# AP – 83

# GENERAL CORRESPONDENCE

# YEAR(S): 2007

AP-83
Gen. Cor.
2007

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

2007 JAN 30 AM 11 13

**CERTIFIED MAIL**
**RETURN RECEIPT NO. 7005 1820 0001 6804 7487**

January 24, 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**
**C-16 (1) Release Site**
**Eunice-Monument-Eumont (EME) SWD System**
**Unit 'C', Sec. 16, T20S, R37E**

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 Rule 116. The remediation of this site may be subject to Rule 19 procedures.

This site experienced an accidental discharge on October 12, 2005 due to the failure of a 4-inch asbestos/cement pipeline, releasing 35 barrels of produced water and affecting approximately 3728 $ft^2$ of ground surface. A C-141 form (initial) was submitted to the Hobbs District 1 office on October 14. Initial assessments of soil impacts were conducted by ROC. ROC concluded that groundwater investigation was warranted.

ROC retained the consultant, L. Peter Galusky Ph.D., of Midland, Texas to address this site. On November 24, 2006 Galusky submitted an Investigation & Characterization Plan to OCD for additional delineation which was approved by OCD on November 29. On December 12, 2006 two monitoring wells were installed at the site. Groundwater was encountered at approximately 15 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 analysis. Chloride and Total Dissolved Solids (TDS) concentrations exceed New Mexico Water Quality Control Commission

standards. Galusky 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

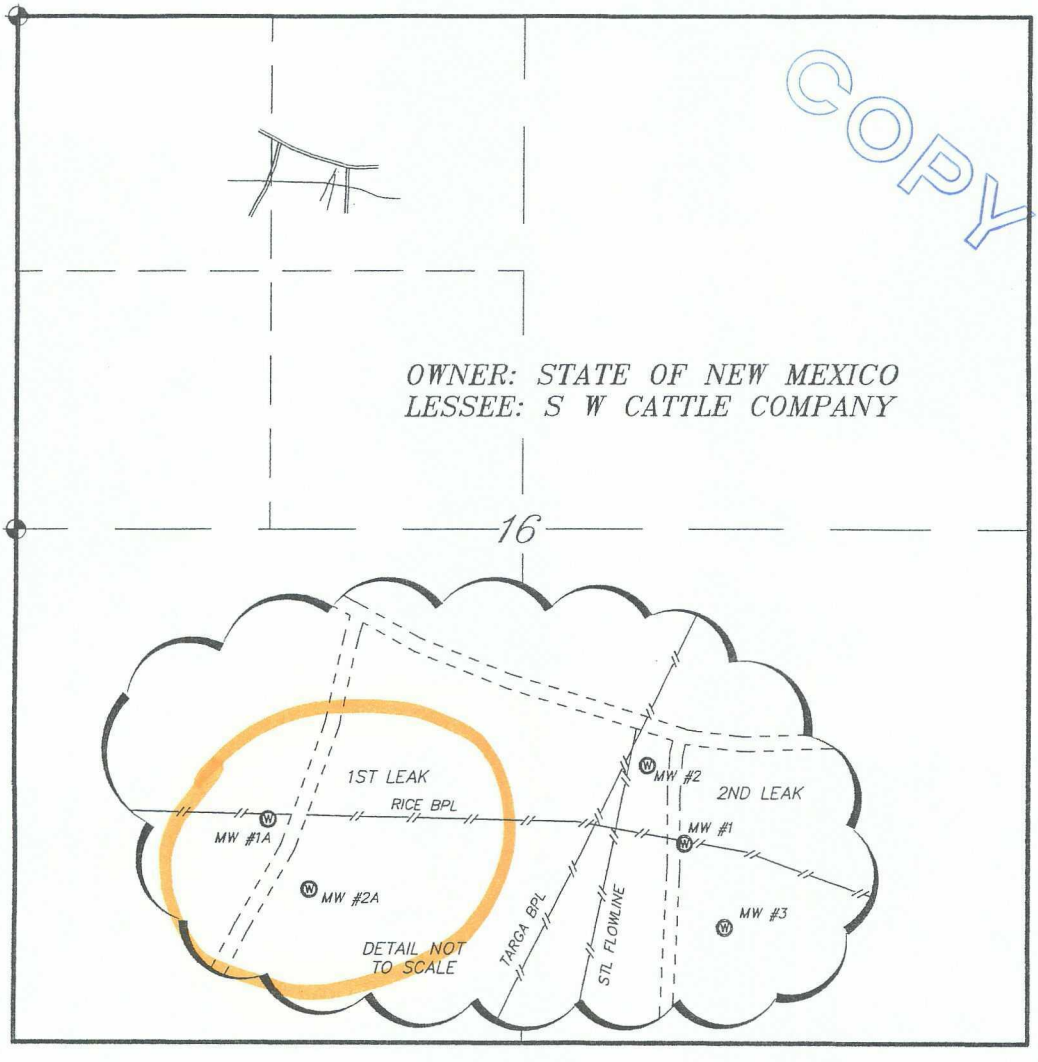
Kristin Farris Pope

Kristin Farris Pope
Project Scientist

enclosures: water analyses, well logs, map

cc: SC, CDH, Galusky, file, Mr. Chris Williams
NMOCD, District 1 Office
1625 N. French Drive
Hobbs, NM 88240

# SECTION 16, TOWNSHIP 20 SOUTH, RANGE 37 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.




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

| | | NEW MEXICO STATE PLANE COORDINATES (NAD83) | | | | | |
|---|---|---|---|---|---|---|---|
| WELL | NORTHING | EASTING | LATITUDE | LONGITUDE | ELEV. PVC | ELEV. CON. | ELEV. GRND |
| MW-1 | 575666.5 | 872122.9 | N 32°34'40.7" | W 103°15'34.2" | 3533.08' | 3530.73' | 3530.51' |
| MW-2 | 575745.9 | 872081.9 | N 32°34'41.5" | W 103°15'34.7" | 3535.87' | 3533.72' | 3533.48' |
| MW-3 | 575580.2 | 872167.1 | N 32°34'39.9" | W 103°15'33.7" | 3535.32' | 3532.89' | 3532.62' |
| MW-1A | 575687.5 | 871686.7 | N 32°34'41.0" | W 103°15'39.3" | 3532.06' | 3529.85' | 3529.68' |
| MW-2A | 575616.0 | 871730.2 | N 32°34'40.3" | W 103°15'38.8" | 3534.79' | 3532.49' | 3532.28' |

1000 0 1000 2000 FEET

SCALE: 1" = 1000'

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. No. 7977
TEXAS P.L.S. No. 5074

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR

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

## RICE OPERATING COMPANY

REF: LEAKS AT EME C-16 SITE

*MONITOR WELLS LOCATED IN*
*SECTION 16, TOWNSHIP 20 SOUTH, RANGE 37 EAST,*
*N.M.P.M., LEA COUNTY, NEW MEXICO.*

| | | | |
|---|---|---|---|
| W.O. Number: 17641 | Drawn By: J. M. SMALL | | |
| Date: 01-08-2007 | Disk: JMS 17641MW | Survey Date: 01-17-2007 | Sheet 1 of 1 Sheets |

**Soil Boring Log**
**Rice Operating Company**
**EME SWD System**
**C-16 (1) Release Site**

| | |
|---|---|
| **Identification:** | **MW-1** |
| Location: | approx. 5 ft southeaset of center of release |
| Date: | 12/12/2006 |
| Driller: | Ken Cooper (Harrison and Cooper, Inc.) |
| Drill method: | Air Rotary |
| Logged by: | L. Peter Galusky, Jr. |
| Total depth: | 28 ft below ground surface |
| Screened interval: | 13 to 28 ft below ground surface |
| Pipe diameter: | 4 inches |

| Depth (ft BGS) | Field Chloride (ppm) | Lab Chloride (ppm) | Field OVM (ppm) | Lab BTEX (ppm) | Cutting Description | Well Schematic |
|---|---|---|---|---|---|---|
| 0 | | | | | olive brown sandy loam | solid pipe |
| 5 | 112 | | 0.5 | | olive brownish gray sand w/ ferric veriegation | |
| 10 | 421 | | 0.2 | | light olive brownish gray sand w/ ferric veriegation | |
| 15 | 701 | 576 | 0.2 | ND | light olive brownish gray sand w/ ferric veriegation | |
| 20 | 937 | | 0 | | light olive gray sandy loam | screen |
| 25 | | | | | light olive gray sandy loam | |
| 30 | | | | | light olive gray sandy loam | |

**Soil Boring Log**
**Rice Operating Company**
**EME SWD System**
**C-16 (1) Release Site**

| **Identification:** | **MW-2** |
|---|---|
| Location: | approx. 100 ft southeaset of center of release |
| Date: | 12/12/2006 |
| Driller: | Ken Cooper (Harrison and Cooper, Inc.) |
| Drill method: | Air Rotary |
| Logged by: | L. Peter Galusky, Jr. |
| Total depth: | 30 ft below ground surface |
| Screened interval: | 15 to 30 ft below ground surface |
| Pipe diameter: | 2 inches |

| Depth (ft BGS) | Field Chloride (ppm) | Lab Chloride (ppm) | Field OVM (ppm) | Lab BTEX (ppm) | Cutting Description | Well Schematic |
|---|---|---|---|---|---|---|
| 0 | | | | | brown sand | solid pipe |
| 5 | 4654 | | 0 | | light brown sand | |
| 10 | 1964 | | 0 | | light olive brown sand | |
| 15 | 1356 | | 0 | | light olive brown sand | |
| 20 | 1446 | 640 | 0 | | light olive brown sand | screen |
| 25 | | | | | light olive brown sand | |
| 30 | | | | | | |

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

# Analytical Report

**Prepared for:**

Kristin Farris-Pope

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: EME C-16 (1) Leak

Project Number: None Given

Location: T20S-R37E-Sec16C, Lea County NM

Lab Order Number: 6L27022

Report Date: 01/05/07

| | | |
|---|---|---|
| Rice Operating Co. | Project: EME C-16 (1) Leak | Fax: (505) 397-1471 |
| 122 W. Taylor | Project Number: None Given | |
| Hobbs NM, 88240 | Project Manager: Kristin Farris-Pope | |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| MW #1 | 6L27022-01 | Water | 12/22/06 14:00 | 12-27-2006 15:45 |
| MW #2 | 6L27022-02 | Water | 12/22/06 12:40 | 12-27-2006 15:45 |



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| | | |
|---|---|---|
| Rice Operating Co. | Project: EME C-16 (1) Leak | Fax: (505) 397-1471 |
| 122 W. Taylor | Project Number: None Given | |
| Hobbs NM, 88240 | Project Manager: Kristin Farris-Pope | |

## Organics by GC

## Environmental Lab of Texas

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW #1 (6L27022-01) Water** | | | | | | | | | |
| Benzene | ND | 0.00100 | mg/L | 1 | EL63102 | 12/31/06 | 01/02/07 | 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* | | *100 %* | | *80-120* | | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *87.0 %* | | *80-120* | | " | " | " | |
| **MW #2 (6L27022-02) Water** | | | | | | | | | |
| Benzene | ND | 0.00100 | mg/L | 1 | EL63102 | 12/31/06 | 01/02/07 | 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* | | *98.5 %* | | *80-120* | | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *114 %* | | *80-120* | | " | " | " | |







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| | | |
|---|---|---|
| Rice Operating Co. | Project: EME C-16 (1) Leak | Fax: (505) 397-1471 |
| 122 W. Taylor | Project Number: None Given | |
| Hobbs NM, 88240 | Project Manager: Kristin Farris-Pope | |

## General Chemistry Parameters by EPA / Standard Methods

## Environmental Lab of Texas

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW #1 (6L27022-01) Water** | | | | | | | | | |
| **Total Alkalinity** | **330** | 20.0 | mg/L | 10 | EL62804 | 12/28/06 | 12/28/06 | EPA 310.1M | B |
| **Chloride** | **8810** | 100 | " | 200 | EL62904 | 12/29/06 | 12/29/06 | EPA 300.0 | |
| **Total Dissolved Solids** | **13400** | 10.0 | " | 1 | EL62801 | 12/28/06 | 01/04/07 | EPA 160.1 | |
| **Sulfate** | **1370** | 100 | " | 200 | EL62904 | 12/29/06 | 12/29/06 | EPA 300.0 | |
| **MW #2 (6L27022-02) Water** | | | | | | | | | |
| **Total Alkalinity** | **300** | 20.0 | mg/L | 10 | EL62804 | 12/28/06 | 12/28/06 | EPA 310.1M | B |
| **Chloride** | **7760** | 100 | " | 200 | EL62904 | 12/29/06 | 12/29/06 | EPA 300.0 | |
| **Total Dissolved Solids** | **12000** | 10.0 | " | 1 | EL62801 | 12/28/06 | 01/04/07 | EPA 160.1 | |
| **Sulfate** | **1650** | 100 | " | 200 | EL62904 | 12/29/06 | 12/29/06 | EPA 300.0 | |







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| | | |
|---|---|---|
| Rice Operating Co. | Project: EME C-16 (1) Leak | Fax: (505) 397-1471 |
| 122 W. Taylor | Project Number: None Given | |
| Hobbs NM, 88240 | Project Manager: Kristin Farris-Pope | |

## Total Metals by EPA / Standard Methods

## Environmental Lab of Texas

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **MW #1 (6L27022-01) Water** | | | | | | | | | |
| **Calcium** | **1140** | 20.2 | mg/L | 250 | EL62806 | 12/28/06 | 12/28/06 | EPA 200.7 | |
| **Magnesium** | **700** | 9.00 | " | " | " | " | " | " | |
| **Potassium** | **99.9** | 3.00 | " | 50 | " | " | " | " | |
| **Sodium** | **4080** | 43.0 | " | 1000 | " | " | " | " | |
| **MW #2 (6L27022-02) Water** | | | | | | | | | |
| **Calcium** | **1090** | 20.2 | mg/L | 250 | EL62806 | 12/28/06 | 12/28/06 | EPA 200.7 | |
| **Magnesium** | **710** | 9.00 | " | " | " | " | " | " | |
| **Potassium** | **80.7** | 3.00 | " | 50 | " | " | " | " | |
| **Sodium** | **3530** | 43.0 | " | 1000 | " | " | " | " | |







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

Project: EME C-16 (1) 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 EL63102 - EPA 5030C (GC)** | | | | | | | | | | |
| **Blank (EL63102-BLK1)** | | | | Prepared: 12/31/06 Analyzed: 01/01/07 | | | | | | |
| 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* | *32.5* | | *ug/l* | *40.0* | | *81.2* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *35.2* | | *"* | *40.0* | | *88.0* | *80-120* | | | |
| **LCS (EL63102-BS1)** | | | | Prepared: 12/31/06 Analyzed: 01/01/07 | | | | | | |
| Benzene | 0.0421 | 0.00100 | mg/L | 0.0500 | | 84.2 | 80-120 | | | |
| Toluene | 0.0413 | 0.00100 | " | 0.0500 | | 82.6 | 80-120 | | | |
| Ethylbenzene | 0.0424 | 0.00100 | " | 0.0500 | | 84.8 | 80-120 | | | |
| Xylene (p/m) | 0.0832 | 0.00100 | " | 0.100 | | 83.2 | 80-120 | | | |
| Xylene (o) | 0.0410 | 0.00100 | " | 0.0500 | | 82.0 | 80-120 | | | |
| *Surrogate: a,a,a-Trifluorotoluene* | *32.0* | | *ug/l* | *40.0* | | *80.0* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *44.0* | | *"* | *40.0* | | *110* | *80-120* | | | |
| **Calibration Check (EL63102-CCV1)** | | | | Prepared: 12/31/06 Analyzed: 01/02/07 | | | | | | |
| Benzene | 46.4 | | ug/l | 50.0 | | 92.8 | 80-120 | | | |
| Toluene | 47.2 | | " | 50.0 | | 94.4 | 80-120 | | | |
| Ethylbenzene | 47.9 | | " | 50.0 | | 95.8 | 80-120 | | | |
| Xylene (p/m) | 91.8 | | " | 100 | | 91.8 | 80-120 | | | |
| Xylene (o) | 45.2 | | " | 50.0 | | 90.4 | 80-120 | | | |
| *Surrogate: a,a,a-Trifluorotoluene* | *43.2* | | *"* | *40.0* | | *108* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *33.1* | | *"* | *40.0* | | *82.8* | *80-120* | | | |
| **Matrix Spike (EL63102-MS1)** | **Source: 6L22002-44** | | | Prepared: 12/31/06 Analyzed: 01/02/07 | | | | | | |
| Benzene | 0.0468 | 0.00100 | mg/L | 0.0500 | ND | 93.6 | 80-120 | | | |
| Toluene | 0.0489 | 0.00100 | " | 0.0500 | ND | 97.8 | 80-120 | | | |
| Ethylbenzene | 0.0468 | 0.00100 | " | 0.0500 | ND | 93.6 | 80-120 | | | |
| Xylene (p/m) | 0.108 | 0.00100 | " | 0.100 | ND | 108 | 80-120 | | | |
| Xylene (o) | 0.0517 | 0.00100 | " | 0.0500 | ND | 103 | 80-120 | | | |
| *Surrogate: a,a,a-Trifluorotoluene* | *44.1* | | *ug/l* | *40.0* | | *110* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *39.0* | | *"* | *40.0* | | *97.5* | *80-120* | | | |

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

Project: EME C-16 (1) 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 EL63102 - EPA 5030C (GC)** | | | | | | | | | | |
| **Matrix Spike Dup (EL63102-MSD1)** | **Source: 6L22002-44** | | | Prepared: 12/31/06 Analyzed: 01/02/07 | | | | | | |
| Benzene | 0.0587 | 0.00100 | mg/L | 0.0500 | ND | 117 | 80-120 | 22.2 | 20 | R |
| Toluene | 0.0598 | 0.00100 | " | 0.0500 | ND | 120 | 80-120 | 20.4 | 20 | R |
| Ethylbenzene | 0.0579 | 0.00100 | " | 0.0500 | ND | 116 | 80-120 | 21.4 | 20 | R |
| Xylene (p/m) | 0.120 | 0.00100 | " | 0.100 | ND | 120 | 80-120 | 10.5 | 20 | |
| Xylene (o) | 0.0596 | 0.00100 | " | 0.0500 | ND | 119 | 80-120 | 14.4 | 20 | |
| *Surrogate: a,a,a-Trifluorotoluene* | *46.9* | | *ug/l* | *40.0* | | *117* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *46.7* | | *"* | *40.0* | | *117* | *80-120* | | | |

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

Project: EME C-16 (1) 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 EL62801 - Filtration Preparation** | | | | | | | | | | |
| **Blank (EL62801-BLK1)** | | | | Prepared: 12/28/06 Analyzed: 12/29/06 | | | | | | |
| Total Dissolved Solids | ND | 10.0 | mg/L | | | | | | | |
| **Duplicate (EL62801-DUP1)** | **Source: 6L27020-01** | | | Prepared: 12/28/06 Analyzed: 12/29/06 | | | | | | |
| Total Dissolved Solids | 26600 | 10.0 | mg/L | | 22700 | | | 15.8 | 20 | |
| **Batch EL62804 - General Preparation (WetChem)** | | | | | | | | | | |
| **Blank (EL62804-BLK1)** | | | | Prepared & Analyzed: 12/28/06 | | | | | | |
| Total Alkalinity | 6.00 | 4.00 | mg/L | | | | | | | B |
| **LCS (EL62804-BS1)** | | | | Prepared & Analyzed: 12/28/06 | | | | | | |
| Total Alkalinity | 180 | 4.00 | mg/L | 200 | | 90.0 | 85-115 | | | B |
| Bicarbonate Alkalinity | 180 | 4.00 | " | 200 | | 90.0 | 85-115 | | | B |
| **Duplicate (EL62804-DUP1)** | **Source: 6L27020-01** | | | Prepared & Analyzed: 12/28/06 | | | | | | |
| Total Alkalinity | 510 | 20.0 | mg/L | | 480 | | | 6.06 | 20 | B |
| **Reference (EL62804-SRM1)** | | | | Prepared & Analyzed: 12/28/06 | | | | | | |
| Total Alkalinity | 244 | 4.00 | mg/L | 250 | | 97.6 | 90-110 | | | B |
| **Batch EL62904 - General Preparation (WetChem)** | | | | | | | | | | |
| **Blank (EL62904-BLK1)** | | | | Prepared & Analyzed: 12/29/06 | | | | | | |
| Chloride | ND | 0.500 | mg/L | | | | | | | |
| Sulfate | ND | 0.500 | " | | | | | | | |

## 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 EL62904 - General Preparation (WetChem)** | | | | | | | | | | |
| **LCS (EL62904-BS1)** | | | | Prepared & Analyzed: 12/29/06 | | | | | | |
| Sulfate | 10.1 | 0.500 | mg/L | 10.0 | | 101 | 80-120 | | | |
| Chloride | 10.0 | 0.500 | " | 10.0 | | 100 | 80-120 | | | |
| **Calibration Check (EL62904-CCV1)** | | | | Prepared & Analyzed: 12/29/06 | | | | | | |
| Sulfate | 12.0 | | mg/L | 10.0 | | 120 | 80-120 | | | |
| Chloride | 9.07 | | " | 10.0 | | 90.7 | 80-120 | | | |
| **Duplicate (EL62904-DUP1)** | **Source: 6L27006-01** | | | Prepared & Analyzed: 12/29/06 | | | | | | |
| Sulfate | 241 | 25.0 | mg/L | | 234 | | | 2.95 | 20 | |
| Chloride | 750 | 25.0 | " | | 730 | | | 2.70 | 20 | |
| **Duplicate (EL62904-DUP2)** | **Source: 6L27017-09** | | | Prepared & Analyzed: 12/29/06 | | | | | | |
| Chloride | 66.0 | 5.00 | mg/L | | 68.0 | | | 2.99 | 20 | |
| Sulfate | 76.7 | 5.00 | " | | 77.7 | | | 1.30 | 20 | |
| **Matrix Spike (EL62904-MS1)** | **Source: 6L27006-01** | | | Prepared & Analyzed: 12/29/06 | | | | | | |
| Chloride | 1320 | 25.0 | mg/L | 500 | 730 | 118 | 80-120 | | | |
| Sulfate | 765 | 25.0 | " | 500 | 234 | 106 | 80-120 | | | |
| **Matrix Spike (EL62904-MS2)** | **Source: 6L27017-09** | | | Prepared & Analyzed: 12/29/06 | | | | | | |
| Chloride | 175 | 5.00 | mg/L | 100 | 68.0 | 107 | 80-120 | | | |
| Sulfate | 178 | 5.00 | " | 100 | 77.7 | 100 | 80-120 | | | |

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

Project: EME C-16 (1) 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 EL62806 - 6010B/No Digestion** | | | | | | | | | | |
| **Blank (EL62806-BLK1)** | | | | Prepared & Analyzed: 12/28/06 | | | | | | |
| Calcium | ND | 0.0810 | mg/L | | | | | | | |
| Magnesium | ND | 0.0360 | " | | | | | | | |
| Potassium | ND | 0.0600 | " | | | | | | | |
| Sodium | ND | 0.0430 | " | | | | | | | |
| **Calibration Check (EL62806-CCV1)** | | | | Prepared & Analyzed: 12/28/06 | | | | | | |
| Calcium | 2.00 | | mg/L | 2.00 | | 100 | 85-115 | | | |
| Magnesium | 2.11 | | " | 2.00 | | 106 | 85-115 | | | |
| Potassium | 1.72 | | " | 2.00 | | 86.0 | 85-115 | | | |
| Sodium | 1.89 | | " | 2.00 | | 94.5 | 85-115 | | | |
| **Duplicate (EL62806-DUP1)** | **Source: 6L27020-01** | | | Prepared & Analyzed: 12/28/06 | | | | | | |
| Calcium | 515 | 20.2 | mg/L | | 569 | | | 9.96 | 20 | |
| Magnesium | 302 | 9.00 | " | | 337 | | | 11.0 | 20 | |
| Potassium | 238 | 1.20 | " | | 228 | | | 4.29 | 20 | |
| Sodium | 13100 | 215 | " | | 13900 | | | 5.93 | 20 | |







12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

| | | |
|---|---|---|
| Rice Operating Co. | Project: EME C-16 (1) Leak | Fax: (505) 397-1471 |
| 122 W. Taylor | Project Number: None Given | |
| Hobbs NM, 88240 | Project Manager: Kristin Farris-Pope | |

## Notes and Definitions

| | |
|---|---|
| R | The RPD exceeded the method control limit. The individual analyte QA/QC recoveries, however, were within acceptance limits. |
| B | Analyte is found in the associated blank as well as in the sample (CLP B-flag). |
| 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: Raland K Tuttle Date: 1/5/2007

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.

# Environmental Lab of Texas

*CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST*

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Kristin Farris Pope kpope@riceswd.com

Company Name: RICE Operating Company

Company Address: 122 W. Taylor Street

City/State/Zip: Hobbs, New Mexico 88240

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

Sampler Signature: Rozanne Johnson (505)631-9310 e-mail: rozanne@valornet.com

Project Name: EME C-16 1st Leak

Project #:

Project Loc: T20S-R37E-Sec16 C ~ Lea County New Mexico

PO #:

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: GL27022

| LAB # (lab use only) | FIELD CODE | Beginning Depth | Ending Depth | Date Sampled | Time Sampled | Field Filtered | Total # of Containers | Preservation & # of Containers: Ice | $HNO_3$ | HCl (2) 40 ml glass vials | $H_2SO_4$ | NaOH | $Na_2S_2O_3$ | None (1) 1 Liter HDPE | Other (Specify) | Matrix: DW=Drinking Water SL=Sludge | GW = Groundwater S=Soil/Solid | NP=Non-Potable Specify Other | Analyze For: TPH: 418.1 8015M | TPH: TX 1005 TX 1006 | Cations (Ca, Mg, Na, K) | Anions (Cl, SO4, Alkalinity) | SAR / ESP / CEC | Metals: As Ag Ba Cd Cr Pb Hg Se (TCLP) | Volatiles | Semivolatiles | BTEX 8021B/5030 (TOTAL) | RCI | N.O.R.M. | Total Dissolved Solids | | | RUSH TAT (Pre-Scheduled) 24, 48, 72 hrs | Standard TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | Monitor Well #1 | | | 12/22/2006 | 14:00 | | 3 | X | | 2 | | | | 1 | | | GW | | | | X | X | | | | | X | | | X | | | | | X |
| 02 | Monitor Well #2 | | | 12/22/2006 | 12:40 | | 3 | X | | 2 | | | | 1 | | | GW | | | | X | X | | | | | X | | | X | | | | | X |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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**Special Instructions:**

Please email to : kpope@riceswd.com mfranks@riceswd.com rozanne@valornet.com

| Relinquished by: | Date | Time | Received by: | Date | Time |
|---|---|---|---|---|---|
| Rozanne Johnson | 12-27-06 | 1545 | | | |
| Relinquished by: | Date | Time | Received by: | Date | Time |
| | | | | | |
| Relinquished by: | Date | Time | Received by ELOT: | Date | Time |
| | | | Diana McMurrian | 12-27-06 | 1545 |

**Laboratory Comments:**

| | | |
|---|---|---|
| Sample Containers Intact? | Y | N |
| VOCs Free of Headspace? | Y | N |
| Labels on container(s) | Y | N |
| Custody seals on container(s) | Y | N |
| Custody seals on cooler(s) | Y | N |
| Sample Hand Delivered | Y | N |
| by Sampler/Client Rep. ? | Y | N |
| by Courier? UPS DHL FedEx Lone Star | | |

Temperature Upon Receipt: 2.0 °C

# Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Rice Operating

Date/ Time: 12-27-06 / 1545

Lab ID #: 601 27022

Initials: AT

## Sample Receipt Checklist

| | | | | | Client Initials |
|---|---|---|---|---|---|
| #1 | Temperature of container/ cooler? | (Yes) | No | 2.0 °C | |
| #2 | Shipping container in good condition? | (Yes) | No | | |
| #3 | Custody Seals intact on shipping container/ cooler? | (Yes) | No | Not Present | |
| #4 | Custody Seals intact on sample bottles/ container? | (Yes) | No | Not Present | |
| #5 | Chain of Custody present? | (Yes) | No | | |
| #6 | Sample instructions complete of Chain of Custody? | (Yes) | No | | |
| #7 | Chain of Custody signed when relinquished/ received? | (Yes) | No | | |
| #8 | Chain of Custody agrees with sample label(s)? | (Yes) | No | ID written on Cont./ Lid | |
| #9 | Container label(s) legible and intact? | (Yes) | No | Not Applicable | |
| #10 | Sample matrix/ properties agree with Chain of Custody? | (Yes) | No | | |
| #11 | Containers supplied by ELOT? | (Yes) | No | | |
| #12 | Samples in proper container/ bottle? | (Yes) | No | See Below | |
| #13 | Samples properly preserved? | (Yes) | No | See Below | |
| #14 | Sample bottles intact? | (Yes) | No | | |
| #15 | Preservations documented on Chain of Custody? | (Yes) | No | | |
| #16 | Containers documented on Chain of Custody? | (Yes) | No | | |
| #17 | Sufficient sample amount for indicated test(s)? | (Yes) | No | See Below | |
| #18 | All samples received within sufficient hold time? | (Yes) | No | See Below | |
| #19 | Subcontract of sample(s)? | (Yes) | No | Not Applicable | |
| #20 | VOC samples have zero headspace? | (Yes) | 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

**Jeanne McMurrey**

**From:** "Melanie Franks" <mfranks@riceswd.com>
**To:** "'Jeanne McMurrey'" <jeanne@elabtexas.com>
**Sent:** Friday, January 05, 2007 1:32 PM
**Subject:** RE: Report #6L27022 EME C-16 1st Week

Jeanne,
I have misunderstood what they wanted on these 2 lab reports for the C-16's. What they really want is for them to say EME C-16 (1) Leak and EME C-16 (2) Leak. I am sorry for any inconvenience this may cause you. If you don't mind could you please resend this to me as above.
Thanks,
Melanie Franks

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**From:** Jeanne McMurrey [mailto:jeanne@elabtexas.com]
**Sent:** Thursday, January 04, 2007 4:38 PM
**To:** Melanie Franks; Rozanne Johnson; Kristin Farris Pope
**Subject:** Re: Report #6L27022 EME C-16 1st Week

Jeanne McMurrey
Environmental Lab of Texas I, Ltd.
12600 West I-20 East
Odessa, Texas 79765
432-563-1800

--

**Subject:** RE: Rice Operating Co submittal - ICP for EME C16(1)

**Date:** Wed, 29 Nov 2006 17:08:16 -0700

**From:** "Hansen, Edward J., EMNRD" <edwardj.hansen@state.nm.us>

**To:** lpg@texerra.com, "Kristin Farris Pope" <kpope@riceswd.com>

**CC:** "Price, Wayne, EMNRD" <wayne.price@state.nm.us>

Dear Dr. Galusky and Ms. Pope:

The NMOCD has reviewed the submitted ICP for the above referenced site. The NMOCD hereby approves the plan. However, be advised that you will be proceeding at risk and may be required to perform additional investigation and characterization.

Also, please be advised that NMOCD approval of this plan does not relieve the owner/operator of responsibility should operations pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve the owner/operator of responsibility for compliance with any OCD, federal, state, or local laws and/or regulations.

If you have questions regarding this matter, please contact me at 505-476-3489.

Edward J. Hansen
Hydrologist
Environmental Bureau

---

**From:** L. Peter Galusky, Jr. P.E. [mailto:lpg@texerra.com]
**Sent:** Friday, November 24, 2006 2:16 PM
**To:** Price, Wayne, EMNRD
**Cc:** Kristin Pope
**Subject:** Rice Operating Co submittal - ICP for EME C16(1)

Wayne,

Please find attached, in .pdf format, and Investigation and Characterization Plan for EME C16(1). I will follow this with a hard copy in the mail.

We would like to get right on this, to drill the second week of December. Therefore, we would greatly appreciate your timely approval of this ICP.

Please do not hesitate to call me if you have any questions or need additional information.

Many thanks.

Sincerely,

Pete Galusky

L. Peter Galusky, Jr. P.E.
Principal Environmental Engineer
Texerra

Energy Square
505 N. Big Spring, Suite 404
Midland, Texas 79701
E-mail: lpg@texerra.com
Web: www.texerra.com
Office Telephone/Fax: 877-534-9001

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- 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

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature
X [signature] ☐ Agent ☑ Addressee

B. Received by (Printed Name) MARLA HARRINGTON
C. Date of Delivery 3/29/07

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7001 1940 0004 3929 4432

PS Form 3811, August 2001 Domestic Return Receipt 102595-01-M-2509

# 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 of 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