	11/14/06	EPA 310.1M	
<b>Chloride</b>	<b>8460</b>	250	"	500	EK60911	11/09/06	11/09/06	EPA 300.0	
<b>Total Dissolved Solids</b>	<b>22800</b>	10.0	"	1	EK61306	11/09/06	11/10/06	EPA 160.1	
<b>Sulfate</b>	<b>6780</b>	250	"	500	EK60911	11/09/06	11/09/06	EPA 300.0	
<b>Monitor Well #2 (6K08010-02) Water</b>									
<b>Total Alkalinity</b>	<b>604</b>	4.00	mg/L	2	EK61307	11/14/06	11/14/06	EPA 310.1M	
<b>Chloride</b>	<b>8680</b>	250	"	500	EK60911	11/09/06	11/09/06	EPA 300.0	
<b>Total Dissolved Solids</b>	<b>23600</b>	10.0	"	1	EK61306	11/09/06	11/10/06	EPA 160.1	
<b>Sulfate</b>	<b>6960</b>	250	"	500	EK60911	11/09/06	11/09/06	EPA 300.0	
<b>Monitor Well #3 (6K08010-03) Water</b>									
<b>Total Alkalinity</b>	<b>668</b>	2.00	mg/L	1	EK61307	11/14/06	11/14/06	EPA 310.1M	
<b>Chloride</b>	<b>7970</b>	250	"	500	EK60911	11/09/06	11/09/06	EPA 300.0	
<b>Total Dissolved Solids</b>	<b>20400</b>	10.0	"	1	EK61306	11/09/06	11/10/06	EPA 160.1	
<b>Sulfate</b>	<b>5950</b>	250	"	500	EK60911	11/09/06	11/09/06	EPA 300.0	

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

Project: EME Jct. A-2-1  
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
<b>Monitor Well #1 (6K08010-01) Water</b>									
Calcium	259	20.2	mg/L	250	EK60919	11/09/06	11/09/06	EPA 6010B	
Magnesium	282	1.80	"	50	"	"	"	"	
Potassium	48.8	0.600	"	10	"	"	"	"	
Sodium	8780	43.0	"	1000	"	"	"	"	
<b>Monitor Well #2 (6K08010-02) Water</b>									
Calcium	841	20.2	mg/L	250	EK60919	11/09/06	11/09/06	EPA 6010B	
Magnesium	302	1.80	"	50	"	"	"	"	
Potassium	43.5	0.600	"	10	"	"	"	"	
Sodium	9110	108	"	2500	"	"	"	"	
<b>Monitor Well #3 (6K08010-03) Water</b>									
Calcium	582	20.2	mg/L	250	EK60919	11/09/06	11/09/06	EPA 6010B	
Magnesium	238	1.80	"	50	"	"	"	"	
Potassium	49.2	0.600	"	10	"	"	"	"	
Sodium	7620	43.0	"	1000	"	"	"	"	

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

Project: EME Jct. A-2-1  
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
<b>Batch EK60808 - EPA 5030C (GC)</b>										
<b>Blank (EK60808-BLK1)</b>										
Prepared: 11/08/06 Analyzed: 11/10/06										
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	40.3		ug/l	40.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	33.5		"	40.0		83.8	80-120			
<b>LCS (EK60808-BS1)</b>										
Prepared: 11/08/06 Analyzed: 11/10/06										
Benzene	0.0525	0.00100	mg/L	0.0500		105	80-120			
Toluene	0.0458	0.00100	"	0.0500		91.6	80-120			
Ethylbenzene	0.0457	0.00100	"	0.0500		91.4	80-120			
Xylene (p/m)	0.0919	0.00100	"	0.100		91.9	80-120			
Xylene (o)	0.0448	0.00100	"	0.0500		89.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	41.2		ug/l	40.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	41.5		"	40.0		104	80-120			
<b>Calibration Check (EK60808-CCV1)</b>										
Prepared: 11/08/06 Analyzed: 11/11/06										
Benzene	50.9		ug/l	50.0		102	80-120			
Toluene	45.0		"	50.0		90.0	80-120			
Ethylbenzene	46.8		"	50.0		93.6	80-120			
Xylene (p/m)	90.9		"	100		90.9	80-120			
Xylene (o)	45.4		"	50.0		90.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	39.9		"	40.0		99.8	80-120			
Surrogate: 4-Bromofluorobenzene	39.0		"	40.0		97.5	80-120			
<b>Matrix Spike (EK60808-MS1)</b>										
Source: 6K06005-01 Prepared: 11/08/06 Analyzed: 11/10/06										
Benzene	0.0503	0.00100	mg/L	0.0500	ND	101	80-120			
Toluene	0.0458	0.00100	"	0.0500	ND	91.6	80-120			
Ethylbenzene	0.0473	0.00100	"	0.0500	ND	94.6	80-120			
Xylene (p/m)	0.0939	0.00100	"	0.100	ND	93.9	80-120			
Xylene (o)	0.0465	0.00100	"	0.0500	ND	93.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.9		ug/l	40.0		97.2	80-120			
Surrogate: 4-Bromofluorobenzene	43.4		"	40.0		108	80-120			

Environmental Lab of Texas

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.

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

Project: EME Jct. A-2-1  
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
<b>Batch EK60808 - EPA 5030C (GC)</b>										
<b>Matrix Spike Dup (EK60808-MSD1)</b>		<b>Source: 6K06005-01</b>		<b>Prepared: 11/08/06 Analyzed: 11/10/06</b>						
Benzene	0.0518	0.00100	mg/L	0.0500	ND	104	80-120	2.93	20	
Toluene	0.0465	0.00100	"	0.0500	ND	93.0	80-120	1.52	20	
Ethylbenzene	0.0478	0.00100	"	0.0500	ND	95.6	80-120	1.05	20	
Xylene (p/m)	0.0983	0.00100	"	0.100	ND	98.3	80-120	4.58	20	
Xylene (o)	0.0494	0.00100	"	0.0500	ND	98.8	80-120	6.05	20	
Surrogate: a,a,a-Trifluorotoluene	41.8		ug/l	40.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	43.7		"	40.0		109	80-120			

Environmental Lab of Texas

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

Project: EME Jct. A-2-1  
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
<b>Batch EK60911 - General Preparation (WetChem)</b>										
<b>Blank (EK60911-BLK1)</b>				Prepared & Analyzed: 11/09/06						
Chloride	ND	0.500	mg/L							
Sulfate	ND	0.500	"							
<b>LCS (EK60911-BS1)</b>				Prepared & Analyzed: 11/09/06						
Chloride	10.9	0.500	mg/L	10.0		109	80-120			
Sulfate	10.1	0.500	"	10.0		101	80-120			
<b>Calibration Check (EK60911-CCV1)</b>				Prepared & Analyzed: 11/09/06						
Chloride	10.8		mg/L	10.0		108	80-120			
Sulfate	10.1		"	10.0		101	80-120			
<b>Duplicate (EK60911-DUP1)</b>				<b>Source: 6K08007-01</b>		Prepared & Analyzed: 11/09/06				
Sulfate	86.2	5.00	mg/L		86.1			0.116	20	
Chloride	283	5.00	"		285			0.704	20	
<b>Duplicate (EK60911-DUP2)</b>				<b>Source: 6K09002-01</b>		Prepared & Analyzed: 11/09/06				
Sulfate	1650	20.0	mg/L		1590			3.70	20	
Chloride	248	20.0	"		239			3.70	20	
<b>Matrix Spike (EK60911-MS1)</b>				<b>Source: 6K08007-01</b>		Prepared & Analyzed: 11/09/06				
Sulfate	184	5.00	mg/L	100	86.1	97.9	80-120			
Chloride	404	5.00	"	100	285	119	80-120			
<b>Matrix Spike (EK60911-MS2)</b>				<b>Source: 6K09002-01</b>		Prepared & Analyzed: 11/09/06				
Chloride	655	20.0	mg/L	400	239	104	80-120			
Sulfate	1960	20.0	"	400	1590	92.5	80-120			

Environmental Lab of Texas

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Page 7 of 10

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

Project: EME Jct. A-2-1  
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
<b>Batch EK61306 - Filtration Preparation</b>										
<b>Blank (EK61306-BLK1)</b>				Prepared: 11/09/06 Analyzed: 11/10/06						
Total Dissolved Solids	ND	10.0	mg/L							
<b>Duplicate (EK61306-DUP1)</b>				<b>Source: 6K07002-01</b>		Prepared: 11/09/06 Analyzed: 11/10/06				
Total Dissolved Solids	10400	10.0	mg/L		9240			11.8	5	S-08
<b>Duplicate (EK61306-DUP2)</b>				<b>Source: 6K08010-02</b>		Prepared: 11/09/06 Analyzed: 11/10/06				
Total Dissolved Solids	24600	10.0	mg/L		23600			4.15	5	
<b>Batch EK61307 - General Preparation (WetChem)</b>										
<b>Blank (EK61307-BLK1)</b>				Prepared & Analyzed: 11/14/06						
Total Alkalinity	ND	2.00	mg/L							
<b>LCS (EK61307-BS1)</b>				Prepared & Analyzed: 11/14/06						
Bicarbonate Alkalinity	192	2.00	mg/L		200		96.0	85-115		
<b>Duplicate (EK61307-DUP1)</b>				<b>Source: 6K08007-01</b>		Prepared & Analyzed: 11/14/06				
Total Alkalinity	150	2.00	mg/L		152			1.32	20	
<b>Reference (EK61307-SRM1)</b>				Prepared & Analyzed: 11/14/06						
Total Alkalinity	248		mg/L		250		99.2	90-110		

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

Project: EME Jct. A-2-1  
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 EK60919 - 6010B/No Digestion**

**Blank (EK60919-BLK1)**

Prepared & Analyzed: 11/09/06

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

**Calibration Check (EK60919-CCV1)**

Prepared & Analyzed: 11/09/06

Calcium	2.28		mg/L	2.00		114	85-115			
Magnesium	2.14		"	2.00		107	85-115			
Potassium	1.87		"	2.00		93.5	85-115			
Sodium	2.04		"	2.00		102	85-115			

**Duplicate (EK60919-DUP1)**

Source: 6K08007-01

Prepared & Analyzed: 11/09/06

Calcium	164	4.05	mg/L		166			1.21	20	
Magnesium	23.5	0.360	"		23.5			0.00	20	
Potassium	3.34	0.600	"		3.30			1.20	20	
Sodium	77.5	0.430	"		77.6			0.129	20	

Environmental Lab of Texas

*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.*

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Rice Operating Co.  
122 W. Taylor  
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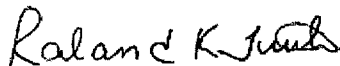
Project: EME Jct. A-2-1  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### Notes and Definitions

S-08 Value outside Laboratory historical or method prescribed QC limits.  
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:

11/17/2006

Raland K. Tuttle, Lab Manager  
Celey D. Keene, Lab Director, Org. Tech Director  
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director  
LaTasha Cornish, Chemist  
Sandra Sanchez, Lab Tech.

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If you have received this material in error, please notify us immediately at 432-563-1800.



**Environmental Lab of Texas**  
**Variance/ Corrective Action Report- Sample Log-In**

Client: Pine Op.  
 Date/ Time: 11/8/06 2:50  
 Lab ID #: 6K08010  
 Initials: CK

**Sample Receipt Checklist**

				Client Initials
#1	Temperature of container/ cooler?	Yes	No	0.5 °C
#2	Shipping container in good condition?	<del>Yes</del>	No	
#3	Custody Seals intact on shipping container/ cooler?	<del>Yes</del>	No	Not Present
#4	Custody Seals intact on sample bottles/ container?	<del>Yes</del>	No	Not Present
#5	Chain of Custody present?	<del>Yes</del>	No	
#6	Sample instructions complete of Chain of Custody?	<del>Yes</del>	No	
#7	Chain of Custody signed when relinquished/ received?	<del>Yes</del>	No	
#8	Chain of Custody agrees with sample label(s)?	<del>Yes</del>	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	<del>Yes</del>	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<del>Yes</del>	No	
#11	Containers supplied by EL0T?	<del>Yes</del>	No	
#12	Samples in proper container/ bottle?	<del>Yes</del>	No	See Below
#13	Samples properly preserved?	<del>Yes</del>	No	See Below
#14	Sample bottles intact?	<del>Yes</del>	No	
#15	Preservations documented on Chain of Custody?	<del>Yes</del>	No	
#16	Containers documented on Chain of Custody?	<del>Yes</del>	No	
#17	Sufficient sample amount for indicated test(s)?	<del>Yes</del>	No	See Below
#18	All samples received within sufficient hold time?	<del>Yes</del>	No	See Below
#19	VOC samples have zero headspace?	<del>Yes</del>	No	Not Applicable

**Variance Documentation**

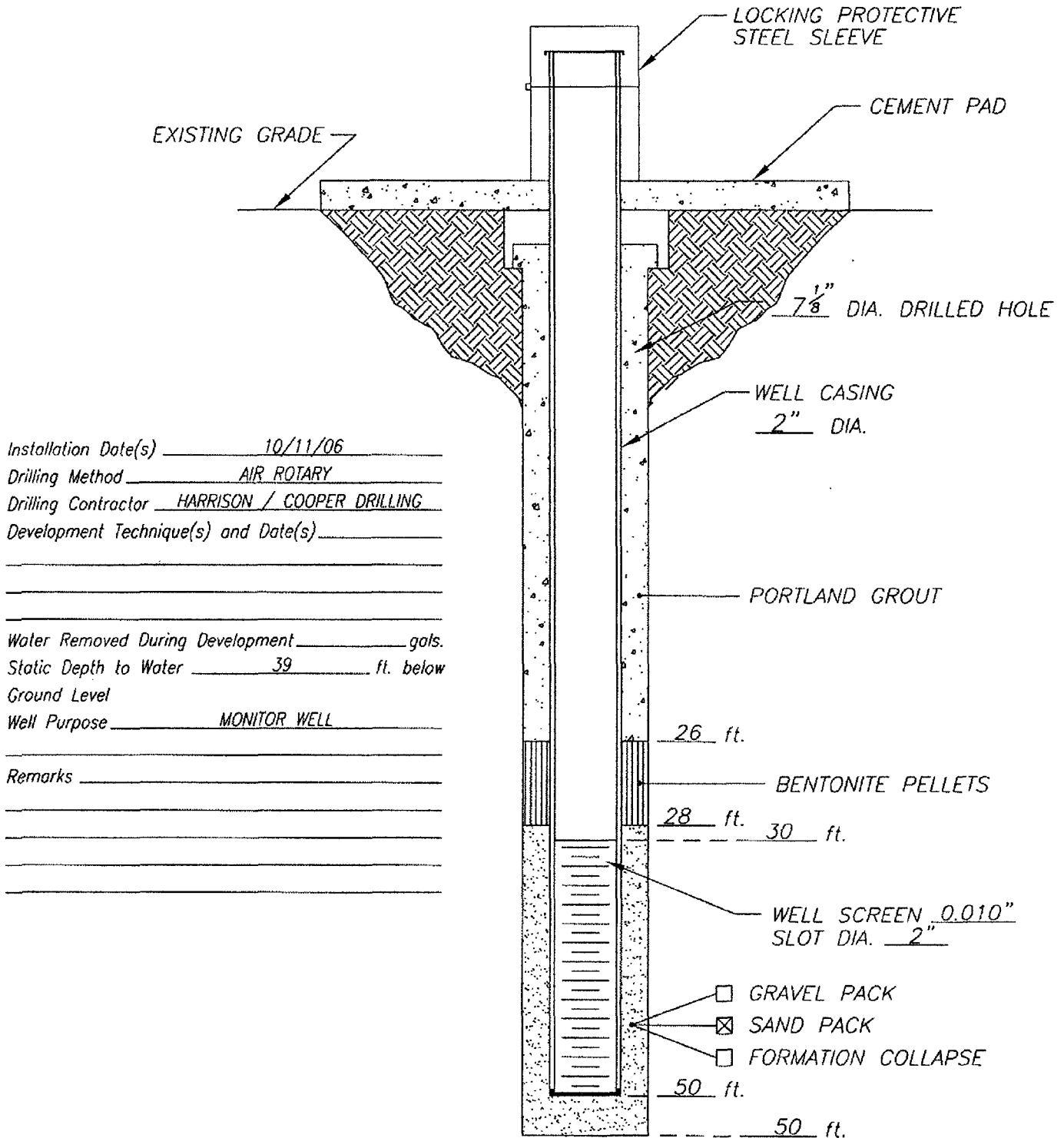
Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

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

# WELL CONSTRUCTION LOG



DATE: 11/9/06

**Highlander  
Environmental**

CLIENT: RICE OPERATING

PROJECT: EME jct. A-2-1

LOCATION: LEA COUNTY, NEW MEXICO

WELL NO.

MW-1

## SAMPLE LOG

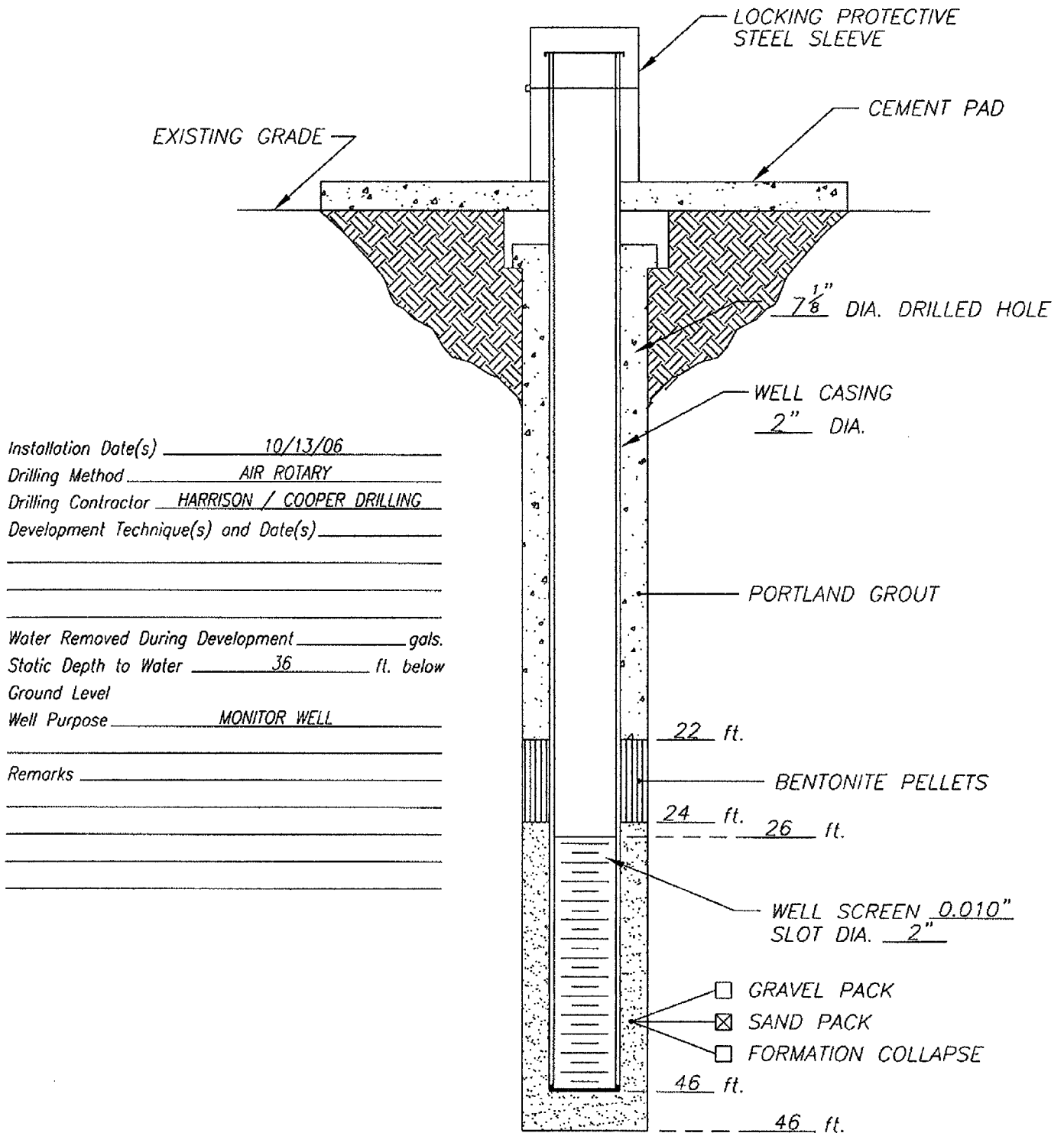
Boring/Well: MW-1  
Project Number: 2646  
Client: Rice Engineering  
Site Location: EME jct. A-2-1  
Location: Lea County, New Mexico  
Total Depth: 50  
Date Installed: 10/11/06

DEPTH (in feet)	OVM	CHLORIDES (in mg/Kg)	SAMPLE DESCRIPTION
8-10	537	680	Dark brown hydrocarbon stained sand
13-15	483	640	Dark brown hydrocarbon stained sand
18-20	445	450	Dark brown hydrocarbon stained sand
23-25	502	370	Dark brown hydrocarbon stained sand
28-30	508	420	Dark brown hydrocarbon stained sand
33-35	511	840	Dark brown hydrocarbon stained sand
38-40	50	950	Dark brown hydrocarbon stained sand (wet)
43-45	0	--	Tan brown clay
48-50	0	--	Tan brown clay

Boring completed at 50 feet bgs

Groundwater encountered at 39 feet

# WELL CONSTRUCTION LOG



DATE: 11/9/06

**Highlander  
Environmental**

CLIENT: RICE OPERATING

PROJECT: EME jct. A-2-1

LOCATION: LEA COUNTY, NEW MEXICO

WELL NO.

MW-2

## SAMPLE LOG

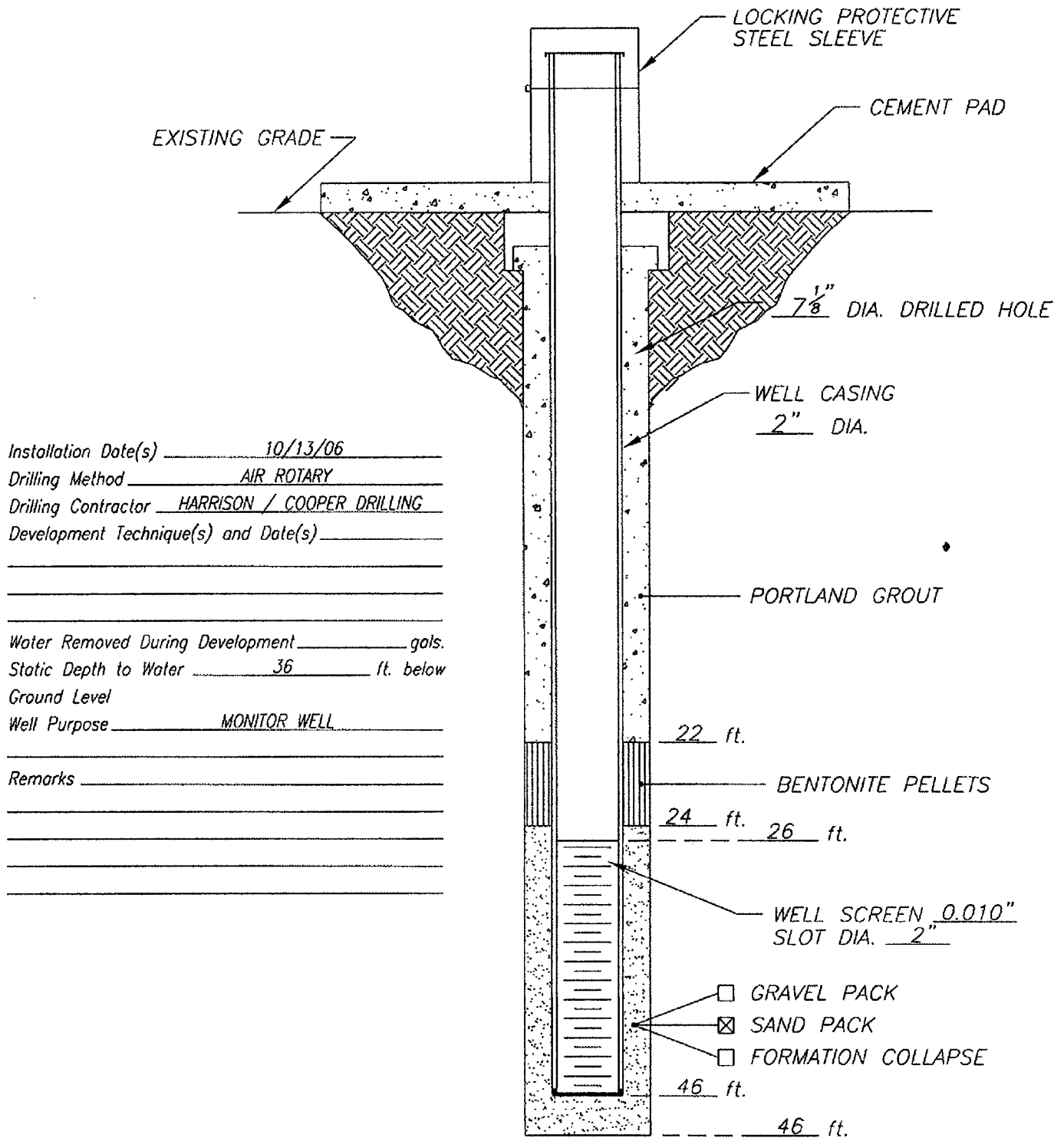
**Boring/Well:** MW-2  
**Project Number:** 2646  
**Client:** Rice Engineering  
**Site Location:** EME jct. A-2-1  
**Location:** Lea County, New Mexico  
**Total Depth** 46  
**Date Installed:** 10/13/06

DEPTH (in feet)	OVM	CHLORIDES (in mg/Kg)	SAMPLE DESCRIPTION
3-5	1	88	Tan brown fine grain sand
8-10	2	587	Tan brown fine grain sand
13-15	1	480	Tan calcareous fine grain sand
18-20	0	511	Tan calcareous fine grain sand
23-25	2	481	Tan calcareous fine grain sand
28-30	0	782	Tan/buff calcareous fine grain sand
33-35	1	1131	Tan calcareous fine grain sand
38-40	0	--	Tan calcareous fine grain sand
43-45	0	--	Tan calcareous fine grain sand

Boring completed at 46 feet bgs

Groundwater encountered at 36 feet

# WELL CONSTRUCTION LOG



Installation Date(s) 10/13/06  
 Drilling Method AIR ROTARY  
 Drilling Contractor HARRISON / COOPER DRILLING  
 Development Technique(s) and Date(s) \_\_\_\_\_

Water Removed During Development \_\_\_\_\_ gals.  
 Static Depth to Water 36 ft. below  
 Ground Level  
 Well Purpose MONITOR WELL

Remarks \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

DATE: 11/9/06

**Highlander  
Environmental**

CLIENT: RICE OPERATING

PROJECT: EME jct. A-2-1

LOCATION: LEA COUNTY, NEW MEXICO

WELL NO.

MW-3

## SAMPLE LOG

Boring/Well: MW-3  
Project Number: 2646  
Client: Rice Engineering  
Site Location: EME jct. A-2-1  
Location: Lea County, New Mexico  
Total Depth: 46  
Date Installed: 10/13/06

DEPTH (in feet)	OVM	CHLORIDES (in mg/Kg)	SAMPLE DESCRIPTION
3-5	4	184	Tan brown fine grain sand
8-10	7	270	Tan brown fine grain sand
13-15	7	338	Tan calcareous fine grain sand
18-20	4	648	Tan calcareous fine grain sand
23-25	6	513	Tan calcareous fine grain sand
28-30	6	630	Tan calcareous fine grain sand
33-35	5	618	Tan calcareous fine grain sand
38-40	0	--	Tan calcareous fine grain sand
43-45	0	--	Tan calcareous fine grain sand

Boring completed at 46 feet bgs      Groundwater encountered at 36 feet