1R - 426-133

# REPORTS

# DATE:

3-16-07

**BD Hendrix Elliot EOL**

IR-426-133



# Disclosure

# RICE OPERATING COMPANY
## JUNCTION BOX **DISCLOSURE*** REPORT

BOX LOCATION

| SWD SYSTEM | JUNCTION | UNIT | SECTION | TOWNSHIP | RANGE | COUNTY | NEW BOX DIMENSIONS - FEET | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Length | Width | Depth |
| BD | Hendrix Elliot EOL | E | 35 | 21S | 37E | Lea | moved 25 ft East | | |

LAND TYPE: BLM _____ STATE _____ FEE LANDOWNER Millard Deck Estate OTHER _____

Depth to Groundwater 45.6 feet NMOCD SITE ASSESSMENT RANKING SCORE: 20

Date Started 10/21/2005 Date Completed 4/17/2006 NMOCD Witness no

Soil Excavated 278 cubic yards Excavation Length 25 Width 25 Depth 12 feet

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

## FINAL ANALYTICAL RESULTS: **Sample Date** 10/27/2005 **Sample Depth** 12 ft

Procure 5-point composite sample of the excavation bottom. TPH, BTEX, 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 |
|---|---|---|---|---|---|---|---|
| 4-WALL COMP. | PID = 0.1 | | | | 7.34 | 198 | 916 |
| BOTTOM COMP. | 0.00796 | 0.0980 | 0.257 | 1.18 | 138.0 | 585 | 973 |
| REMED. BACKFILL | PID = 88.3 | | | | 55.1 | 577 | 639 |

General Description of Remedial Action:

This end-of-line (EOL) box was addressed with the pipeline replacement/upgrade program. The junction was moved 25 ft east where a new junction box was built. The former box site was delineated using a backhoe to produce a 25 x 25 x 12-ft-deep excavation. Soil samples that were collected at regular intervals yielded elevated chloride concentrations south and west of the box. Composite samples were collected from the final excavation for laboratory analysis. OCD TPH guidelines were not met on the bottom, 4-wall, and backfill samples. The excavated soil was blended on site and then returned to the excavation at 6 ft BGS where a clay barrier was installed. The remainder of the soil was used to fill the excavation on top of the clay and to contour the surface. An identification plate was placed on the surface to mark the location of the former junction for future environmental considerations and the presence of clay below. The disturbed surface was seeded with a blend of native vegetation on 9/1/2006. On 3/15/2007, OCD was notified of potential groundwater impact at this site.

**ADDITIONAL EVALUATION IS *HIGH* PRIORITY**

enclosures: photos, lab results, PID field screenings, chloride graphs, BTEX comparison

CHLORIDE FIELD TESTS

| LOCATION | DEPTH (ft) | ppm |
|---|---|---|
| 15 ft SOUTH of former jct. box site | 3 | 1000 |
| | 4 | 801 |
| | 5 | 1025 |
| | 6 | 625 |
| | 7 | 850 |
| | 8 | 2228 |
| | 9 | 1888 |
| | 10 | 3326 |
| | 11 | 3289 |
| | 12 | 1522 |
| 4-wall comp. | n/a | 442 |
| bottom comp. | 12 | 664 |
| backfill comp. | n/a | 617 |

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

SITE SUPERVISOR Kevin Collins SIGNATURE not available COMPANY RICE Operating Company

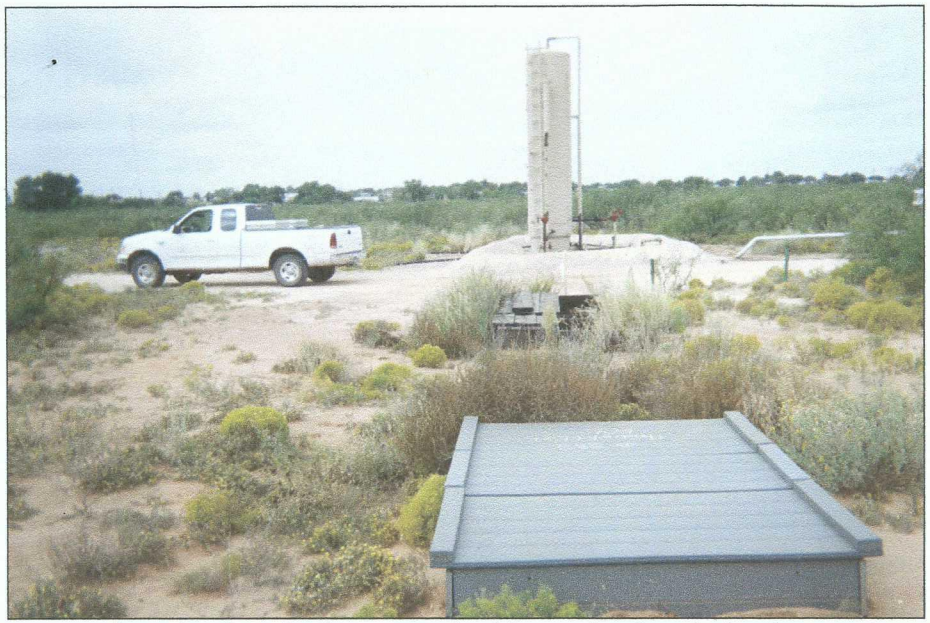
REPORT ASSEMBLED BY Kristin Farris Pope SIGNATURE Kristin Farris Pope

DATE 3/16/2007 TITLE Project Scientist

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

# BD Hendrix Elliott EOL

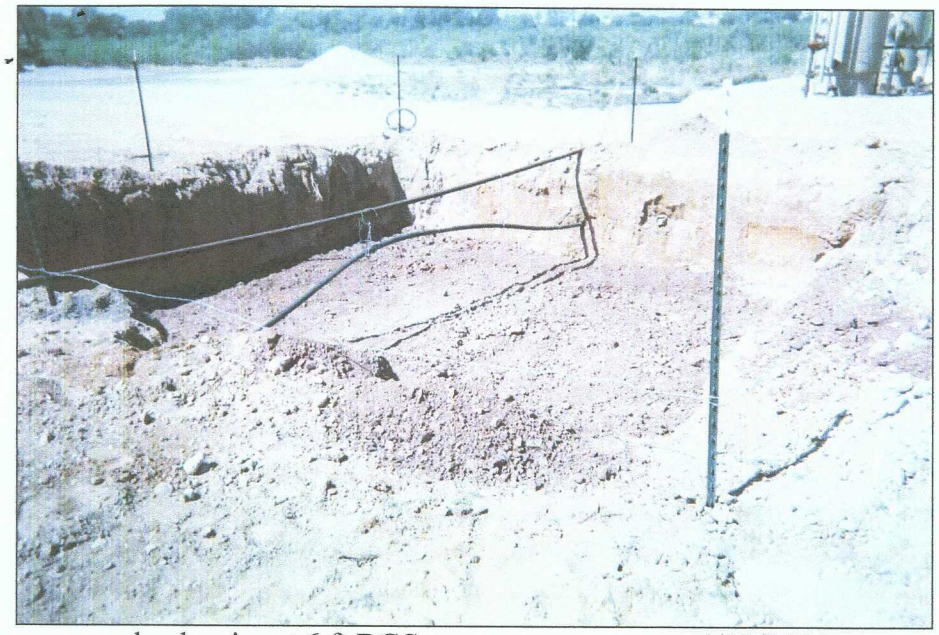
Unit 'E', Sec. 35, T21S, R37E



new junction box in foreground; old wooden box in background

collecting final samples from excavation bottom 10/27/2005

final 25 x 25 x 12 ft deep excavation Oct. 2005



clay barrier at 6 ft BGS 4/19/2006

backfilling excavation 4/20/2006

backfilling excavation 4/21/2006

seeding disturbed surface 9/1/2006

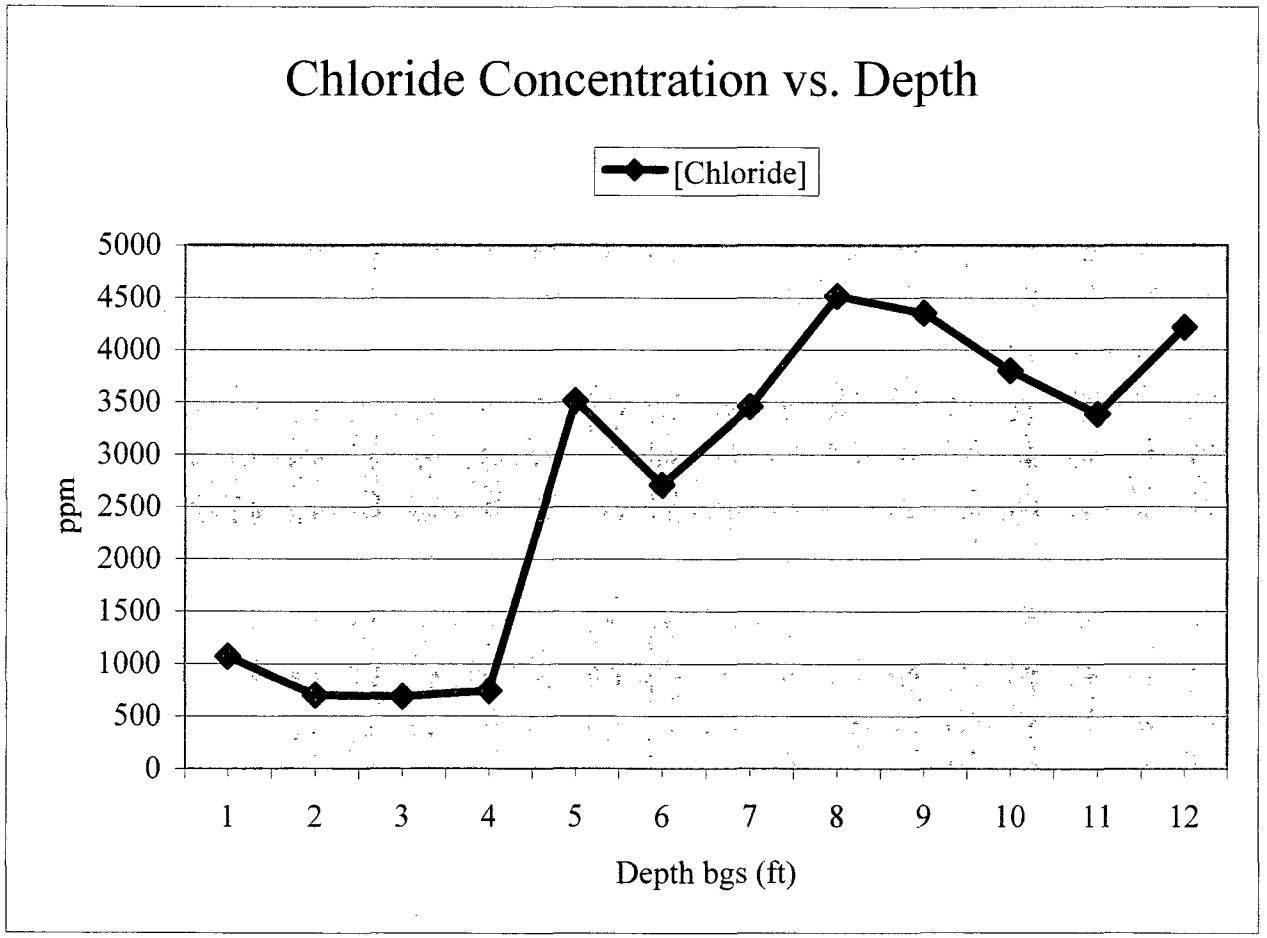
# BD Hendrix Elliott EOL

Unit 'E', Sec. 35, T21S, R37E

*15 ft WEST of junction*

| Depth bgs (ft) | [Cl⁻] ppm |
|---|---|
| 1 | 1069 |
| 2 | 701 |
| 3 | 687 |
| 4 | 745 |
| 5 | 3516 |
| 6 | 2709 |
| 7 | 3459 |
| 8 | 4517 |
| 9 | 4354 |
| 10 | 3805 |
| 11 | 3390 |
| 12 | 4216 |

Groundwater = 45.6 ft



# 2006 BTEX Study

# Revised Junction Box Upgrade Plan (2003)

| | | | | | |
|---|---|---|---|---|---|
| System: | BD | Date: | 10/27/2005 | Laboratory: | Environmental |
| Site: | Hendrix Elliott EOL | Sampler: | Kevin Collins | | Lab of Texas |

| Location | PID reading (ppm) | FIELD COMPOSITE (mg/kg) | | | |
|---|---|---|---|---|---|
| | | Benzene | Toluene | Ethyl Benzene | Total Xylenes |
| bottom composite at 12 ft BGS | 599 | 0.00796 | 0.0980 | 0.257 | 1.18 |
| | | LAB COMPOSITE (mg/kg) | | | |
| | | 0.0142 | 0.515 | 1.83 | 4.893 |

Field PID tests <100 ppm are considered final for BTEX. If PID is >100 ppm, the components of the BTEX composite sample will be collected individually and will be composited under laboratory conditions to prevent excessive volatilization. A 15-box, 30-sample study will be made to compare field-compositing with lab-compositing BTEX samples. Composite components are collected in a skewed 'W' pattern.

25' x 25' x 12'

122 WEST TAYLOR
HOBBS, NEW MEXICO 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471

# VOC FIELD TEST REPORT FORM

## MINI RAE PLUS CLASSIC PHOTOIONIZATION GAS DETECTOR

MODEL NO: PGM 761S
CALIBRATION GAS
GAS COMPOSITION: ISOBUTYLENE
AIR
LOT NO: 05-2859
EXP. DATE: 011907
METER READING
ACCURACY: 100.2

SERIAL NO: 104412

100 PPM
BALANCE
FILL DATE: 071905
ACCURACY: ± 2%

| SYSTEM | JUNCTION | UNIT | SECTION | TOWNSHIP | RANGE |
|---|---|---|---|---|---|
| BD | Hendrix Illoith E01 | E | 35 | 21S | 37E |

| SAMPLE | PID RESULT | SAMPLE | PID RESULT |
|---|---|---|---|
| Bottom Composit | 599 | | |
| 4 Wall Comp | 0.1 | | |
| Back Fill Comp | 88.3 | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



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

Signature

10 2 05
Date

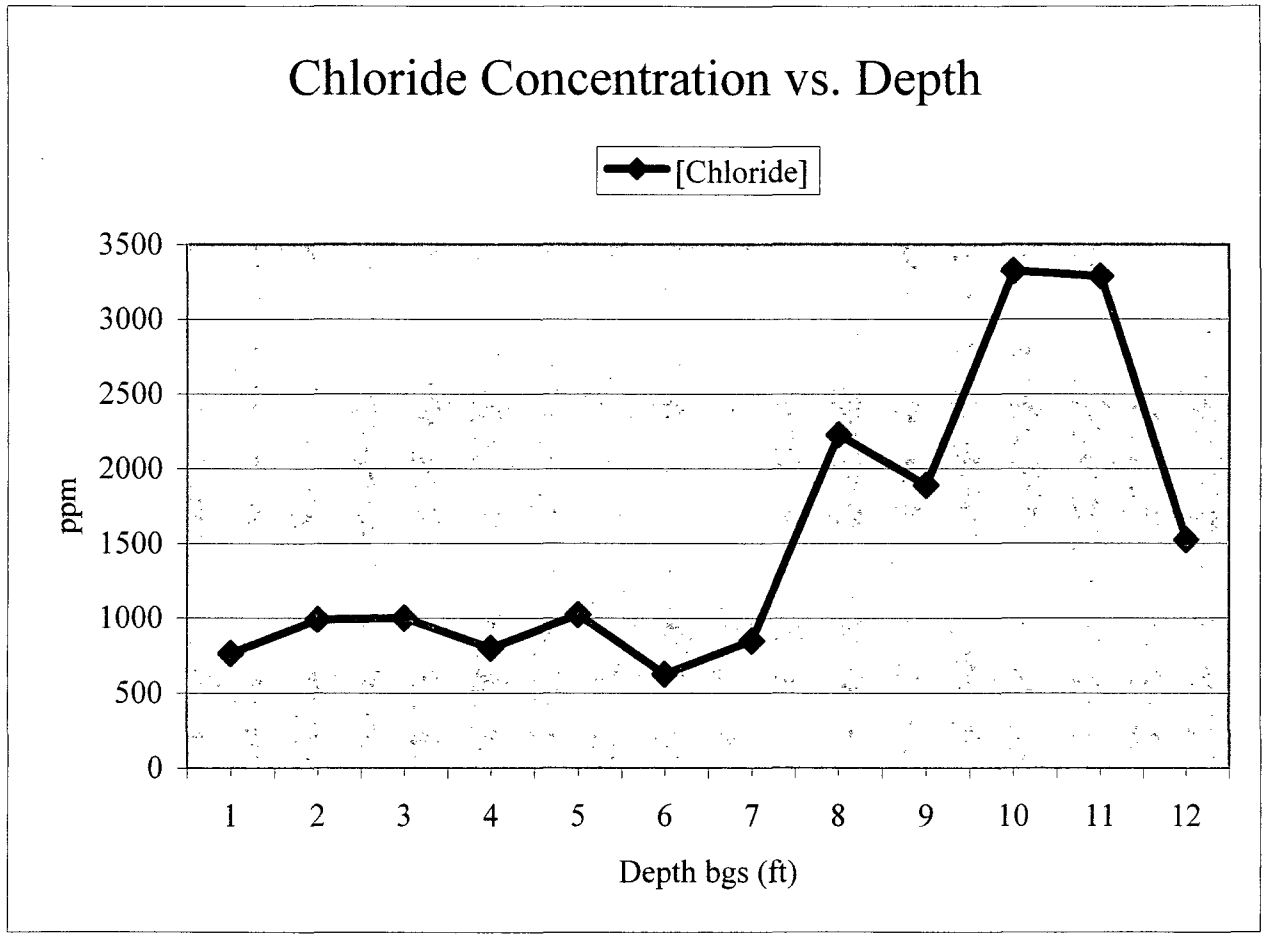
# BD Hendrix Elliott EOL

Unit 'E', Sec. 35, T21S, R37E

*15 ft SOUTH of junction*

| Depth bgs (ft) | [Cl⁻] ppm |
|---|---|
| 1 | 764 |
| 2 | 989 |
| 3 | 1000 |
| 4 | 801 |
| 5 | 1025 |
| 6 | 625 |
| 7 | 850 |
| 8 | 2228 |
| 9 | 1888 |
| 10 | 3326 |
| 11 | 3289 |
| 12 | 1522 |

Groundwater = 45.6 ft



25 x 25 x 12 ft
①

ENVIRONMENTAL LAB OF
12600 West I-20 East - Odessa, Texas 79765

# Analytical Report

COPY

**Prepared for:**
Roy Rascon
Rice Operating Co.
122 W. Taylor
Hobbs, NM 88240

Project: BD Hendrix Elliott EOL
Project Number: None Given
Location: None Given

Lab Order Number: 5J28004

Report Date: 11/07/05

| | | |
|---|---|---|
| Rice Operating Co. | Project: BD Hendrix Elliott EOL | Fax: (505) 397-1471 |
| 122 W. Taylor | Project Number: None Given | **Reported:** |
| Hobbs NM, 88240 | Project Manager: Roy Rascon | 11/07/05 14:37 |

## ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| 4 Wall Comp.@ 25'X25' | 5J28004-01 | Soil | 10/27/05 12:35 | 10/28/05 07:50 |
| Bottom Comp.@ 12' | 5J28004-02 | Soil | 10/27/05 12:30 | 10/28/05 07:50 |
| Comp. Bottom SP #1-5 | 5J28004-03 | Soil | 10/27/05 12:14 | 10/28/05 07:50 |
| Blend Backfill | 5J28004-04 | Soil | 10/27/05 13:09 | 10/28/05 07:50 |



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| | | |
|---|---|---|
| Rice Operating Co. | Project: BD Hendrix Elliott EOL | Fax: (505) 397-1471 |
| 122 W. Taylor | Project Number: None Given | **Reported:** |
| Hobbs NM, 88240 | Project Manager: Roy Rascon | 11/07/05 14:37 |

## Organics by GC

## Environmental Lab of Texas

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **4 Wall Comp.@ 25'X25' (5J28004-01) Soil** | | | | | | | | | |
| **Gasoline Range Organics C6-C12** | **J [7.34]** | 10.0 | mg/kg dry | 1 | EJ52810 | 10/28/05 | 10/28/05 | EPA 8015M | J |
| **Diesel Range Organics >C12-C35** | **198** | 10.0 | " | " | " | " | " | " | |
| **Total Hydrocarbon C6-C35** | **198** | 10.0 | " | " | " | " | " | " | |
| *Surrogate: 1-Chlorooctane* | | *115 %* | *70-130* | | " | " | " | " | |
| *Surrogate: 1-Chlorooctadecane* | | *140 %* | *70-130* | | " | " | " | " | *S-04* |
| **Bottom Comp.@ 12' (5J28004-02) Soil** | | | | | | | | | |
| **Benzene** | **J [0.00796]** | 0.0250 | mg/kg dry | 25 | EK50312 | 11/03/05 | 11/03/05 | EPA 8021B | J |
| **Toluene** | **0.0980** | 0.0250 | " | " | " | " | " | " | |
| **Ethylbenzene** | **0.257** | 0.0250 | " | " | " | " | " | " | |
| **Xylene (p/m)** | **1.04** | 0.0250 | " | " | " | " | " | " | |
| **Xylene (o)** | **0.140** | 0.0250 | " | " | " | " | " | " | |
| *Surrogate: a,a,a-Trifluorotoluene* | | *88.3 %* | *80-120* | | " | " | " | " | |
| *Surrogate: 4-Bromofluorobenzene* | | *146 %* | *80-120* | | " | " | " | " | *S-04* |
| **Gasoline Range Organics C6-C12** | **138** | 10.0 | " | 1 | EJ52810 | 10/28/05 | 10/28/05 | EPA 8015M | |
| **Diesel Range Organics >C12-C35** | **585** | 10.0 | " | " | " | " | " | " | |
| **Total Hydrocarbon C6-C35** | **723** | 10.0 | " | " | " | " | " | " | |
| *Surrogate: 1-Chlorooctane* | | *93.6 %* | *70-130* | | " | " | " | " | |
| *Surrogate: 1-Chlorooctadecane* | | *127 %* | *70-130* | | " | " | " | " | |
| **Comp. Bottom SP #1-5 (5J28004-03) Soil** | | | | | | | | | |
| **Benzene** | **J [0.0142]** | 0.0250 | mg/kg dry | 25 | EK50219 | 11/01/05 | 11/02/05 | EPA 8021B | J |
| **Toluene** | **0.515** | 0.0250 | " | " | " | " | " | " | |
| **Ethylbenzene** | **1.83** | 0.0250 | " | " | " | " | " | " | |
| **Xylene (p/m)** | **4.43** | 0.0250 | " | " | " | " | " | " | |
| **Xylene (o)** | **0.463** | 0.0250 | " | " | " | " | " | " | |
| *Surrogate: a,a,a-Trifluorotoluene* | | *132 %* | *80-120* | | " | " | " | " | *S-04* |
| *Surrogate: 4-Bromofluorobenzene* | | *189 %* | *80-120* | | " | " | " | " | *S-04* |







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| | | |
|---|---|---|
| Rice Operating Co. | Project: BD Hendrix Elliott EOL | Fax: (505) 397-1471 |
| 122 W. Taylor | Project Number: None Given | **Reported:** |
| Hobbs NM, 88240 | Project Manager: Roy Rascon | 11/07/05 14:37 |

## Organics by GC

## Environmental Lab of Texas

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Blend Backfill (5J28004-04) Soil** | | | | | | | | | |
| **Gasoline Range Organics C6-C12** | **55.1** | 10.0 | mg/kg dry | 1 | EJ52810 | 10/28/05 | 10/28/05 | EPA 8015M | |
| **Diesel Range Organics >C12-C35** | **577** | 10.0 | " | " | " | " | " | " | |
| **Total Hydrocarbon C6-C35** | **632** | 10.0 | " | " | " | " | " | " | |
| *Surrogate: 1-Chlorooctane* | | *129 %* | *70-130* | | " | " | " | " | |
| *Surrogate: 1-Chlorooctadecane* | | *174 %* | *70-130* | | " | " | " | " | *S-04* |







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| | | |
|---|---|---|
| Rice Operating Co. | Project: BD Hendrix Elliott EOL | Fax: (505) 397-1471 |
| 122 W. Taylor | Project Number: None Given | **Reported:** |
| Hobbs NM, 88240 | Project Manager: Roy Rascon | 11/07/05 14:37 |

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

| Analyte | Result | Reporting Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **4 Wall Comp.@ 25'X25' (5J28004-01) Soil** | | | | | | | | | |
| **Chloride** | **916** | 20.0 | mg/kg | 40 | EK50207 | 11/01/05 | 11/02/05 | EPA 300.0 | |
| **% Moisture** | **10.8** | 0.1 | % | 1 | EJ53114 | 10/28/05 | 10/31/05 | % calculation | |
| **Bottom Comp.@ 12' (5J28004-02) Soil** | | | | | | | | | |
| **Chloride** | **973** | 50.0 | mg/kg | 100 | EK50207 | 11/01/05 | 11/02/05 | EPA 300.0 | |
| **% Moisture** | **15.1** | 0.1 | % | 1 | EJ53114 | 10/28/05 | 10/31/05 | % calculation | |
| **Comp. Bottom SP #1-5 (5J28004-03) Soil** | | | | | | | | | |
| **% Moisture** | **13.0** | 0.1 | % | 1 | EJ53114 | 10/28/05 | 10/31/05 | % calculation | |
| **Blend Backfill (5J28004-04) Soil** | | | | | | | | | |
| **Chloride** | **639** | 10.0 | mg/kg | 20 | EK50207 | 11/01/05 | 11/02/05 | EPA 300.0 | |
| **% Moisture** | **10.3** | 0.1 | % | 1 | EJ53114 | 10/28/05 | 10/31/05 | % calculation | |







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## 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 EJ52810 - Solvent Extraction (GC)** | | | | | | | | | | |
| **Blank (EJ52810-BLK1)** | | | Prepared & Analyzed: 10/28/05 | | | | | | | |
| Gasoline Range Organics C6-C12 | ND | 10.0 | mg/kg wet | | | | | | | |
| Diesel Range Organics >C12-C35 | ND | 10.0 | " | | | | | | | |
| Total Hydrocarbon C6-C35 | ND | 10.0 | " | | | | | | | |
| *Surrogate: 1-Chlorooctane* | *45.9* | | *mg/kg* | *50.0* | | *91.8* | *70-130* | | | |
| *Surrogate: 1-Chlorooctadecane* | *55.2* | | *"* | *50.0* | | *110* | *70-130* | | | |
| **LCS (EJ52810-BS1)** | | | Prepared & Analyzed: 10/28/05 | | | | | | | |
| Gasoline Range Organics C6-C12 | 481 | 10.0 | mg/kg wet | 500 | | 96.2 | 75-125 | | | |
| Diesel Range Organics >C12-C35 | 458 | 10.0 | " | 500 | | 91.6 | 75-125 | | | |
| Total Hydrocarbon C6-C35 | 939 | 10.0 | " | 1000 | | 93.9 | 75-125 | | | |
| *Surrogate: 1-Chlorooctane* | *55.6* | | *mg/kg* | *50.0* | | *111* | *70-130* | | | |
| *Surrogate: 1-Chlorooctadecane* | *50.7* | | *"* | *50.0* | | *101* | *70-130* | | | |
| **Calibration Check (EJ52810-CCV1)** | | | Prepared & Analyzed: 10/28/05 | | | | | | | |
| Gasoline Range Organics C6-C12 | 512 | | mg/kg | 500 | | 102 | 80-120 | | | |
| Diesel Range Organics >C12-C35 | 480 | | " | 500 | | 96.0 | 80-120 | | | |
| Total Hydrocarbon C6-C35 | 992 | | " | 1000 | | 99.2 | 80-120 | | | |
| *Surrogate: 1-Chlorooctane* | *54.5* | | *"* | *50.0* | | *109* | *70-130* | | | |
| *Surrogate: 1-Chlorooctadecane* | *54.4* | | *"* | *50.0* | | *109* | *70-130* | | | |
| **Matrix Spike (EJ52810-MS1)** | **Source: 5J28003-23** | | Prepared & Analyzed: 10/28/05 | | | | | | | |
| Gasoline Range Organics C6-C12 | 644 | 10.0 | mg/kg dry | 579 | 21.4 | 108 | 75-125 | | | |
| Diesel Range Organics >C12-C35 | 637 | 10.0 | " | 579 | 117 | 89.8 | 75-125 | | | |
| Total Hydrocarbon C6-C35 | 1280 | 10.0 | " | 1160 | 138 | 98.4 | 75-125 | | | |
| *Surrogate: 1-Chlorooctane* | *64.2* | | *mg/kg* | *50.0* | | *128* | *70-130* | | | |
| *Surrogate: 1-Chlorooctadecane* | *62.8* | | *"* | *50.0* | | *126* | *70-130* | | | |
| **Matrix Spike Dup (EJ52810-MSD1)** | **Source: 5J28003-23** | | Prepared & Analyzed: 10/28/05 | | | | | | | |
| Gasoline Range Organics C6-C12 | 602 | 10.0 | mg/kg dry | 579 | 21.4 | 100 | 75-125 | 6.74 | 20 | |
| Diesel Range Organics >C12-C35 | 619 | 10.0 | " | 579 | 117 | 86.7 | 75-125 | 2.87 | 20 | |
| Total Hydrocarbon C6-C35 | 1220 | 10.0 | " | 1160 | 138 | 93.3 | 75-125 | 4.80 | 20 | |
| *Surrogate: 1-Chlorooctane* | *63.5* | | *mg/kg* | *50.0* | | *127* | *70-130* | | | |
| *Surrogate: 1-Chlorooctadecane* | *60.9* | | *"* | *50.0* | | *122* | *70-130* | | | |

## 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 EK50219 - EPA 5030C (GC)** | | | | | | | | | | |
| **Blank (EK50219-BLK1)** | | | | Prepared & Analyzed: 11/01/05 | | | | | | |
| Benzene | ND | 0.0250 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0250 | " | | | | | | | |
| Ethylbenzene | ND | 0.0250 | " | | | | | | | |
| Xylene (p/m) | ND | 0.0250 | " | | | | | | | |
| Xylene (o) | ND | 0.0250 | " | | | | | | | |
| *Surrogate: a,a,a-Trifluorotoluene* | *0.0429* | | " | *0.0400* | | *107* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0473* | | " | *0.0400* | | *118* | *80-120* | | | |
| **LCS (EK50219-BS1)** | | | | Prepared & Analyzed: 11/01/05 | | | | | | |
| Benzene | 0.0479 | 0.00100 | mg/kg wet | 0.0500 | | 95.8 | 80-120 | | | |
| Toluene | 0.0494 | 0.00100 | " | 0.0500 | | 98.8 | 80-120 | | | |
| Ethylbenzene | 0.0469 | 0.00100 | " | 0.0500 | | 93.8 | 80-120 | | | |
| Xylene (p/m) | 0.0887 | 0.00100 | " | 0.100 | | 88.7 | 80-120 | | | |
| Xylene (o) | 0.0477 | 0.00100 | " | 0.0500 | | 95.4 | 80-120 | | | |
| *Surrogate: a,a,a-Trifluorotoluene* | *0.0427* | | " | *0.0400* | | *107* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0352* | | " | *0.0400* | | *88.0* | *80-120* | | | |
| **Calibration Check (EK50219-CCV1)** | | | | Prepared: 11/01/05 Analyzed: 11/02/05 | | | | | | |
| Benzene | 45.8 | | ug/kg | 50.0 | | 91.6 | 80-120 | | | |
| Toluene | 47.6 | | " | 50.0 | | 95.2 | 80-120 | | | |
| Ethylbenzene | 46.0 | | " | 50.0 | | 92.0 | 80-120 | | | |
| Xylene (p/m) | 87.4 | | " | 100 | | 87.4 | 80-120 | | | |
| Xylene (o) | 46.9 | | " | 50.0 | | 93.8 | 80-120 | | | |
| *Surrogate: a,a,a-Trifluorotoluene* | *0.0396* | | *mg/kg wet* | *0.0400* | | *99.0* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0348* | | " | *0.0400* | | *87.0* | *80-120* | | | |
| **Matrix Spike (EK50219-MS1)** | **Source: 5J27009-01** | | | Prepared: 11/01/05 Analyzed: 11/02/05 | | | | | | |
| Benzene | 0.0509 | 0.00100 | mg/kg dry | 0.0557 | ND | 91.4 | 80-120 | | | |
| Toluene | 0.0540 | 0.00100 | " | 0.0557 | ND | 96.9 | 80-120 | | | |
| Ethylbenzene | 0.0538 | 0.00100 | " | 0.0557 | ND | 96.6 | 80-120 | | | |
| Xylene (p/m) | 0.102 | 0.00100 | " | 0.111 | ND | 91.9 | 80-120 | | | |
| Xylene (o) | 0.0550 | 0.00100 | " | 0.0557 | ND | 98.7 | 80-120 | | | |
| *Surrogate: a,a,a-Trifluorotoluene* | *0.0424* | | " | *0.0445* | | *95.3* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0509* | | " | *0.0445* | | *114* | *80-120* | | | |

# 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 EK50219 - EPA 5030C (GC)** | | | | | | | | | | |
| **Matrix Spike Dup (EK50219-MSD1)** | **Source: 5J27009-01** | | | Prepared: 11/01/05 Analyzed: 11/02/05 | | | | | | |
| Benzene | 0.0504 | 0.00100 | mg/kg dry | 0.0557 | ND | 90.5 | 80-120 | 0.990 | 20 | |
| Toluene | 0.0538 | 0.00100 | " | 0.0557 | ND | 96.6 | 80-120 | 0.310 | 20 | |
| Ethylbenzene | 0.0538 | 0.00100 | " | 0.0557 | ND | 96.6 | 80-120 | 0.00 | 20 | |
| Xylene (p/m) | 0.102 | 0.00100 | " | 0.111 | ND | 91.9 | 80-120 | 0.00 | 20 | |
| Xylene (o) | 0.0548 | 0.00100 | " | 0.0557 | ND | 98.4 | 80-120 | 0.304 | 20 | |
| *Surrogate: a,a,a-Trifluorotoluene* | *0.0465* | | " | *0.0445* | | *104* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0516* | | " | *0.0445* | | *116* | *80-120* | | | |
| **Batch EK50312 - EPA 5030C (GC)** | | | | | | | | | | |
| **Blank (EK50312-BLK1)** | | | | Prepared & Analyzed: 11/03/05 | | | | | | |
| Benzene | ND | 0.0250 | mg/kg wet | | | | | | | |
| Toluene | ND | 0.0250 | " | | | | | | | |
| Ethylbenzene | ND | 0.0250 | " | | | | | | | |
| Xylene (p/m) | ND | 0.0250 | " | | | | | | | |
| Xylene (o) | ND | 0.0250 | " | | | | | | | |
| *Surrogate: a,a,a-Trifluorotoluene* | *0.0354* | | " | *0.0400* | | *88.5* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0440* | | " | *0.0400* | | *110* | *80-120* | | | |
| **LCS (EK50312-BS1)** | | | | Prepared & Analyzed: 11/03/05 | | | | | | |
| Benzene | 0.0435 | 0.00100 | mg/kg wet | 0.0500 | | 87.0 | 80-120 | | | |
| Toluene | 0.0458 | 0.00100 | " | 0.0500 | | 91.6 | 80-120 | | | |
| Ethylbenzene | 0.0452 | 0.00100 | " | 0.0500 | | 90.4 | 80-120 | | | |
| Xylene (p/m) | 0.0888 | 0.00100 | " | 0.100 | | 88.8 | 80-120 | | | |
| Xylene (o) | 0.0464 | 0.00100 | " | 0.0500 | | 92.8 | 80-120 | | | |
| *Surrogate: a,a,a-Trifluorotoluene* | *0.0394* | | " | *0.0400* | | *98.5* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0398* | | " | *0.0400* | | *99.5* | *80-120* | | | |

## 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 EK50312 - EPA 5030C (GC)** | | | | | | | | | | |
| **Calibration Check (EK50312-CCV1)** | | | | Prepared: 11/03/05 Analyzed: 11/04/05 | | | | | | |
| Benzene | 44.2 | | ug/kg | 50.0 | | 88.4 | 80-120 | | | |
| Toluene | 46.3 | | " | 50.0 | | 92.6 | 80-120 | | | |
| Ethylbenzene | 44.8 | | " | 50.0 | | 89.6 | 80-120 | | | |
| Xylene (p/m) | 89.5 | | " | 100 | | 89.5 | 80-120 | | | |
| Xylene (o) | 46.1 | | " | 50.0 | | 92.2 | 80-120 | | | |
| *Surrogate: a,a,a-Trifluorotoluene* | *0.0381* | | *mg/kg wet* | *0.0400* | | *95.2* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0359* | | *"* | *0.0400* | | *89.8* | *80-120* | | | |
| **Matrix Spike (EK50312-MS1)** | | **Source: 5J31002-01** | | Prepared: 11/03/05 Analyzed: 11/04/05 | | | | | | |
| Benzene | 1.20 | 0.0250 | mg/kg dry | 1.32 | ND | 90.9 | 80-120 | | | |
| Toluene | 1.25 | 0.0250 | " | 1.32 | ND | 94.7 | 80-120 | | | |
| Ethylbenzene | 1.26 | 0.0250 | " | 1.32 | ND | 95.5 | 80-120 | | | |
| Xylene (p/m) | 2.51 | 0.0250 | " | 2.63 | ND | 95.4 | 80-120 | | | |
| Xylene (o) | 1.30 | 0.0250 | " | 1.32 | ND | 98.5 | 80-120 | | | |
| *Surrogate: a,a,a-Trifluorotoluene* | *0.0425* | | *"* | *0.0421* | | *101* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0472* | | *"* | *0.0421* | | *112* | *80-120* | | | |
| **Matrix Spike Dup (EK50312-MSD1)** | | **Source: 5J31002-01** | | Prepared: 11/03/05 Analyzed: 11/04/05 | | | | | | |
| Benzene | 1.13 | 0.0250 | mg/kg dry | 1.32 | ND | 85.6 | 80-120 | 6.01 | 20 | |
| Toluene | 1.17 | 0.0250 | " | 1.32 | ND | 88.6 | 80-120 | 6.66 | 20 | |
| Ethylbenzene | 1.19 | 0.0250 | " | 1.32 | ND | 90.2 | 80-120 | 5.71 | 20 | |
| Xylene (p/m) | 2.30 | 0.0250 | " | 2.63 | ND | 87.5 | 80-120 | 8.64 | 20 | |
| Xylene (o) | 1.22 | 0.0250 | " | 1.32 | ND | 92.4 | 80-120 | 6.39 | 20 | |
| *Surrogate: a,a,a-Trifluorotoluene* | *0.0362* | | *"* | *0.0421* | | *86.0* | *80-120* | | | |
| *Surrogate: 4-Bromofluorobenzene* | *0.0471* | | *"* | *0.0421* | | *112* | *80-120* | | | |

## 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 EJ53114 - General Preparation (Prep)** | | | | | | | | | | |
| **Blank (EJ53114-BLK1)** | | | | Prepared: 10/28/05 Analyzed: 10/31/05 | | | | | | |
| % Solids | 100 | | % | | | | | | | |
| **Duplicate (EJ53114-DUP1)** | | Source: 5J28003-01 | | Prepared: 10/28/05 Analyzed: 10/31/05 | | | | | | |
| % Solids | 88.2 | | % | | 88.6 | | | 0.452 | 20 | |
| **Batch EK50207 - Water Extraction** | | | | | | | | | | |
| **Blank (EK50207-BLK1)** | | | | Prepared: 11/01/05 Analyzed: 11/02/05 | | | | | | |
| Chloride | ND | 0.500 | mg/kg | | | | | | | |
| **LCS (EK50207-BS1)** | | | | Prepared: 11/01/05 Analyzed: 11/02/05 | | | | | | |
| Chloride | 8.51 | | mg/L | 10.0 | | 85.1 | 80-120 | | | |
| **Calibration Check (EK50207-CCV1)** | | | | Prepared: 11/01/05 Analyzed: 11/02/05 | | | | | | |
| Chloride | 8.44 | | mg/L | 10.0 | | 84.4 | 80-120 | | | |
| **Duplicate (EK50207-DUP1)** | | Source: 5J28003-23 | | Prepared: 11/01/05 Analyzed: 11/02/05 | | | | | | |
| Chloride | 1640 | 20.0 | mg/kg | | 1650 | | | 0.608 | 20 | |

## Notes and Definitions

| | |
|---|---|
| S-04 | The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect. |
| J | Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-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: 11-07-05

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, Inc.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Roy Rascon
Company Name: Rice Operating Company
Company Address: 122 W Taylor
City/State/Zip: Hobbs, NM 88240
Telephone No: 505-393-9174 Fax No: 505-397-1471
Sampler Signature:

Project Name: BD Hendrix Elliott EOL
Project #:
Project Loc:
PO #:

5/2/2005

| LAB # (lab use only) | FIELD CODE | Date Sampled (see attached e-mail) | Time Sampled | No. of Containers (4oz glass) | Preservative: Ice | $HNO_3$ | HCl | NaOH | $H_2SO_4$ | None | Other (Specify) | Matrix: Water | Sludge | Soil | Other (specify): | Analyze For: TCLP: TCLP | TPH 418.1 | TPH TX 1005/1006 | TPH 8015M GRO/DRO | Metals: As Ag Ba Cd Cr Pb Hg Se | Volatiles | Semivolatiles | BTEX 8021B/5030 | EC, CEC, SAR, ESP | Major cations/anions, TDS | RUSH TAT (Pre-Schedule) | Standard TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -01 | 4 WALL Comp. @ 25'x25' | 4-27-05 | 1235 | 1 | ✓ | | | | | | | | | ✓ | | ✓ | | | ✓ | | | | | | | | |
| -02 | Bottom Comp. @ 12' | 4-27-05 | 1230 | 1 | ✓ | | | | | | | | | ✓ | | ✓ | | | ✓ | | | | ✓ | | | | |
| -03 | Bottom SP#1 | 4-27-05 | 1200 | 1 | ✓ | | | | | | | | | ✓ | | | | | | | | | | | | | |
| | Bottom SP#2 | 4-27-05 | 1202 | 1 | ✓ | | | | | | | | | ✓ | | | | | | | | | | | | | |
| | Bottom SP#3 | 4-27-05 | 1208 | 1 | ✓ | | | | | | | | | ✓ | | | | | | | | | ✓ | | | | |
| | Bottom SP#4 | 4-27-05 | 1212 | 1 | ✓ | | | | | | | | | ✓ | | | | | | | | | | | | | |
| | Bottom SP#5 | 4-27-05 | 1214 | 1 | ✓ | | | | | | | | | ✓ | | | | | | | | | | | | | |
| -04 | Blend Backfill | 4-27-05 | 1090 | 1 | ✓ | | | | | | | | | ✓ | | ✓ | | | ✓ | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Composite Bottom SP#1-#5

Special Instructions: BTEX Study: Combine Bottom SP #1-5 Test for BTEX only

Sample Containers Intact? (Y) N
Temperature Upon Receipt: labels + seals.
Laboratory Comments:
-2.5°C on ice

| Relinquished by: | Date | Time | Received by: | Date | Time |
|---|---|---|---|---|---|
| | 10/27/05 | 2:00 PM | | 10/27 | 17:20 |
| Relinquished by: | Date | Time | Received by ELOT: | Date | Time |
| | 10/28 | 7:00 | From Drop Box Jeanne McMurry | 10-28-05 | 0750 |

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

Client: Rice Op.

Date/Time: 10/28/05 7:50

Order #: 552800

Initials: CK

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| Temperature of container/cooler? | Yes | No | -2.5 C |
| Shipping container/cooler in good condition? | Yes | No | |
| Custody Seals intact on shipping container/cooler? | Yes | No | Not present |
| Custody Seals intact on sample bottles? | Yes | No | Not present |
| Chain of custody present? | Yes | No | |
| Sample Instructions complete on Chain of Custody? | Yes | No | |
| Chain of Custody signed when relinquished and received? | Yes | No | |
| Chain of custody agrees with sample label(s) | Yes | No | |
| Container labels legible and intact? | Yes | No | |
| Sample Matrix and properties same as on chain of custody? | Yes | No | |
| Samples in proper container/bottle? | Yes | No | |
| Samples properly preserved? | Yes | No | |
| Sample bottles intact? | Yes | No | |
| Preservations documented on Chain of Custody? | Yes | No | |
| Containers documented on Chain of Custody? | Yes | No | |
| Sufficient sample amount for indicated test? | Yes | No | |
| All samples received within sufficient hold time? | Yes | No | |
| VOC samples have zero headspace? | Yes | No | Not Applicable |

Other observations:

_____

_____

_____

### Variance Documentation:

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

Regarding:

_____

_____

_____

Corrective Action Taken:

_____

_____

_____

_____

_____

_____

_____

_____

**Jeanne McMurrey**

**From:** "Jeanne McMurrey" <jeanne@elabtexas.com>
**To:** "Roy Rascon" <rroyriceswd@valornet.com>
**Sent:** Friday, October 28, 2005 7:53 AM
**Subject:** Re: Sampling date discrepancy

Good Morning Roy,
We received your samples for BD Hendrix Elliott this morning. We have a discrepancy on the sampling date. The COC says 04/27/05 and the labels say 10/27/05. I know the answer is obvious but I still have to hear from you.
Thanks,
Jeanne

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

**Jeanne McMurrey**

**From:** "Roy Rascon" <rroyriceswd@valornet.com>
**To:** "Jeanne McMurrey" <jeanne@elabtexas.com>
**Sent:** Saturday, October 29, 2005 11:40 AM
**Subject:** BD Hendrix Elliott EOL samples

Jeanne
Thanks for catching this discrepency. After seeing the copy that we make at our office, it was very obvious. I am sorry about the date, it should of read 10-27-05. Thanks again and have a nice day

Roy R. Rascon
RICE Operating Company
122 W. Taylor
Hobbs, NM 88240
505-393-9174

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