

1R - 427-317

**REPORTS**

**DATE:**

3-25-10

EME Jct N-8-2  
2009

1R427-317

RECEIVED

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National Archives  
College Park, MD

DISCLOSURE

RECEIVED

RICE OPERATING COMPANY  
JUNCTION BOX DISCLOSURE\* REPORT

ADD - 6 2010

Environmental Bureau  
Oil Conservation Division

| BOX LOCATION                    |            |      |         |          |       |        | BOX DIMENSIONS - FEET |       |       |
|---------------------------------|------------|------|---------|----------|-------|--------|-----------------------|-------|-------|
| SWD SYSTEM                      | JUNCTION   | UNIT | SECTION | TOWNSHIP | RANGE | COUNTY | Length                | Width | Depth |
| Eunice Monument<br>Eumont (EME) | Jct. N-8-2 | N    | 8       | 20S      | 37E   | Lea    | eliminated            |       |       |

LAND TYPE: BLM \_\_\_\_\_ STATE \_\_\_\_\_ FEE LANDOWNER Jimmie Cooper OTHER \_\_\_\_\_

Depth to Groundwater 30 feet NMOCD SITE ASSESSMENT RANKING SCORE: 20

Date Started 9/1/2009 Date Completed 11/12/2009 OCD Witness no

Soil Excavated 133.3 cubic yards Excavation Length 30 Width 10 Depth 12 feet

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

FINAL ANALYTICAL RESULTS: Sample Date 10/8/2009, 11/12/2009 Sample Depth 12 ft, 20 ft, 24 ft, 28 ft

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

## CHLORIDE FIELD TESTS

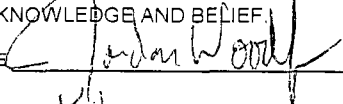
| Sample Location  | PID (field) ppm | GRO mg/kg | DRO mg/kg | Chlorides mg/kg |
|------------------|-----------------|-----------|-----------|-----------------|
| 4-WALL COMP.     | 1.8             | <10.0     | <10.0     | 144             |
| BOTTOM COMP.     | 2.4             | <10.0     | <10.0     | 400             |
| BLENDED BACKFILL | 4.8             | <10.0     | 77.0      | 288             |
| SB#1 @ 20'       | 69.9            | <10.0     | <10.0     | 1,650           |
| SB#1 @ 24'       | 0.0             | <10.0     | 10.7      | 1,280           |
| SB#1 @ 28'       | 0.0             | <10.0     | 55.5      | 256             |

| LOCATION                                                        | DEPTH | mg/kg |
|-----------------------------------------------------------------|-------|-------|
| 4-wall comp.                                                    | n/a   | 354   |
| bottom comp.                                                    | 12'   | 481   |
| blended backfill                                                | n/a   | 457   |
| SOIL BORING<br>at 15 ft east of<br>the junction<br>(11/12/2009) | 14'   | 572   |
|                                                                 | 16'   | 1,327 |
|                                                                 | 18'   | 615   |
|                                                                 | 20'   | 1,390 |
|                                                                 | 22'   | 604   |
|                                                                 | 24'   | 1,446 |
|                                                                 | 26'   | 719   |
|                                                                 | 28'   | 614   |

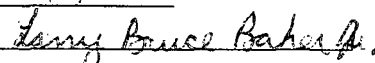
**General Description of Remedial Action:** This junction box was eliminated during the pipeline replacement/upgrade program. An investigation was conducted at the former junction box site using a backhoe to collect soil samples at regular intervals producing a 30x10x12-ft-deep excavation. Chloride field tests were performed on each sample which yielded some elevated concentrations. Organic vapors, measured using a PID, yielded low concentrations. The excavated soil was blended on site and representative composite samples were collected from the blended backfill, the excavation walls, and the bottom of the excavation and sent to a commercial laboratory for analysis of chloride and TPH. The blended backfill was returned to the excavation up to 5 ft below ground surface (BGS). At 5-4 ft BGS, a 1-ft thick clay barrier was installed with a compaction test performed on 11/9/2009. The remaining backfill was returned to the excavation to ground surface and contoured to the surrounding area. To further investigate depth of chloride presence, a soil bore was initiated on 11/12/2009 at 15 ft east of the former junction box. The boring was advanced to 28 ft BGS while soil samples were collected at regular intervals and field tested for chlorides. The 20 ft, 24 ft, and 28 ft samples were analyzed by a commercial laboratory for chlorides and TPH. Laboratory analysis confirmed some elevated concentrations. The entire borehole was plugged with bentonite to the ground surface. On 12/18/2009, the site was seeded with a blend of native vegetation and is expected to return to productive capacity at a normal rate. NMOCD was notified of potential groundwater impact on 2/25/2010.

**ADDITIONAL EVALUATION IS HIGH PRIORITY**

enclosures: photos, boring log, lab results, PID screenings, cross-section, compaction test, chloride curve

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY  
KNOWLEDGE AND BELIEF.SITE SUPERVISOR Jordan Woodfin SIGNATURE  COMPANY RICE OPERATING COMPANY

REPORT ASSEMBLED BY Katie Jones INITIAL KJ

PROJECT LEADER Larry Bruce Baker Jr. SIGNATURE  DATE 3-25-10

\*This site is a "DISCLOSURE." It will be placed on a prioritized list of similar sites for further consideration.

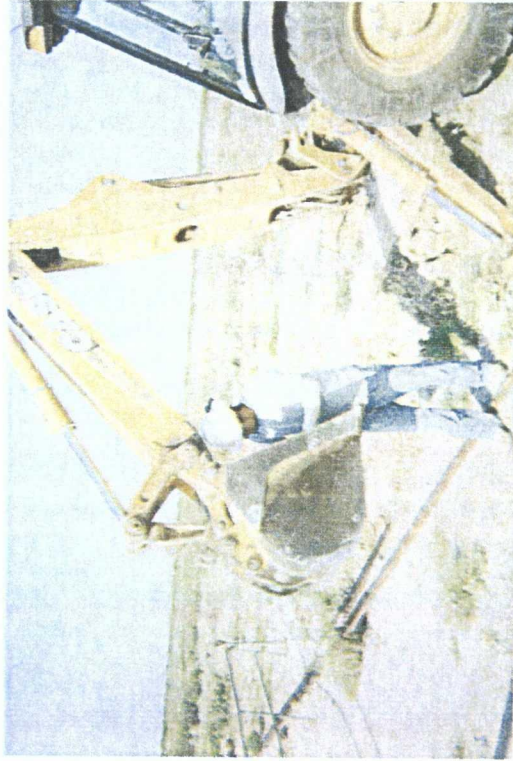
# EME Jct. N-8-2

Unit N, Section 8, T20S, R37E



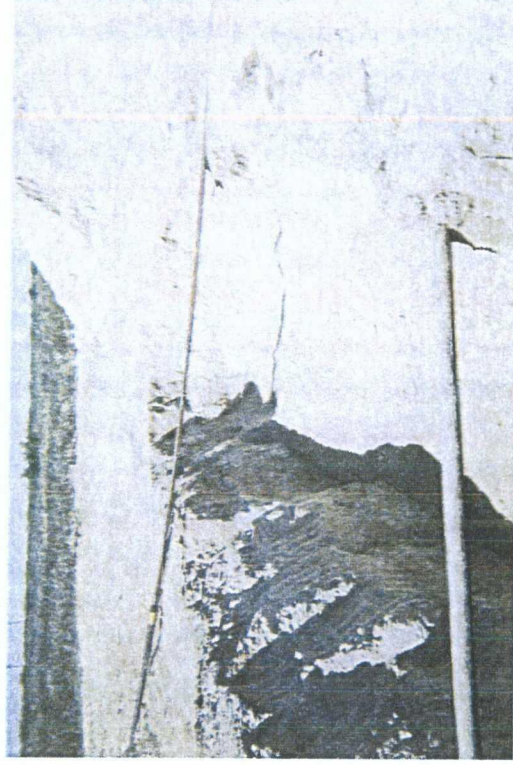
excavating the former  
junction box site, facing west

9/1/2009



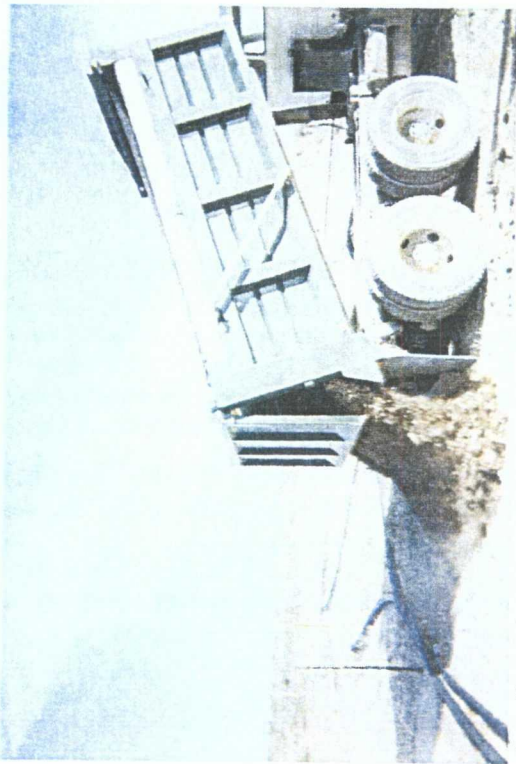
collecting a soil sample, facing west

9/1/2009



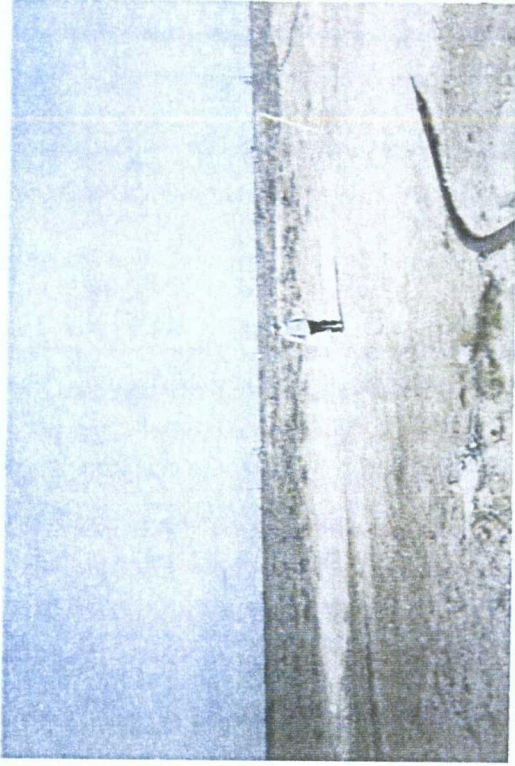
backfilling the final excavation  
up to 5 ft BGS, facing east

10/20/2009



unloading clay

10/28/2009



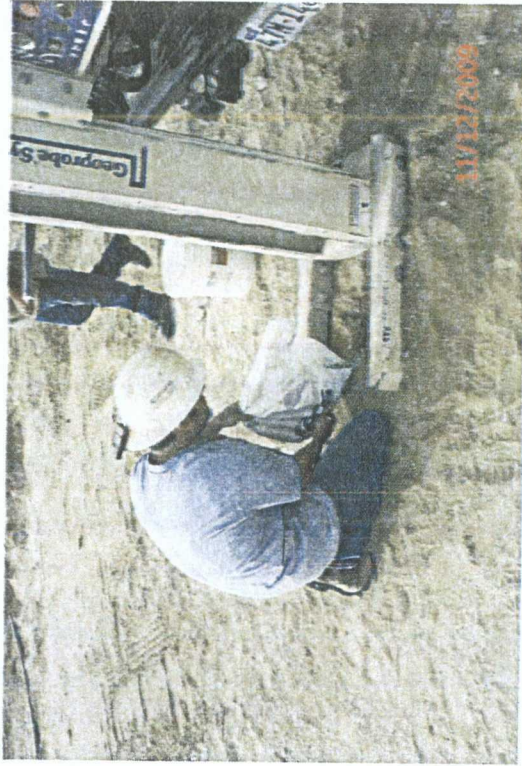
seeding the backfilled site, facing west

12/18/2009



drilling SB #1 at 15 ft east of the former junction

11/12/2009



plugging SB #1 with bentonite

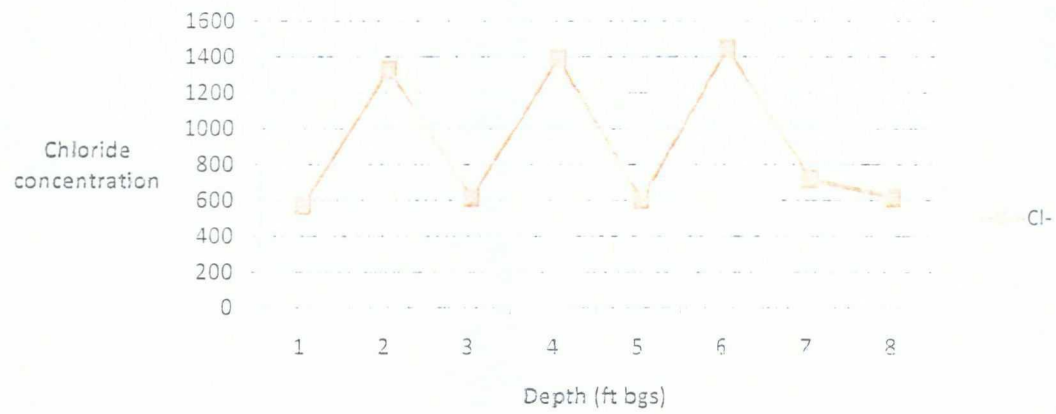
11/12/2009

|                                                                                                                                                                                        |                                     |                                                                                                                                                                                                      |                                                                                                                |          |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------|-------|
| Logger:                                                                                                                                                                                | Lara Weinheimer                     | <div style="text-align: center;">             EME Jct. N-8-1<br/> <br/>             EME Jct. N-8-2           </div> |                              |          |       |
| Driller:                                                                                                                                                                               | Harrison & Cooper, Inc. Drilling    |                                                                                                                                                                                                      |                                                                                                                |          |       |
| Consultant:                                                                                                                                                                            | N/A - ROC junction box upgrade plan |                                                                                                                                                                                                      |                                                                                                                |          |       |
| Drilling Method:                                                                                                                                                                       | Geo-probe                           |                                                                                                                                                                                                      |                                                                                                                |          |       |
| Start Date:                                                                                                                                                                            | 11/12/2009                          |                                                                                                                                                                                                      |                                                                                                                |          |       |
| End Date:                                                                                                                                                                              | 11/12/2009                          | Project Name:                                                                                                                                                                                        | EME Jct. N-8-2                                                                                                 | Well ID: | SB #1 |
| Comments: All samples from split spoon sampling. Located 15 feet east of the former junction box site.<br>Drafted by: Lara Weinheimer<br>TD = 28 ft      Estimated Depth to GW = 30 ft |                                     |                                                                                                                                                                                                      | Location: UL/N sec. 8 T20S R37E<br>Lat: 32°35'3.634"N      County: Lea<br>Long: 103°16'34.06" W      State: NM |          |       |

| Depth (feet) | chloride field tests | LAB | PID  | Description                                         | Lithology | Well Construction |
|--------------|----------------------|-----|------|-----------------------------------------------------|-----------|-------------------|
|              |                      |     |      | 11 - 14 ft                                          |           |                   |
|              |                      |     |      | VERY FINE TO FINE SAND; CALICHE                     |           |                   |
|              |                      |     |      | brown, dry, no odor                                 |           |                   |
| 14           | 572                  |     | 0.6  |                                                     |           |                   |
|              |                      |     |      | 14 - 16 ft                                          |           |                   |
|              |                      |     |      | VERY FINE TO FINE SAND; CALICHE                     |           |                   |
|              |                      |     |      | light brown, slightly moist, no odor                |           |                   |
| 16           | 1327                 |     | 1    |                                                     |           |                   |
|              |                      |     |      | 16 - 20 ft                                          |           |                   |
|              |                      |     |      | VERY FINE TO FINE SAND; CALICHE                     |           |                   |
|              |                      |     |      | slight reddish brown, dry, no odor                  |           |                   |
| 18           | 615                  |     | 21.6 |                                                     |           |                   |
|              |                      |     |      | 20 - 22 ft                                          |           |                   |
|              |                      |     |      | VERY FINE TO FINE SAND WITH CLAY                    |           |                   |
|              |                      |     |      | reddish brown, dry, no odor                         |           |                   |
| 20           | 1390                 |     | 69.9 |                                                     |           |                   |
|              |                      |     |      | 22 - 28 ft                                          |           |                   |
|              |                      |     |      | VERY FINE TO FINE SAND; CONSOL. ROCK; CALICHE; CLAY |           |                   |
|              |                      |     |      | light brown, slightly moist, no odor                |           |                   |
| 22           | 604                  |     | 84.4 |                                                     |           |                   |
|              |                      |     |      |                                                     |           |                   |
| 24           | 1446                 |     | 0    |                                                     |           |                   |
|              |                      |     |      |                                                     |           |                   |
| 26           | 719                  |     | 0    |                                                     |           |                   |
|              |                      |     |      |                                                     |           |                   |
| 28           | 614                  |     | 0    |                                                     |           |                   |
|              |                      |     |      |                                                     |           |                   |
|              |                      |     |      |                                                     |           |                   |

bentonite seal

### Chloride concentration versus depth



COPY



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

Sampling Date: 11/12/09  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: ML  
Analyzed By: CK/HM

COPY

| ANALYSIS DATE               | 11/17/09 | 11/17/09 | 11/18/09 |
|-----------------------------|----------|----------|----------|
| H18725-1 SB #1 @ 20'        | <10.0    | <10.0    | 1,650    |
| H18725-2 SB #1 @ 24'        | <10.0    | 10.7     | 1,280    |
| H18725-3 SB #1 @ 28'        | <10.0    | 55.5     | 256      |
|                             |          |          |          |
|                             |          |          |          |
|                             |          |          |          |
|                             |          |          |          |
|                             |          |          |          |
|                             |          |          |          |
|                             |          |          |          |
|                             |          |          |          |
| Quality Control             | 457      | 522      | 500      |
| True Value QC               | 500      | 500      | 500      |
| % Recovery                  | 91.4     | 104      | 100      |
| Relative Percent Difference | 0.5      | 7.7      | < 0.1    |

\*Analyses performed on 1:4 w/v aqueous extracts. Reported on wet weight.

Date \_\_\_\_\_

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# RICE OPERATING COMPANY

122 West Taylor ~ Hobbs, NM 88240

PHONE: (575) 393-9174 FAX: (575) 397-1471

PID METER CALIBRATION & FIELD REPORT FORM

CK  
MODEL  
NO.

|   |
|---|
|   |
| ✓ |
|   |
|   |

MODEL: PGM 7300

SERIAL NO: 590-000183

MODEL: PGM 7300

SERIAL NO: 590-000504

MODEL: PGM 7600

SERIAL NO: 110-12383

MODEL: PGM 7600

SERIAL NO: 110-02920

COPY

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

|                    |                               |
|--------------------|-------------------------------|
| LOT NO: 424908     | EXPIRATION DATE: 7-29-2012    |
| FILL DATE: 7-30-09 | METER READING ACCURACY: 100.0 |

ACCURACY: +/- 2%

| SYSTEM | SITE      | UNIT | SECTION | TOWNSHIP | RANGE |
|--------|-----------|------|---------|----------|-------|
| EME    | jet N-8-2 | N    | 8       | T20S     | R37E  |

SAMPLE ID: soil bore #1

| DEPTH | PID  |
|-------|------|
| 14'   | 0.6  |
| 16'   | 1.0  |
| 18'   | 21.6 |
| 20'   | 69.9 |
| 22'   | 84.4 |

| DEPTH | PID |
|-------|-----|
|       |     |
|       |     |
|       |     |
|       |     |
|       |     |

| DEPTH | PID |
|-------|-----|
|       |     |
|       |     |
|       |     |
|       |     |
|       |     |

| DEPTH | PID |
|-------|-----|
|       |     |
|       |     |
|       |     |
|       |     |
|       |     |

| DEPTH | PID |
|-------|-----|
| 24'   | 0   |
| 26'   | 0   |
| 28'   | 0   |
|       |     |
|       |     |

| DEPTH | PID |
|-------|-----|
|       |     |
|       |     |
|       |     |
|       |     |
|       |     |

| DEPTH | PID |
|-------|-----|
|       |     |
|       |     |
|       |     |
|       |     |
|       |     |

| DEPTH | PID |
|-------|-----|
|       |     |
|       |     |
|       |     |
|       |     |
|       |     |

I verify that I have calibrated the above instrument in accordance to the manufacture's operation manual.

Signature

*[Signature]*

Date

11-12-09

SITE MAP





# ARDINAL LABORATORIES

PHONE: (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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

Receiving Date: 10/09/09  
Reporting Date: 10/13/09  
Project Owner: NOT GIVEN  
Project Name: FINAL SAMPLES  
Project Location: EME N-8-2

Sampling Date: 10/08/09  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: ML  
Analyzed By: AB/HM

COPY

| LAB NUMBER | SAMPLE ID | GRO                                                                                | DRO     | CI      |
|------------|-----------|------------------------------------------------------------------------------------|---------|---------|
|            |           | (C <sub>6</sub> -C <sub>10</sub> ) (>C <sub>10</sub> -C <sub>28</sub> )<br>(mg/kg) | (mg/kg) | (mg/kg) |

| ANALYSIS DATE                  | 10/12/09 | 10/12/09 | 10/12/09 |
|--------------------------------|----------|----------|----------|
| H18461-1 4 WALL COMPOSITE      | <10.0    | <10.0    | 144      |
| H18461-2 5 PT BOTTOM COMPOSITE | <10.0    | <10.0    | 400      |
| H18461-3 BLENDED BACKFILL      | <10.0    | 77.0     | 288      |
|                                |          |          |          |
|                                |          |          |          |
|                                |          |          |          |
|                                |          |          |          |
|                                |          |          |          |
| Quality Control                | 447      | 506      | 490      |
| True Value QC                  | 500      | 500      | 500      |
| % Recovery                     | 89.4     | 101      | 98.0     |
| Relative Percent Difference    | 2.2      | 1.9      | 2.0      |

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; CI: Std. Methods 4500-CIB

\*Analyses performed on 1:4 w/v aqueous extracts. Reported on wet weight.

Chemist

Date 10/13/09

H18461 TOL RICE

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101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603  
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

|                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                        |  |                                                |  |                                                                                                                                                                                                                                                                                                                                |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------|--|------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Company Name:</b> RICE OPERATING<br><b>Project Manager:</b> Bruce Baker<br><b>Address:</b> 122 W. TAYLOR<br><b>City:</b> HOBBS<br><b>State:</b> NM <b>Zip:</b> 88240<br><b>Phone #:</b> 393-9174 <b>Fax #:</b> 397-1471<br><b>Project #:</b><br><b>Project Name:</b> Final Samples<br><b>Project Location:</b> EME N-8-D<br><b>Sampler Name:</b> Danell Mitchell<br><small>FOR LAB USE ONLY</small> |  | <b>Sample I.D.</b><br><br>4 well compost<br>2 5PT Bottom Compost<br>3 Blended Backfill |  | <b>Sample I.D.</b><br><br>8015 m TRH           |  | <b>ANALYSIS REQUEST</b>                                                                                                                                                                                                                                                                                                        |  |
| <b>Lab I.D.</b>                                                                                                                                                                                                                                                                                                                                                                                        |  | <b>Lab I.D.</b>                                                                        |  | <b>Lab I.D.</b>                                |  | <b>Lab I.D.</b>                                                                                                                                                                                                                                                                                                                |  |
| <b>Matrix:</b><br>GROUNDWATER<br>WASTEWATER<br>SOIL<br>SLUDGE<br>OTHER:                                                                                                                                                                                                                                                                                                                                |  | <b>Preserv:</b><br>ACID/BASE<br>ICE/COOL<br>OTHER:                                     |  | <b>Sampling:</b><br>DATE<br>TIME               |  | <b>Analysis Request:</b><br>Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Add'l Phone #: <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Add'l Fax #: <input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| # CONTAINERS<br>(G)RAB OR (C)OMP                                                                                                                                                                                                                                                                                                                                                                       |  | DATE<br>TIME                                                                           |  | DATE<br>TIME                                   |  | DATE<br>TIME                                                                                                                                                                                                                                                                                                                   |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |
| 1<br>1<br>1                                                                                                                                                                                                                                                                                                                                                                                            |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                         |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10 |  | 10-8-09 11:45<br>10-8-09 11:35<br>10-8-09 1:10                                                                                                                                                                                                                                                                                 |  |

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

# RICE OPERATING COMPANY

122 West Taylor Hobbs, NM 88240  
PHONE: (575) 393-9174 FAX: (575) 397-1471

PID METER CALIBRATION & FIELD REPORT FORM

COPY

Check Model Number:

|   |
|---|
| ✓ |
|   |
|   |

Model: PGM 7300  
Model: PGM 7300  
Model: PGM 7300

Serial No: 590-000183  
Serial No: 590-000508  
Serial No: 590-000504

|  |
|--|
|  |
|  |
|  |

Model: PGM 7600  
Model: PGM 7600  
Model: PGM 7600

Serial No: 110-023920  
Serial No: 110-013744  
Serial No: 110-013676

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

|                   |                                   |
|-------------------|-----------------------------------|
| LOT NO: 924503    | EXPIRATION DATE: 7-29-2010        |
| FILL DATE: 3-9-09 | METER READING ACCURACY: 100.1 ppm |

ACCURACY : +/- 2%

| SYSTEM | JUNCTION | UNIT | SECTION | TOWN SHIP | RANGE |
|--------|----------|------|---------|-----------|-------|
| EME    | N-8-2    | N    | 8       | 21        | 36    |

| SAMPLE ID        | PID | SAMPLE ID | PID |
|------------------|-----|-----------|-----|
| 4 Well Comp      | 1.8 |           |     |
| 5pt Bottom       | 2.4 |           |     |
| Blended Backfill | 4.8 |           |     |
|                  |     |           |     |
|                  |     |           |     |
|                  |     |           |     |
|                  |     |           |     |
|                  |     |           |     |
|                  |     |           |     |
|                  |     |           |     |
|                  |     |           |     |

I verify that I have calibrated the above instrument in accordance to the manufacture operation manual.

SIGNATURE: Daniel M. Wheeler

DATE: 10-8-09

EME Jct. N-8-2  
Unit 'N', Sec. 8, T20S, R37E

# Excavation Cross-Section





LABORATORY TEST REPORT  
PETTIGREW & ASSOCIATES, P.A.  
1110 N. GRIMES  
HOBBS, NM 88240  
(575) 393-9827



DEBRA P. HICKS, P.E./L.S.I.  
WILLIAM M. HICKS, III, P.E./P.S.

To: Rice Operating Company  
Attn: Bruce  
122 W. Taylor  
Hobbs, NM 88240

Material: Wallach Red Clay

Test Method: ASTM: D 2922

Project: N-8-2-EME  
Project No. 2009.1294

Date of Test: November 9, 2009

COPY

Depth: See Below

Depth of Probe: 12"

| Test No. | Location                              | Dry Density |            | Depth |
|----------|---------------------------------------|-------------|------------|-------|
|          |                                       | % Max       | % Moisture |       |
| SG 1     | N-8-2 EME - 7' W & 5' S. of NE Corner | 90.9        | 16.0       | FSG   |

RECEIVED

DEC 09 2009

RICE OPERATING  
HOBBS, NM

Control Density: 100.7  
ASTM: D 698

Optimum Moisture: 20.7%

Required Compaction: 90% - 95%

Densometer ID: 815  
PETTIGREW & ASSOCIATES

Lab No.: 09 7347-7348

Copies To: Rice Operating

BY: Erica M Hart

BY: C. Hicks P.E.

CHLORIDE CONCENTRATION CURVE

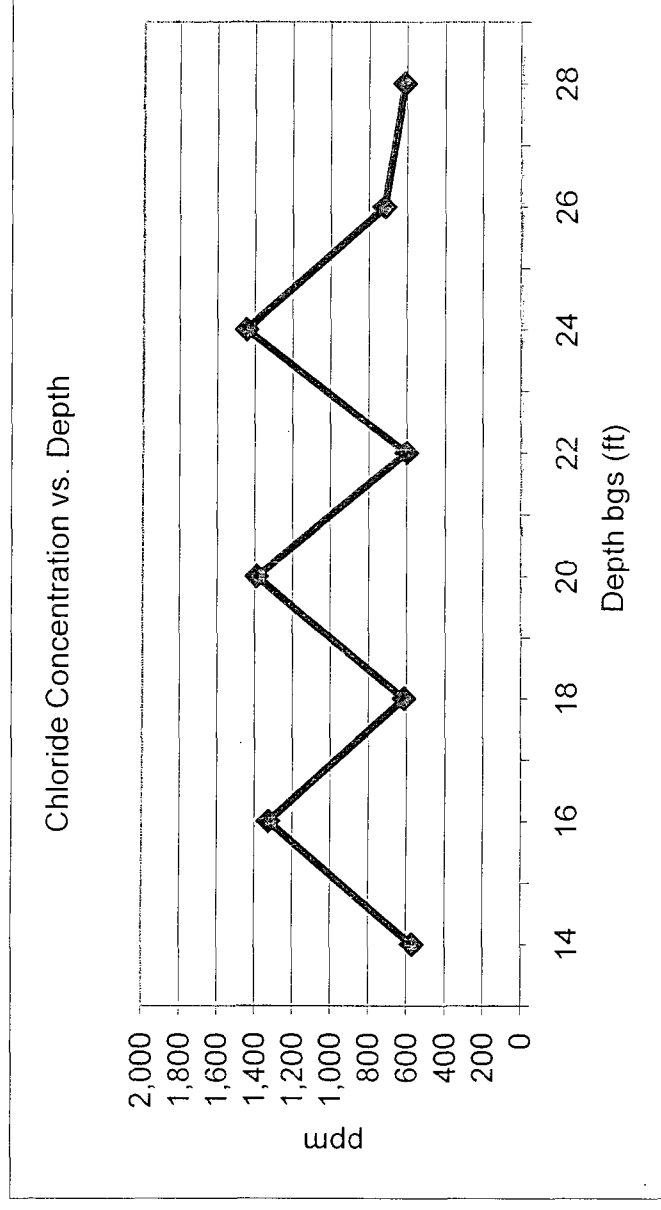
RICE Operating Company

EME Jct. N-8-2

Unit 'N', Sec. 8, T20S, R37E

SOIL BORE samples at 15 ft east of the junction (source)

| Depth bgs (ft) | [Cl <sup>-</sup> ] ppm |
|----------------|------------------------|
| 14             | 572                    |
| 16             | 1,327                  |
| 18             | 615                    |
| 20             | 1,390                  |
| 22             | 604                    |
| 24             | 1,446                  |
| 26             | 719                    |
| 28             | 614                    |



Groundwater = 30 ft