

1R - 425-80

**REPORTS**

**DATE:**

11-12-09

1R425-80

Vac Jct C-31-2  
2009

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APR 15 2009  
Environmental Protection  
Oil Conservation Division

**DISCLOSURE**

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APR - 6 2010

RICE OPERATING COMPANY  
JUNCTION BOX DISCLOSURE\* REPORTEnvironmental Bureau  
Oil Conservation Division

## BOX LOCATION

| SWD SYSTEM | JUNCTION    | UNIT | SECTION | TOWNSHIP | RANGE | COUNTY | BOX DIMENSIONS - FEET |       |       |
|------------|-------------|------|---------|----------|-------|--------|-----------------------|-------|-------|
| Vacuum     | Jct. C-31-2 | C    | 31      | 17S      | 35E   | Lea    | Length                | Width | Depth |
|            |             |      |         |          |       |        | eliminated            |       |       |

LAND TYPE: BLM \_\_\_\_\_ STATE X FEE LANDOWNER \_\_\_\_\_ OTHER \_\_\_\_\_Depth to Groundwater 100 feet NMOCD SITE ASSESSMENT RANKING SCORE: 20Date Started 6/3/2008 Date Completed 6/19/2009 OCD Witness noSoil Excavated 6.7 cubic yards Excavation Length 5 Width 3 Depth 12 feetSoil Disposed 0 cubic yards Offsite Facility n/a Location n/aFINAL ANALYTICAL RESULTS: Sample Date 6/4/2008; 6/19/2009 Sample Depth 12 ft; 15 ft, 40 ft, 60 ft

TPH and Chloride laboratory test results completed by using an approved lab and testing procedures pursuant to NMOCD guidelines.

| Sample Location | Benzene mg/kg       | Toluene mg/kg | Ethyl Benzene mg/kg | Total Xylenes mg/kg | GRO mg/kg | DRO mg/kg | Chloride mg/kg |
|-----------------|---------------------|---------------|---------------------|---------------------|-----------|-----------|----------------|
| SOURCE 12' GRAB | PID (field) = 847.0 |               |                     |                     | 452       | 4,760     | 320            |
| SB #1 15' GRAB  | <0.050              | <0.050        | <0.050              | <0.300              | <10.0     | 645       | 1,880          |
| SB #1 40' GRAB  |                     |               |                     |                     | <10.0     | <10.0     | 3,120          |
| SB #1 60' GRAB  |                     |               |                     |                     | <10.0     | <10.0     | 2,280          |

**General Description of Remedial Action:** This junction was addressed during the Vacuum SWD System Abandonment. An investigation was conducted at the former junction box site using a backhoe to collect soil samples at regular intervals creating a 5x3x12-ft excavation. Chloride field tests were performed on each sample which yielded some elevated concentrations. Organic vapors were measured using a PID which also yielded elevated concentrations. The deepest sample, 12 ft BGS, was sent to a commercial laboratory for analysis of chloride and TPH. Laboratory analysis confirmed elevated concentrations of DRO, but lower concentrations of GRO and chloride. The excavated soil was returned to the excavation to ground surface and contoured to the surrounding area. To further investigation depth of TPH presence, a soil bore was initiated at the former junction box site on 6/19/2009. The boring was advanced to a depth of 60 ft BGS with soil samples collected at 5 ft intervals. Chloride field test performed on each sample yielded elevated concentrations. The 15 ft, 40 ft, and 60 ft samples were sent to a commercial laboratory for analysis of chloride and TPH. Laboratory analysis confirmed elevated concentrations of chloride but low concentrations of TPH. The entire bore hole was plugged with bentonite to the ground surface. NMOCD was notified of potential groundwater impact on 11/11/2009.

**ADDITIONAL EVALUATION IS HIGH PRIORITY**

enclosures: photos, lab results, PID (field) screenings, boring log, chloride curve

## CHLORIDE FIELD TESTS

| LOCATION                                              | DEPTH | mg/kg |
|-------------------------------------------------------|-------|-------|
| vertical delineation trench at the junction (source)  | 5'    | 573   |
|                                                       | 6'    | 825   |
|                                                       | 7'    | 1,183 |
|                                                       | 8'    | 483   |
|                                                       | 9'    | 737   |
|                                                       | 10'   | 3,198 |
|                                                       | 11'   | 627   |
| SOIL BORING at the former junction (source) 6/19/2009 | 12'   | 646   |
|                                                       | 15'   | 1,391 |
|                                                       | 20'   | 3,890 |
|                                                       | 25'   | 3,299 |
|                                                       | 30'   | 3,660 |
|                                                       | 35'   | 3,231 |
|                                                       | 40'   | 3,050 |
|                                                       | 45'   | 2,460 |
|                                                       | 50'   | 2,411 |
|                                                       | 55'   | 2,533 |
|                                                       | 60'   | 2,584 |

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

SITE SUPERVISOR Roy Rascon SIGNATURE not available COMPANY RICE OPERATING COMPANYREPORT  
ASSEMBLED BY Katie Jones INITIAL KJPROJECT LEADER Larry Bruce Baker Jr. SIGNATURE Larry Bruce Baker Jr. DATE 11-12-09

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

## Vacuum Jct. C-31-2

Unit C, Section 31, T17S, R35E



prior to excavation, facing north

5/29/2008



vertical at the source, facing north

6/4/2008



drilling SB #1 at the former junction box site

6/19/2009



plugging SB #1 with bentonite

6/19/2009



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JUN 11 2008

RICE OPERATING  
HOBBS, NM

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

Receiving Date: 06/04/08  
Reporting Date: 06/10/08  
Project Owner: NOT GIVEN  
Project Name: NOT GIVEN  
Project Location: VAC JCT. C-31-2

Sampling Date: 06/04/08  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: ML  
Analyzed By: CK/AB

COPY

| LAB NUMBER                  | SAMPLE ID                    | GRO<br>(C <sub>6</sub> -C <sub>10</sub> )<br>(mg/kg) | DRO<br>(>C <sub>10</sub> -C <sub>28</sub> )<br>(mg/kg) | CI*<br>(mg/kg) |
|-----------------------------|------------------------------|------------------------------------------------------|--------------------------------------------------------|----------------|
|                             |                              | 06/05/08                                             | 06/05/08                                               | 06/05/08       |
| H14926-1                    | VERT @ SOURCE @ 12' BGS GRAB | 452                                                  | 4,760                                                  | 320            |
|                             |                              |                                                      |                                                        |                |
|                             |                              |                                                      |                                                        |                |
|                             |                              |                                                      |                                                        |                |
| Quality Control             |                              | 497                                                  | 573                                                    | 490            |
| True Value QC               |                              | 500                                                  | 500                                                    | 500            |
| % Recovery                  |                              | 99.4                                                 | 115                                                    | 98.0           |
| Relative Percent Difference |                              | 1.6                                                  | 0.7                                                    | 2.0            |

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

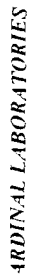
\*Analysis performed on a 1:4 w/v aqueous extract.

Chemist

Date

H14926TCL RICE

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## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

|                                                                                   |                                  |                                              |                        |                               |
|-----------------------------------------------------------------------------------|----------------------------------|----------------------------------------------|------------------------|-------------------------------|
| <b>Logger:</b>                                                                    | Lara Weinheimer                  | <b>Client:</b>                               | RICE Operating Company | <b>Well ID:</b><br><br>SB - 1 |
| <b>Driller:</b>                                                                   | Harrison & Cooper, Inc. Drilling | <b>Project Name:</b>                         |                        |                               |
| <b>Drilling Method:</b>                                                           | Air rotary                       | Vacuum jct. C-31-2                           |                        |                               |
| <b>Start Date:</b>                                                                | 6-19-09                          | <b>Location:</b>                             |                        |                               |
| <b>End Date:</b>                                                                  | 6-19-09                          | VACUUM SWD System                            |                        |                               |
| <b>Comments:</b><br>Located: 1 ft north of former jct. box site<br><br>TD = 60 ft |                                  | Unit 'C' Sec.31 T17S, R35E<br>Lea County, NM |                        |                               |

| Depth<br>(feet) | chloride<br>field    | PID                 | Description                              | Lithology | Soil Bore<br>Construction |
|-----------------|----------------------|---------------------|------------------------------------------|-----------|---------------------------|
|                 |                      |                     | 0 - 15 ft                                |           |                           |
|                 |                      |                     | VERY FINE TO FINE SAND                   |           |                           |
| 15              | 1391                 | 82                  | caliche, light brown, dry                |           |                           |
| LAB             | 1860                 | GRD #10<br>GRD #543 |                                          |           |                           |
|                 | BTE <0.05<br>X <0.03 |                     |                                          |           |                           |
| 20              | 3890                 | 5.1                 | 15 - 30 ft                               |           |                           |
|                 |                      |                     | VERY FINE TO FINE SAND                   |           |                           |
|                 |                      |                     | light brown, slightly moist              |           |                           |
| 25              | 3299                 |                     |                                          |           |                           |
|                 |                      |                     |                                          |           |                           |
| 30              | 3660                 |                     |                                          |           |                           |
|                 |                      |                     |                                          |           |                           |
| 35              | 3231                 |                     | 30 - 45 ft                               |           |                           |
|                 |                      |                     | VERY FINE TO FINE SAND                   |           |                           |
|                 |                      |                     | reddish-brown, slightly moist            |           |                           |
| 40              | 3050                 |                     |                                          |           |                           |
| LAB             | 3120                 | GRD #10<br>GRD #10  |                                          |           |                           |
| 45              | 2460                 |                     |                                          |           |                           |
|                 |                      |                     | 45 - 50 ft                               |           |                           |
|                 |                      |                     | VERY FINE TO FINE SAND                   |           |                           |
| 50              | 2411                 |                     | light brown, dry                         |           |                           |
|                 |                      |                     | 50 - 55 ft                               |           |                           |
|                 |                      |                     | VERY FINE TO FINE SAND                   |           |                           |
| 55              | 2533                 |                     | quartzite, reddish-brown, slightly moist |           |                           |
|                 |                      |                     | 55 - 60 ft                               |           |                           |
|                 |                      |                     | VERY FINE TO FINE SAND                   |           |                           |
| 60              | 2584                 |                     | reddish-brown, moist                     |           |                           |
| LAB             | 2280                 | GRD #10<br>GRD #10  |                                          |           |                           |



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

Receiving Date: 06/23/09  
Reporting Date: 06/24/09  
Project Owner: NOT GIVEN  
Project Name: VACUUM JCT C-31-2  
Project Location: VACUUM JCT C-31-2

Sampling Date: 06/19/09  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: HM  
Analyzed By: AB/HM

COPIED

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

| ANALYSIS DATE               |             | 02/10/09 | 02/10/09 | 06/23/09 |
|-----------------------------|-------------|----------|----------|----------|
| H17688-1                    | SB #1 @ 15' | <10.0    | 645      | 1,880    |
| H17688-2                    | SB #1 @ 40' | <10.0    | <10.0    | 3,120    |
| H17688-3                    | SB #1 @ 60' | <10.0    | <10.0    | 2,280    |
|                             |             |          |          |          |
|                             |             |          |          |          |
|                             |             |          |          |          |
| Quality Control             |             | 590      | 600      | 490      |
| True Value QC               |             | 500      | 500      | 500      |
| % Recovery                  |             | 118      | 120      | 98.0     |
| Relative Percent Difference |             | 1.6      | 1.0      | 2.0      |

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

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

Not accredited for GRO/DRO and Chloride.

Chemist

Date

H17688 TCL RICE

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

Receiving Date: 06/23/09  
Reporting Date: 06/26/09  
Project Owner: NOT GIVEN  
Project Name: VACUUM JCT C-31-2  
Project Location: VACUUM JCT C-31-2

Sampling Date: 06/19/09  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: HM  
Analyzed By: ZL

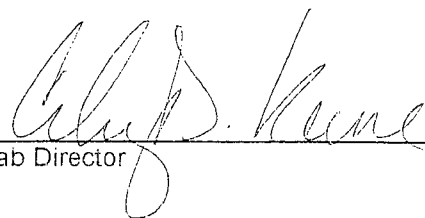
LAB NO. SAMPLE ID

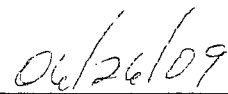
|  | ETHYL   | TOTAL   |
|--|---------|---------|
|  | BENZENE | TOLUENE |
|  | BENZENE | XYLENES |
|  | (mg/kg) | (mg/kg) |

|                             |          |          |          |          |
|-----------------------------|----------|----------|----------|----------|
| ANALYSIS DATE:              | 06/25/09 | 06/25/09 | 06/25/09 | 06/25/09 |
| H17688-1 SB#1 @ 15'         | <0.050   | <0.050   | <0.050   | <0.300   |
|                             |          |          |          |          |
|                             |          |          |          |          |
|                             |          |          |          |          |
|                             |          |          |          |          |
| Quality Control             | 0.057    | 0.055    | 0.057    | 0.171    |
| True Value QC               | 0.050    | 0.050    | 0.050    | 0.150    |
| % Recovery                  | 114      | 110      | 114      | 114      |
| Relative Percent Difference | 3.8      | 3.9      | 3.8      | 4.4      |

METHODS: BTEX - SW-846 8021B

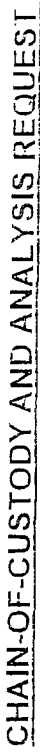
TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
AND TOTAL XYLENES. Reported on wet weight.

  
Lab Director

  
Date

H17688 B RICE

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## ARDINAL LABORATORIES

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

[illegible]

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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

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

|                    |                               |
|--------------------|-------------------------------|
| LOT NO: 08-3425    | EXPIRATION DATE: 6-19-09      |
| FILL DATE: 2-29-09 | METER READING ACCURACY: 100.0 |

ACCURACY: +/- 2%

| SYSTEM | SITE       | UNIT | SECTION | TOWNSHIP | RANGE |
|--------|------------|------|---------|----------|-------|
| Vacuum | JCR C-31-2 | C    | 31      | T17S     | R35E  |

SAMPLE ID: Soil box #1

| DEPTH | PID |
|-------|-----|
| 15'   | 82  |
| 20'   | 5.1 |
|       |     |
|       |     |
|       |     |

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

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

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

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

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

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

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

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

Signature [Signature]

Date 6-16-09

SITE MAP



# CHLORIDE CONCENTRATION CURVE

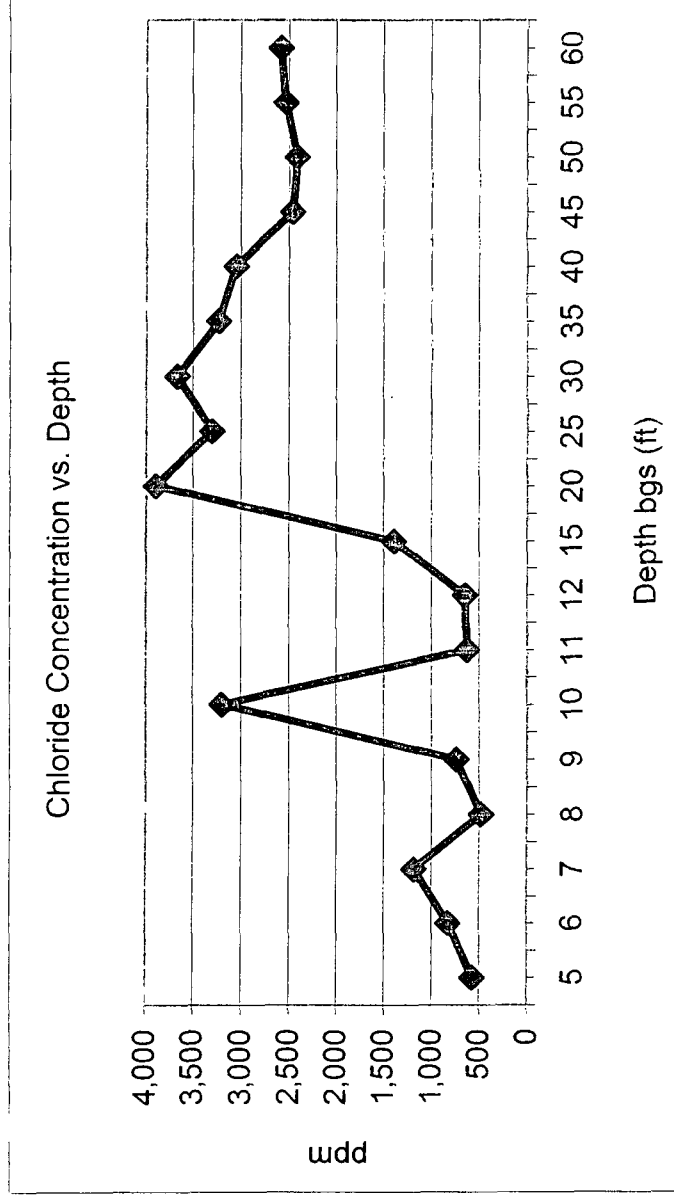
RICE Operating Company

## Vacuum Jct. C-31-2

Unit 'C', Sec. 31, T17S, R35E

Backhoe and Soil Bore samples at the junction (source)

| Depth bgs (ft) | [Cl <sup>-</sup> ] ppm |
|----------------|------------------------|
| 5              | 573                    |
| 6              | 825                    |
| 7              | 1,183                  |
| 8              | 483                    |
| 9              | 737                    |
| 10             | 3,198                  |
| 11             | 627                    |
| 12             | 646                    |
| 15             | 1,391                  |
| 20             | 3,890                  |
| 25             | 3,299                  |
| 30             | 3,660                  |
| 35             | 3,231                  |
| 40             | 3,050                  |
| 45             | 2,460                  |
| 50             | 2,411                  |
| 55             | 2,533                  |
| 60             | 2,584                  |



Groundwater = 100 ft