

1R - 426-105

**GENERAL  
CORRESPONDENCE**

**YEAR(S):**

**2007**

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RECEIVED  
Highlander Environmental Corp.

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1R426-105

August 3, 2007

Mr. Wayne Price  
New Mexico Energy, Minerals, & Natural Resources  
Oil Conservation Division, Environmental Bureau  
1220 S. St. Francis Drive  
Santa Fe, New Mexico 87504

RE: **INVESTIGATION & CHARACTERIZATION WORK PLAN  
C-4-3 JUNCTION BOX, BD SWD SYSTEM  
UNIT "C", SEC. 4, T22S, R37E**

Mr. Price:

RICE Operating Company (ROC) has retained Highlander Environmental Corp. (Highlander) to address potential environmental concerns at the above-referenced site. ROC is the service provider (agent) for the Blinebry Drinkard (BD) SWD System and has no ownership of any portion of the pipeline, well, or facility. The System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. In general, project funding is not forthcoming until NMOCD approves the work plan. Therefore, your timely review of this submission is requested.

For all environmental projects, ROC will choose a path forward that:

- protects public health,
- provides the greatest net environmental benefit,
- complies with NMOCD Rules, and
- is supported by good science.

Each site shall have three submissions or a combination of:

1. This **Investigation and Characterization Plan** (ICP) is a proposal for data gathering and site characterization and assessment.
2. Upon evaluating the data and results from the ICP, a recommended remedy will be submitted in a **Corrective Action Plan** (CAP).
3. Finally, after implementing the remedy, a **closure report** with final documentation will be submitted.

## **BACKGROUND & PREVIOUS WORK**

As part of the ROC Junction Box Upgrade Workplan the junction box was moved 25' to the south. Starting on June 16, 2004, the former junction box site was investigated vertically and horizontally with a backhoe. The Site was excavated to the approximate dimensions of 22' x 28' x 12'. TPH impact was noted to a depth of at least 12' below ground surface (bgs) at the bottom of the excavation along with on the east and north walls. To further delineate the vertical extent of the TPH impact, a trench in the center of the excavation was extended to a depth of 17' bgs. A vertical grab sample was collected at 17' bgs with analytical results exceeding the NMOCD guidelines of 1,000 mg/kg TPH. Chloride concentrations decline with depth from 617 mg/kg at a depth of 5 feet bgs on the south wall to 64 mg/kg at a depth of 17 feet bgs. No water wells were located within Section 4 which contains the site. However, according to the New Mexico State Engineers Well Reports, one water well is located in adjacent section 3 with a depth to groundwater of 85 feet bgs.

The excavated soil was blended onsite and replaced into the excavation to a depth of 12' below ground surface (bgs). On September 15, 2004, ROC submitted a Junction Box Disclosure Report to the NMOCD. A copy of the Junction Box Disclosure Report is included in Appendix A. A copy of the soil boring log and laboratory analysis are included in Appendix B.

## **INVESTIGATION & CHARACTERIZATION PLAN**

As discussed above, existing site data suggest a potential for impairment of groundwater quality. Therefore the work elements described below are designed to assist ROC in selecting an appropriate vadose zone remedy and, if necessary, a groundwater remedy.

### **Task 1      Collect Regional Hydrogeologic Data**

A water well inventory will be performed to encompass a ½ mile radius around the release site. The inventory will include a review of water well records on the New Mexico Office of the State Engineer W.A.T.E.R.S. database and United States Geologic Survey (USGS) website. Any water wells denoted on the USGS 7.5 minute topographic quadrangle map within the search radius will be inspected. If viable wells are located, they will be evaluated for the possible incorporation of water level measurements and groundwater monitoring.

### **Task 2      Evaluate Concentrations of Constituents of Concern in Soil (and Ground Water)**

Highlander proposes to conduct soil borings at the former junction box site for further evaluation. The soil borings will be placed appropriately to evaluate subsurface TPH and chloride impacts, and for vertical and horizontal delineation. The soil boring samples will be field screened for chloride concentrations and hydrocarbons utilizing a photoionization detector (PID). If chloride concentrations do not decline sufficiently with depth or exceed 250 mg/kg within 10' of the suspected groundwater depth, one soil boring, in the area with the highest potential to impact groundwater, will be converted to a monitoring well.

If a monitoring well is installed, it will be constructed according to EPA and industry standards and developed either by bailing with a rig or hand bailer, or pumping with an electric submersible pump to remove fine grained sediment disturbed during drilling and to ensure



collection of representative groundwater samples. Water removed from any monitor well will be disposed of in the BD SWD System.

If a monitoring well is completed, it will be inspected for the presence of phase-separated hydrocarbons (PSH) and, if present, a sample will be collected and analyzed by gas chromatography (GC) to determine composition and origin. The well will be properly purged and sampled with a clean, dedicated, polyethylene bailer and disposable line. Groundwater samples will be submitted to a laboratory for analysis of Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) by method EPA 8021B, and chloride by method 300.0.

### Task 3 Evaluate Flux from the Vadose Zone to Ground Water

As part of the ICP, the residual impact to vadose zone soils will be evaluated to determine what, if any remediation/isolation techniques will be required at the Site.

The information gathered from tasks 1-3 will be evaluated and utilized to design a groundwater remedy if needed. The groundwater remedy that offers the greatest environmental benefit while causing the least environmental impairment will be selected. If the evaluation demonstrates that residual constituents pose no threat to groundwater quality, a vadose zone remedy protective of groundwater will be proposed. Such recommendations and findings will be presented to NMOCD in a subsequent Corrective Action Plan (CAP). When evaluating any proposed remedy or investigative work, ROC will confirm that there is a reasonable relationship between the benefits created by the proposed remedy or assessment and the economic and social costs.

Should you have any questions, please contact me at (432) 682-4559. Your prompt review of this submission is appreciated. Thank you for your attention to this matter.

Highlander Environmental Corp.

*Jeffrey Kindley*  
Jeffrey W. Kindley, P.G.  
Senior Environmental Geologist

cc: ROC  
Edward Hansen - NMOCD  
Larry Johnson - NMOCD

enclosures: photos, disclosure report, laboratory analysis



Figures

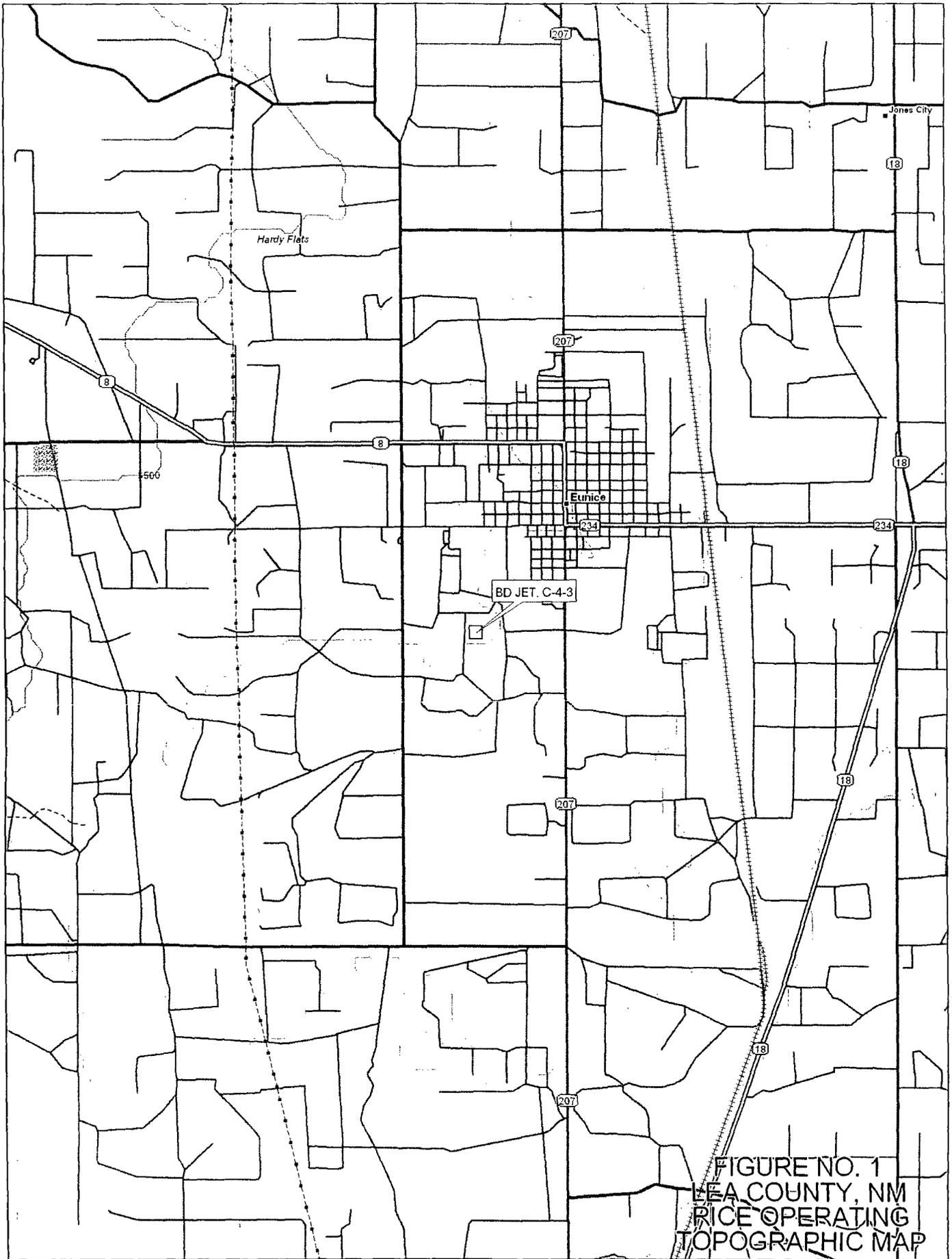
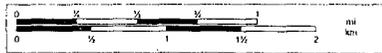


FIGURE NO. 1  
LEA COUNTY, NM  
RICE OPERATING  
TOPOGRAPHIC MAP

Scale 1 : 50,000  
1" = 4170 ft



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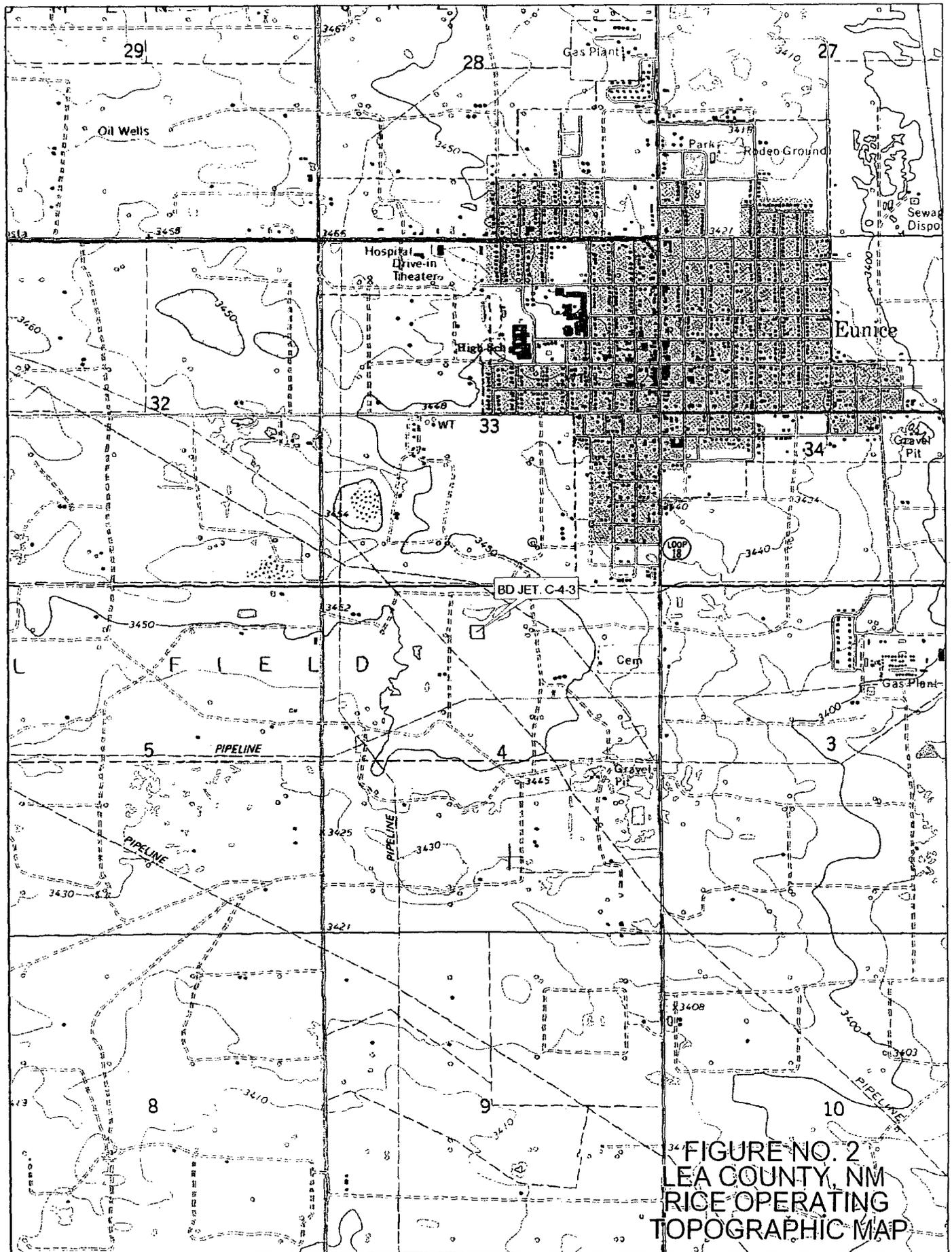


FIGURE NO. 2  
LEA COUNTY, NM  
RICE OPERATING  
TOPOGRAPHIC MAP



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www.delorme.com

Scale 1 : 24,000  
1" = 2000 ft





NORTH

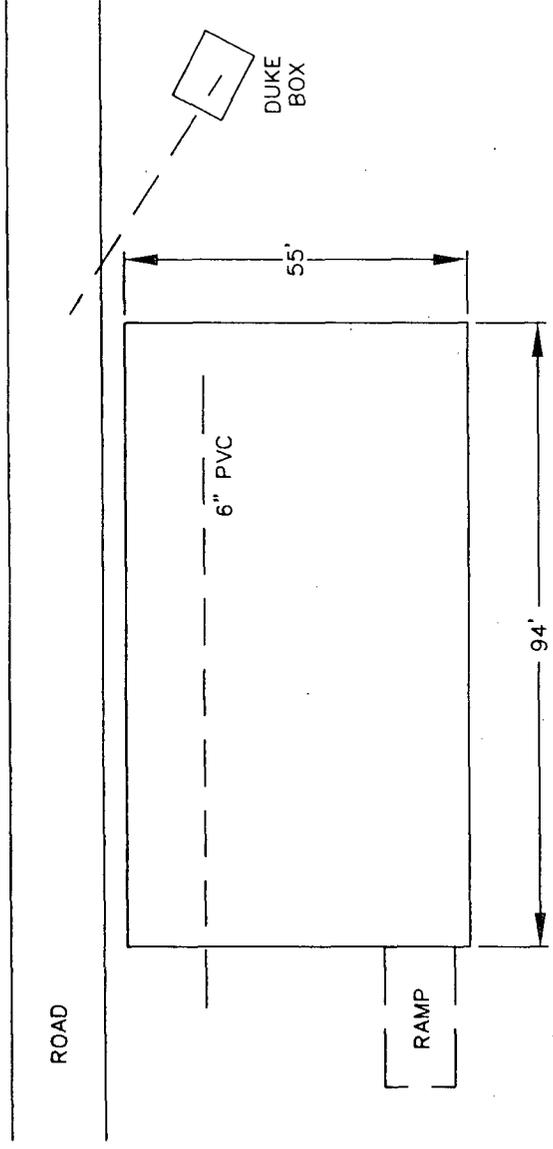
GOOD  
VEGETATION

GOOD  
VEGETATION

GOOD  
VEGETATION

GOOD  
VEGETATION

ROAD



RICE  
BOX

DUKE  
BOX

55'

94'

6" PVC

RAMP

FIGURE NO. 3

LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY  
BD JET. C-4-3

HIGHLANDER ENVIRONMENTAL CORP.  
MIDLAND, TEXAS

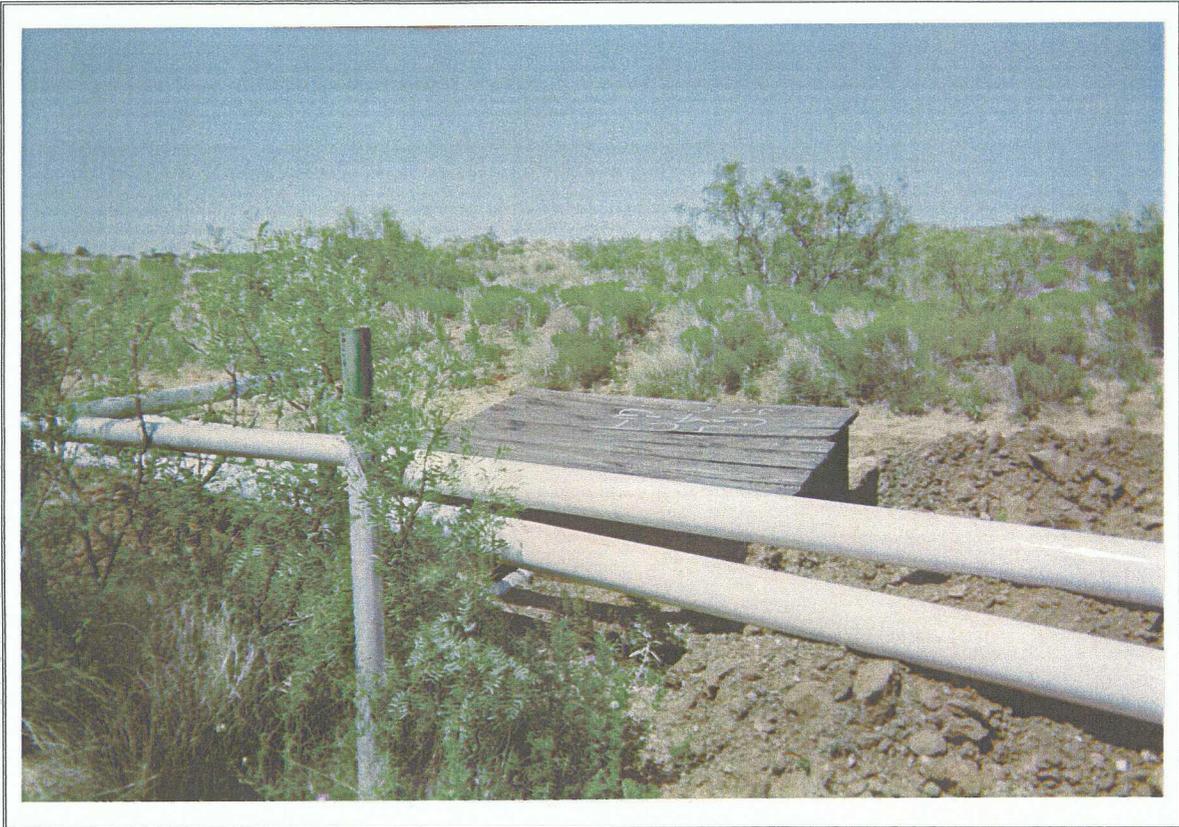
DATE:	8/6/07
DWN. BY:	RC
FILE:	ENR/2/002
BD JET:	C-4-3

NOT TO SCALE

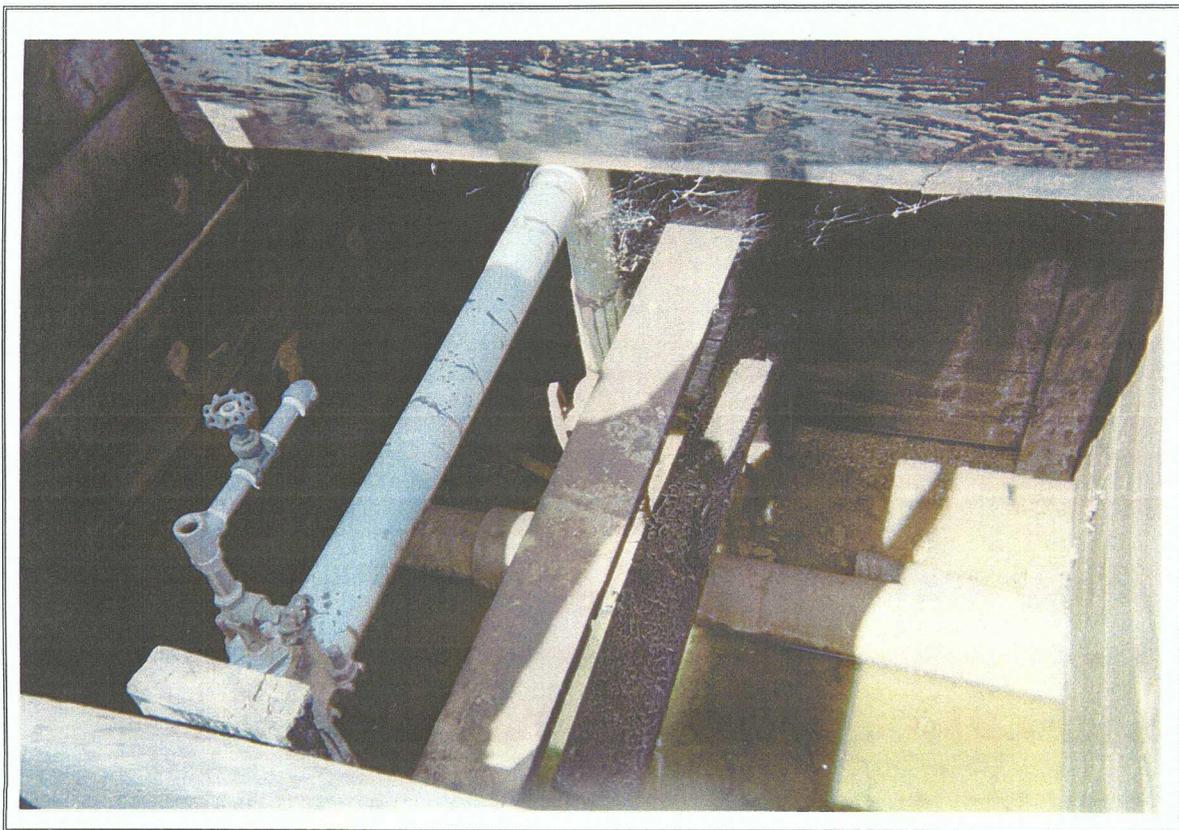
Photographs

**PHOTOGRAPHIC DOCUMENTATION**

Rice Operating Company  
BD Jct. C-4-3, Lea County, New Mexico



1. View of the old junction box.



2. View inside the old junction box.

**PHOTOGRAPHIC DOCUMENTATION**

Rice Operating Company  
BD Jct. C-4-3, Lea County, New Mexico



3. Excavation of the old junction box.



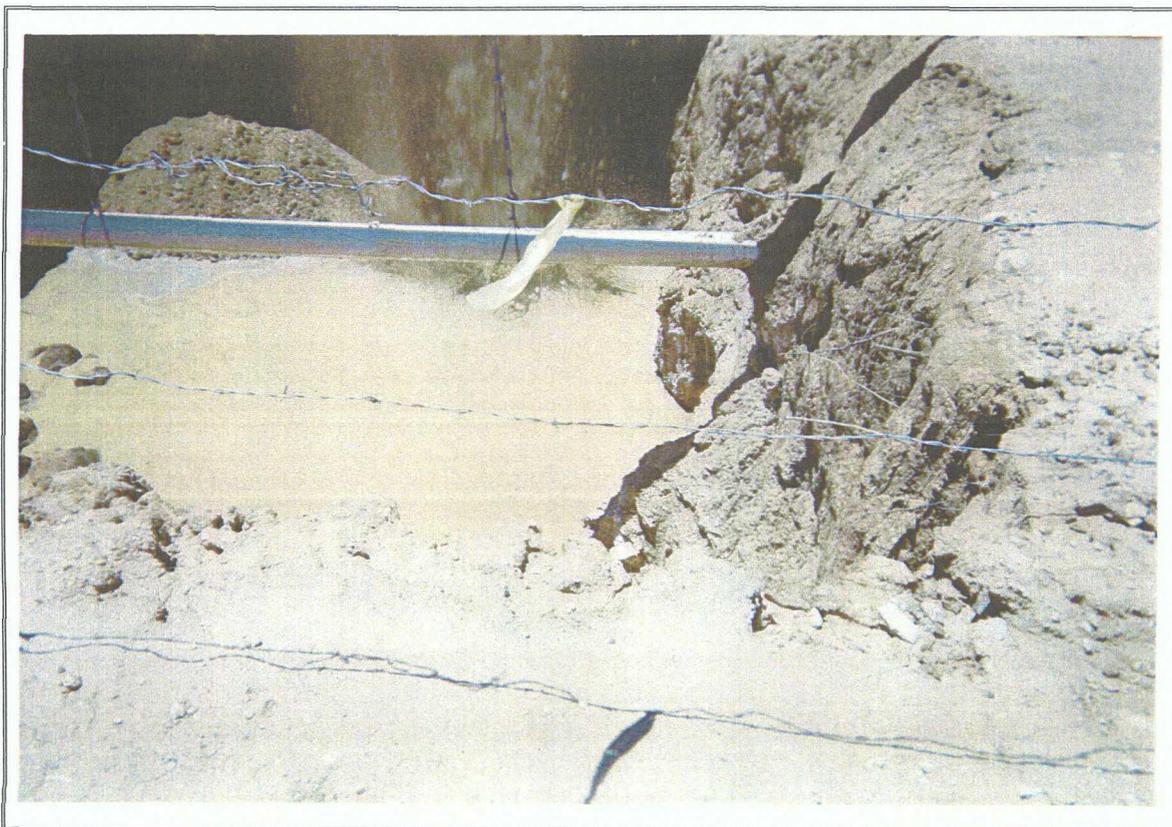
4. Excavation of the old junction box.

**PHOTOGRAPHIC DOCUMENTATION**

Rice Operating Company  
BD Jct. C-4-3, Lea County, New Mexico



5. Excavation of the old junction box.



6. Backfilling of the old junction box.

**PHOTOGRAPHIC DOCUMENTATION**

Rice Operating Company  
BD Jct. C-4-3, Lea County, New Mexico



7. Backfilling of old junction box.



8. Completed backfilling of site.

**PHOTOGRAPHIC DOCUMENTATION**

Rice Operating Company  
BD Jct. C-4-3, Lea County, New Mexico



9. Completed backfilling of site..



10. Plumbing for new junction box.

**PHOTOGRAPHIC DOCUMENTATION**  
Rice Operating Company  
BD Jct. C-4-3, Lea County, New Mexico



11. Plumbing for new junction box.



12. Interior view of new junction box.

**PHOTOGRAPHIC DOCUMENTATION**  
Rice Operating Company  
BD Jct. C-4-3, Lea County, New Mexico



13. View of new junction box.

Appendix A

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

**BOX LOCATION**

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
BD	C-4-3	C	4	22S	37E	Lea	moved 25 ft South		

LAND TYPE: BLM \_\_\_\_\_ STATE \_\_\_\_\_ FEE LANDOWNER Priscilla Brunson Moody OTHER \_\_\_\_\_

Depth to Groundwater 93 feet NMOC SITE ASSESSMENT RANKING SCORE: 10

Date Started 6/16/2004 Date Completed 7/6/2004 OCD Witness No

Soil Excavated 274 cubic yards Excavation Length 22 Width 28 Depth 12 feet

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

**FINAL ANALYTICAL RESULTS:** Sample Date 6/17/2004, 6/22/2004, 7/1/2004 Sample Depth 12, 17 ft

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

Sample Location	Benzene mg/kg	Toluene mg/kg	Ethyl Benzene mg/kg	Total Xylenes mg/kg	GRO mg/kg	DRO mg/kg	Chlorides mg/kg
VERTICAL GRAB @ 17 ft	0.298	0.065	4.78	5.71	21.7	2640	64
BOTTOM COMPOSITE @ 12 ft	See enclosed laboratory analytical report and BTEX Study tables				156	984	372
NORTH WALL COMPOSITE					141	911	436
SOUTH WALL COMPOSITE					19	183	617
EAST WALL COMPOSITE					183	1070	383
WEST WALL COMPOSITE					8.82	27.9	585
REMEDIATED BACKFILL COMPOSITE	<0.005	<0.005	<0.005	<0.015	<10.0	414	289

General Description of Remedial Action: This junction box site was delineated using a backhoe while chloride field tests and PID screenings were conducted at regular intervals. Within the 22 x 28 x 12-ft-deep excavation, chloride concentrations were very low and similar to the background level (87 ppm). Some of the samples collected within the excavation yielded elevated PID readings. The bottom and wall samples were analyzed for BTEX after being composited under laboratory conditions. Comparative tables showing these results are enclosed. NMOC BTEX guidelines were met. NMOC TPH guidelines were not met on the following samples: vertical grab at 17 ft, bottom composite, at 12 ft, north wall composite, and the east wall composite. The excavated soils were blended on site and then backfilled into the hole. An identification plate was placed on the surface to mark the site of the former junction box for future considerations. A new watertight junction box was built 25 ft south of this location.

**CHLORIDE FIELD TESTS**

LOCATION	DEPTH (ft)	ppm
Vertical	8	84
at jct.	9	83
	10	84
	11	140
	12	87
	17	81
north wall comp.	0-12	495
south wall comp.	0-12	857
east wall comp.	0-12	464
west wall comp.	0-12	590
bottom comp.	12	393

**ADDITIONAL EVALUATION IS HIGH PRIORITY**

enclosures: chloride graph, photos, lab results, BTEX study

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

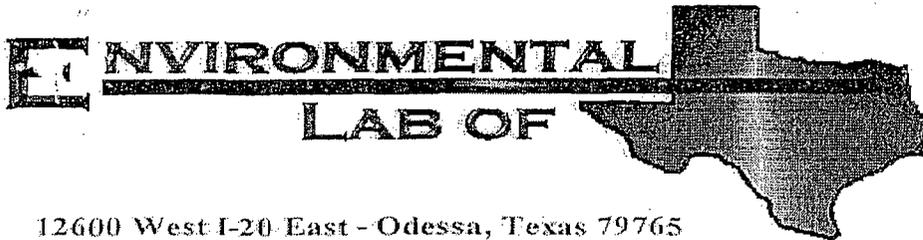
SITE SUPERVISOR Joe Gatts SIGNATURE *Joe Gatts* COMPANY RICE Operating Company

REPORT ASSEMBLED BY Kristin Farnis Pope SIGNATURE *Kristin Farnis Pope*

DATE 9/15/2004 TITLE Project Scientist

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

Appendix B



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

Prepared for:

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

Project: **C-4-3**

Project Number: None Given

Location: None Given

Lab Order Number: 4F28001

Report Date: 07/01/04

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>West Wall Pt #1,2,3,4,5 (4F28001-01) Soil</b> <i>LAB COMP.</i>									
Benzene	ND	0.0250	mg/kg dry	25	EF42907	06/25/04	06/28/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		96.5 %	80-120	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		101 %	80-120	"	"	"	"	"	
<b>South Wall Pt #1,2,3,4,5 (4F28001-02) Soil</b> <i>LAB COMP.</i>									
Benzene	ND	0.0250	mg/kg dry	25	EF42907	06/25/04	06/28/04	EPA 8021B	
Toluene	0.0289	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.0656	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.188	0.0250	"	"	"	"	"	"	
Xylene (o)	0.0462	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		96.0 %	80-120	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98.5 %	80-120	"	"	"	"	"	
<b>East Wall Pt #1,2,3,4,5 (4F28001-03) Soil</b> <i>LAB COMP.</i>									
Benzene	ND	0.0250	mg/kg dry	25	EF42907	06/25/04	06/28/04	EPA 8021B	
Toluene	0.100	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.186	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.820	0.0250	"	"	"	"	"	"	
Xylene (o)	0.269	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		96.3 %	80-120	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		90.3 %	80-120	"	"	"	"	"	
<b>North Wall Pt #1,2,3,4,5 (4F28001-04) Soil</b> <i>LAB COMP.</i>									
Benzene	ND	0.0250	mg/kg dry	25	EF42907	06/25/04	06/28/04	EPA 8021B	
Toluene	0.0977	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.350	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.845	0.0250	"	"	"	"	"	"	
Xylene (o)	0.274	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %	80-120	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98.4 %	80-120	"	"	"	"	"	

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes	
<b>Bottom Pt #1,2,3,4,5 @ 12' Bgs (4F28001-05) Soil</b>										
			<b>LAB COMP</b>							
Benzene	0.0268	0.0250	mg/kg dry	25	EF42907	06/25/04	06/28/04	EPA 8021B		
Toluene	0.139	0.0250	"	"	"	"	"	"		
Ethylbenzene	0.155	0.0250	"	"	"	"	"	"		
Xylene (p/m)	1.08	0.0250	"	"	"	"	"	"		
Xylene (o)	0.128	0.0250	"	"	"	"	"	"		
Surrogate: a,a,a-Trifluorotoluene		131 %		80-120	"	"	"	"	S-04	
Surrogate: 4-Bromofluorobenzene		97.9 %		80-120	"	"	"	"		
<b>East Wall Field Comp (4F28001-06) Soil</b>										
Benzene	ND	0.0250	mg/kg dry	25	EG40101	06/29/04	06/29/04	EPA 8021B		
Toluene	0.135	0.0250	"	"	"	"	"	"		
Ethylbenzene	0.126	0.0250	"	"	"	"	"	"		
Xylene (p/m)	0.701	0.0250	"	"	"	"	"	"		
Xylene (o)	0.222	0.0250	"	"	"	"	"	"		
Surrogate: a,a,a-Trifluorotoluene		89.2 %		80-120	"	"	"	"		
Surrogate: 4-Bromofluorobenzene		109 %		80-120	"	"	"	"		
Gasoline Range Organics C6-C12	183	10.0	mg/kg dry	1	EF42803	06/28/04	06/28/04	EPA 8015M		
Diesel Range Organics >C12-C35	1070	10.0	"	"	"	"	"	"		
Total Hydrocarbon C6-C35	1250	10.0	"	"	"	"	"	"		
Surrogate: 1-Chlorooctane		86.8 %		70-130	"	"	"	"		
Surrogate: 1-Chlorooctadecane		105 %		70-130	"	"	"	"		
<b>West Wall Field Comp (4F28001-07) Soil</b>										
Benzene	ND	0.0250	mg/kg dry	25	EG40101	06/29/04	06/29/04	EPA 8021B		
Toluene	ND	0.0250	"	"	"	"	"	"		
Ethylbenzene	ND	0.0250	"	"	"	"	"	"		
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"		
Xylene (o)	ND	0.0250	"	"	"	"	"	"		
Surrogate: a,a,a-Trifluorotoluene		92.8 %		80-120	"	"	"	"		
Surrogate: 4-Bromofluorobenzene		107 %		80-120	"	"	"	"		
Gasoline Range Organics C6-C12	J [8.82]	10.0	mg/kg dry	1	EF42803	06/28/04	06/28/04	EPA 8015M	J	
Diesel Range Organics >C12-C35	27.9	10.0	"	"	"	"	"	"		
Total Hydrocarbon C6-C35	27.9	10.0	"	"	"	"	"	"		
Surrogate: 1-Chlorooctane		82.0 %		70-130	"	"	"	"		
Surrogate: 1-Chlorooctadecane		83.8 %		70-130	"	"	"	"		

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Page 3 of 13

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>North Wall Field Comp (4F28001-08) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EG40101	06/29/04	06/29/04	EPA 8021B	
Toluene	0.0796	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.184	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.700	0.0250	"	"	"	"	"	"	
Xylene (o)	0.259	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		91.2 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97.8 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	141	10.0	mg/kg dry	1	EF42803	06/28/04	06/28/04	EPA 8015M	
Diesel Range Organics >C12-C35	911	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	1050	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		90.8 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		105 %	70-130		"	"	"	"	
<b>South Wall Field Comp (4F28001-09) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EG40101	06/29/04	06/29/04	EPA 8021B	
Toluene	0.0265	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.0433	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.131	0.0250	"	"	"	"	"	"	
Xylene (o)	0.0336	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		86.5 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		90.6 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	19.0	10.0	mg/kg dry	1	EF42803	06/28/04	06/28/04	EPA 8015M	
Diesel Range Organics >C12-C35	183	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	202	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		93.0 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		93.6 %	70-130		"	"	"	"	
<b>Bottom Wall Field Comp @12' bgs (4F28001-10) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EG40101	06/29/04	06/29/04	EPA 8021B	
Toluene	0.123	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.113	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.829	0.0250	"	"	"	"	"	"	
Xylene (o)	0.133	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		87.9 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96.8 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	156	10.0	mg/kg dry	1	EF42803	06/28/04	06/28/04	EPA 8015M	
Diesel Range Organics >C12-C35	984	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	1140	10.0	"	"	"	"	"	"	

Environmental Lab of Texas

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Bottom Wall Field Comp @12' bgs (4F28001-10) Soil</b>									
Surrogate: 1-Chlorooctane		96.6 %	70-130		EF42803	06/28/04	06/28/04	EPA 8015M	
Surrogate: 1-Chlorooctadecane		110 %	70-130		"	"	"	"	

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>West Wall Pt #1,2,3,4,5 (4F28001-01) Soil</b>									
% Solids	89.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>South Wall Pt #1,2,3,4,5 (4F28001-02) Soil</b>									
% Solids	89.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>East Wall Pt #1,2,3,4,5 (4F28001-03) Soil</b>									
% Solids	90.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>North Wall Pt #1,2,3,4,5 (4F28001-04) Soil</b>									
% Solids	90.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>Bottom Pt #1,2,3,4,5 @ 12' Bgs (4F28001-05) Soil</b>									
% Solids	90.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>East Wall Field Comp (4F28001-06) Soil</b>									
Chloride	383	20.0	mg/kg Wet	2	EF43008	06/29/04	06/29/04	SW 846 9253	
% Solids	89.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>West Wall Field Comp (4F28001-07) Soil</b>									
Chloride	585	20.0	mg/kg Wet	2	EF43008	06/29/04	06/29/04	SW 846 9253	
% Solids	89.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>North Wall Field Comp (4F28001-08) Soil</b>									
Chloride	436	20.0	mg/kg Wet	2	EF43008	06/29/04	06/29/04	SW 846 9253	
% Solids	89.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>South Wall Field Comp (4F28001-09) Soil</b>									
Chloride	617	20.0	mg/kg Wet	2	EF43008	06/29/04	06/29/04	SW 846 9253	
% Solids	89.0		%	1	EF42901	06/28/04	06/28/04	% calculation	

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bottom <del>WFO</del> Field Comp @12' bgs (4F28001-10) Soil									
Chloride	372	20.0	mg/kg Wet	2	EF43008	06/29/04	06/29/04	SW 846 9253	
% Solids	90.0		%	1	EF42901	06/28/04	06/28/04	% calculation	

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

**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 EF42803 - Solvent Extraction (GC)**

**Blank (EF42803-BLK1)**

Prepared & Analyzed: 06/28/04

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	37.0		mg/kg	50.0		74.0	70-130			
Surrogate: 1-Chlorooctadecane	37.0		"	50.0		74.0	70-130			

**LCS (EF42803-BS1)**

Prepared & Analyzed: 06/28/04

Gasoline Range Organics C6-C12	411	10.0	mg/kg wet	500		82.2	75-125			
Diesel Range Organics >C12-C35	424	10.0	"	500		84.8	75-125			
Total Hydrocarbon C6-C35	835	10.0	"	1000		83.5	75-125			
Surrogate: 1-Chlorooctane	48.6		mg/kg	50.0		97.2	70-130			
Surrogate: 1-Chlorooctadecane	35.6		"	50.0		71.2	70-130			

**Calibration Check (EF42803-CCV1)**

Prepared & Analyzed: 06/28/04

Gasoline Range Organics C6-C12	445		mg/kg	500		89.0	80-120			
Diesel Range Organics >C12-C35	485		"	500		97.0	80-120			
Total Hydrocarbon C6-C35	930		"	1000		93.0	80-120			
Surrogate: 1-Chlorooctane	51.8		"	50.0		104	70-130			
Surrogate: 1-Chlorooctadecane	36.6		"	50.0		73.2	70-130			

**Matrix Spike (EF42803-MS1)**

Source: 4F25003-06

Prepared & Analyzed: 06/28/04

Gasoline Range Organics C6-C12	533	10.0	mg/kg dry	538	ND	99.1	75-125			
Diesel Range Organics >C12-C35	576	10.0	"	538	ND	107	75-125			
Total Hydrocarbon C6-C35	1110	10.0	"	1080	ND	103	75-125			
Surrogate: 1-Chlorooctane	57.1		mg/kg	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	48.6		"	50.0		97.2	70-130			

**Matrix Spike Dup (EF42803-MSD1)**

Source: 4F25003-06

Prepared & Analyzed: 06/28/04

Gasoline Range Organics C6-C12	517	10.0	mg/kg dry	538	ND	96.1	75-125	3.05	20	
Diesel Range Organics >C12-C35	577	10.0	"	538	ND	107	75-125	0.173	20	
Total Hydrocarbon C6-C35	1090	10.0	"	1080	ND	101	75-125	1.82	20	
Surrogate: 1-Chlorooctane	55.3		mg/kg	50.0		111	70-130			
Surrogate: 1-Chlorooctadecane	48.1		"	50.0		96.2	70-130			

Environmental Lab of Texas

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Page 8 of 13

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch EF42907 - EPA 5030C (GC)</b>										
<b>Blank (EF42907-BLK1)</b> Prepared & Analyzed: 06/25/04										
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	85.6		ug/kg	100		85.6	80-120			
Surrogate: 4-Bromofluorobenzene	90.2		"	100		90.2	80-120			
<b>LCS (EF42907-BS1)</b> Prepared: 06/25/04 Analyzed: 06/28/04										
Benzene	99.8		ug/kg	100		99.8	80-120			
Toluene	103		"	100		103	80-120			
Ethylbenzene	103		"	100		103	80-120			
Xylene (p/m)	207		"	200		104	80-120			
Xylene (o)	105		"	100		105	80-120			
Surrogate: a,a,a-Trifluorotoluene	101		"	100		101	80-120			
Surrogate: 4-Bromofluorobenzene	107		"	100		107	80-120			
<b>Calibration Check (EF42907-CCV1)</b> Prepared: 06/25/04 Analyzed: 06/28/04										
Benzene	98.0		ug/kg	100		98.0	80-120			
Toluene	103		"	100		103	80-120			
Ethylbenzene	101		"	100		101	80-120			
Xylene (p/m)	202		"	200		101	80-120			
Xylene (o)	101		"	100		101	80-120			
Surrogate: a,a,a-Trifluorotoluene	107		"	100		107	80-120			
Surrogate: 4-Bromofluorobenzene	100		"	100		100	80-120			
<b>Matrix Spike (EF42907-MS1)</b> Source: 4F28001-01 Prepared: 06/25/04 Analyzed: 06/29/04										
Benzene	106		ug/kg	100	ND	106	80-120			
Toluene	110		"	100	ND	110	80-120			
Ethylbenzene	109		"	100	ND	109	80-120			
Xylene (p/m)	218		"	200	ND	109	80-120			
Xylene (o)	107		"	100	ND	107	80-120			
Surrogate: a,a,a-Trifluorotoluene	109		"	100		109	80-120			
Surrogate: 4-Bromofluorobenzene	104		"	100		104	80-120			



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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

**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
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**Batch EG40101 - EPA 5030C (GC)**

**Calibration Check (EG40101-CCV1)**

Prepared: 06/29/04 Analyzed: 06/30/04

Benzene	86.1		ug/kg	100		86.1	80-120			
Toluene	90.0		"	100		90.0	80-120			
Ethylbenzene	92.0		"	100		92.0	80-120			
Xylene (p/m)	184		"	200		92.0	80-120			
Xylene (o)	97.8		"	100		97.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	89.9		"	100		89.9	80-120			
Surrogate: 4-Bromofluorobenzene	98.3		"	100		98.3	80-120			

**Matrix Spike (EG40101-MS1)**

Source: 4F28001-07

Prepared: 06/29/04 Analyzed: 06/30/04

Benzene	90.7		ug/kg	100	ND	90.7	80-120			
Toluene	95.6		"	100	ND	95.6	80-120			
Ethylbenzene	98.6		"	100	ND	98.6	80-120			
Xylene (p/m)	198		"	200	ND	99.0	80-120			
Xylene (o)	100		"	100	ND	100	80-120			
Surrogate: a,a,a-Trifluorotoluene	94.6		"	100		94.6	80-120			
Surrogate: 4-Bromofluorobenzene	102		"	100		102	80-120			

**Matrix Spike Dup (EG40101-MSD1)**

Source: 4F28001-07

Prepared: 06/29/04 Analyzed: 06/30/04

Benzene	90.0		ug/kg	100	ND	90.0	80-120	0.775	20	
Toluene	94.4		"	100	ND	94.4	80-120	1.26	20	
Ethylbenzene	97.2		"	100	ND	97.2	80-120	1.43	20	
Xylene (p/m)	195		"	200	ND	97.5	80-120	1.53	20	
Xylene (o)	101		"	100	ND	101	80-120	0.995	20	
Surrogate: a,a,a-Trifluorotoluene	92.9		"	100		92.9	80-120			
Surrogate: 4-Bromofluorobenzene	107		"	100		107	80-120			

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch EF42901 - General Preparation (Prep)</b>										
Blank (EF42901-BLK1)				Prepared & Analyzed: 06/28/04						
% Solids	100		%							
Duplicate (EF42901-DUP1)				Source: 4F28001-01		Prepared & Analyzed: 06/28/04				
% Solids	89.0		%		89.0			0.00	20	
<b>Batch EF43008 - Water Extraction</b>										
Blank (EF43008-BLK1)				Prepared & Analyzed: 06/29/04						
Chloride	ND	20.0	mg/kg Wet							
Matrix Spike (EF43008-MS1)				Source: 4F28001-06		Prepared & Analyzed: 06/29/04				
Chloride	851	20.0	mg/kg Wet	500	383	93.6	80-120			
Matrix Spike Dup (EF43008-MSD1)				Source: 4F28001-06		Prepared & Analyzed: 06/29/04				
Chloride	830	20.0	mg/kg Wet	500	383	89.4	80-120	2.50	20	
Reference (EF43008-SRM1)				Prepared & Analyzed: 06/29/04						
Chloride	5210		mg/kg	5000		104	80-120			

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

### 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:

7-01-04

Raland K. Tuttle, QA Officer

James L. Hawkins, Chemist/Geologist

Celey D. Keene, Lab Director, Org. Tech Director

Sara Molina, Chemist

Jeanne Mc Murrey, Inorg. Tech Director

Sandra Biezugbe, Lab Tech.

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Environmental Lab of Texas

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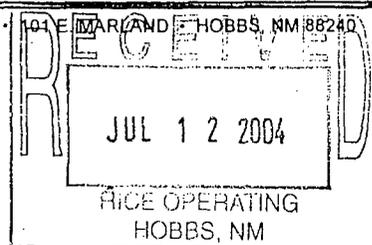




PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 103 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
 RICE OPERATING CO.  
 ATTN: ROY RASCON  
 122 W. TAYLOR  
 HOBBS, NM 88240  
 FAX TO: (505) 397-1471



Receiving Date: 07/06/04  
 Reporting Date: 07/08/04  
 Project Number: NOT GIVEN  
 Project Name: C-4-3  
 Project Location: BD

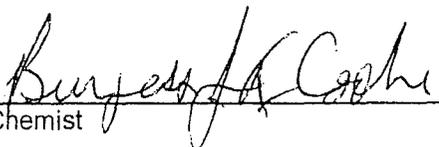
Sampling Date: 07/01/04  
 Sample Type: SOIL  
 Sample Condition: COOL & INTACT  
 Sample Received By: BC  
 Analyzed By: BC/HM

LAB NUMBER	SAMPLE ID	GRO (C <sub>6</sub> -C <sub>10</sub> ) (mg/Kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		07/06/04	07/06/04	07/06/04
H8879-1	REMD. BACKFILL	<10.0	414	289**
Quality Control		778	819	1000
True Value QC		800	800	1000
% Recovery		97.3	102	100
Relative Percent Difference		12.4	10.8	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.

\*\*Matrix interference (color) observed.

  
 Chemist

7/8/04  
 Date

H8879A.XLS



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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
 RICE OPERATING CO.  
 ATTN: ROY RASCON  
 122 W. TAYLOR  
 HOBBS, NM 88240  
 FAX TO: (505) 397-1471

Receiving Date: 07/06/04  
 Reporting Date: 07/08/04  
 Project Number: NOT GIVEN  
 Project Name: C-4-3  
 Project Location: BD

Sampling Date: 07/01/04  
 Sample Type: SOIL  
 Sample Condition: COOL & INTACT  
 Sample Received By: BC  
 Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		07/08/04	07/08/04	07/08/04	07/08/04
H8879-1	REMD. BACKFILL	<0.005	<0.005	<0.005	<0.015
Quality Control		0.106	0.102	0.091	0.091
True Value QC		0.100	0.100	0.100	0.300
% Recovery		106	102	91.2	90.5
Relative Percent Difference		2.0	3.9	3.1	1.5

METHOD: EPA SW-846 8260

Burgess J. Cook  
 Chemist

7/18/04  
 Date





**ARDINAL  
LABORATORIES**

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
RICE OPERATING CO.  
ATTN: J. GATTS  
122 W. TAYLOR  
HOBBS, NM 88240  
FAX TO: (505) 397-1471

Receiving Date: 06/17/04  
Reporting Date: 06/18/04  
Project Number: NOT GIVEN  
Project Name: C-4-3  
Project Location: BD

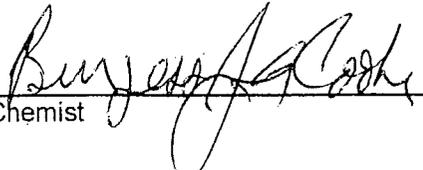
Sampling Date: 06/17/04  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: BC  
Analyzed By: BC/AH

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

ANALYSIS DATE	06/17/04	06/17/04	06/18/04
H8834-1 SOURCE @ 17' BGS	21.7	2640	64
Quality Control	803	808	1020
True Value QC	800	800	1000
% Recovery	100	101	102
Relative Percent Difference	3.9	1.8	1.0

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

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

  
\_\_\_\_\_  
Chemist

  
\_\_\_\_\_  
Date

H8834A.XLS



**ARDINAL  
LABORATORIES**

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ANALYTICAL RESULTS FOR  
RICE OPERATING CO.  
ATTN: J. GATTS  
122 W. TAYLOR  
HOBBS, NM 88240  
FAX TO: (505) 397-1471

Receiving Date: 06/17/04  
Reporting Date: 06/18/04  
Project Number: NOT GIVEN  
Project Name: C-4-3  
Project Location: BD

Sampling Date: 06/17/04  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: BC  
Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		06/17/04	06/17/04	06/17/04	06/17/04
H8834-1	SOURCE @ 17' BGS	0.298	0.065	4.78	5.71
Quality Control		0.102	0.098	0.093	0.273
True Value QC		0.100	0.100	0.100	0.300
% Recovery		102	98.4	93.4	90.9
Relative Percent Difference		5.6	3.1	1.2	0.8

METHOD: EPA SW-846 8260

*Bryan J. Coche*  
Chemist

*6/18/04*  
Date



# CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020  
101 East Mariand, Hobbs, NM 88240 (505) 383-2328 Fax (505) 393-2476

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page      of     

Company Name: <u>    </u>		P.O. #:		ANALYSIS REQUEST	
Project Manager: <u>Rice Operating</u>		Company:			
Address: <u>Joe Gatts</u>		Attn:			
City: <u>Hobbs</u>		Address:			
Phone #: <u>393-9174</u>		City:			
State: <u>NM</u>		State:			
Zip: <u>88240</u>		Phone #:			
Fax #:		Fax #:			
Project #: <u>    </u>		Project Owner:			
Project Name: <u>C-4-3</u>					
Project Location: <u>BD</u>					
Sampler Name: <u>J Gatts</u>					

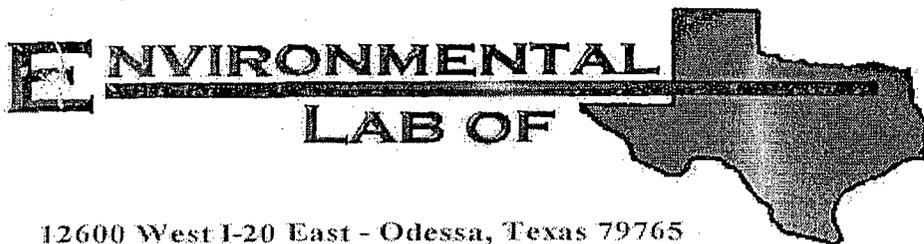
FOR LAB USE ONLY		PRESERV.		SAMPLING	
Lab I.D. <u>    </u>		ACID/BASE:		DATE	
Sample I.D. <u>    </u>		OTHER:		TIME	
Matrix: <u>Source at 17 bgs</u>		ICE / COOL		6/17/01 11:30	
Matrix: <u>    </u>		OTHER:			
Matrix: <u>    </u>		SLUDGE			
Matrix: <u>    </u>		OIL			
Matrix: <u>    </u>		SOIL			
Matrix: <u>    </u>		WASTEWATER			
Matrix: <u>    </u>		GROUNDWATER			
Matrix: <u>    </u>		# CONTAINERS			
Matrix: <u>    </u>		(GRAB OR COMP.)			

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Sampler Relinquished:		Received By:	
Date:	Time:	Date:	Time:
<u>6/17/01</u>	<u>4:30</u>	<u>6/17/01</u>	<u>11:30</u>
Relinquished By: <u>J Gatts</u>		Received By: (Lab Staff) <u>Burnett</u>	
Delivered By: (Circle One)		Sample Condition	
Sampler - UPS - Bus - Other:		Temp. <input checked="" type="checkbox"/> Intact <input type="checkbox"/> Checked <input type="checkbox"/>	
		By: <u>    </u> (Initials)	
Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	
REMARKS:			

† Cardinal cannot accept verbal changes. Please fax written changes to (915) 673-7020.



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

Prepared for:

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

Project: C-4-3

Project Number: None Given

Location: None Given

Lab Order Number: 4F28001

Report Date: 07/01/04

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
West Wall Pt #1,2,3,4,5	4F28001-01	Soil	06/22/04 13:40	06/28/04 07:52
South Wall Pt #1,2,3,4,5	4F28001-02	Soil	06/22/04 13:30	06/28/04 07:52
East Wall Pt #1,2,3,4,5	4F28001-03	Soil	06/22/04 13:00	06/28/04 07:52
North Wall Pt #1,2,3,4,5	4F28001-04	Soil	06/22/04 13:10	06/28/04 07:52
Bottom Pt #1,2,3,4,5 @ 12' Bgs	4F28001-05	Soil	06/22/04 13:20	06/28/04 07:52
East Wall Field Comp	4F28001-06	Soil	06/22/04 13:05	06/28/04 07:52
West Wall Field Comp	4F28001-07	Soil	06/22/04 13:40	06/28/04 07:52
North Wall Field Comp	4F28001-08	Soil	06/22/04 13:10	06/28/04 07:52
South Wall Field Comp	4F28001-09	Soil	06/22/04 13:30	06/28/04 07:52
Bottom Wall Field Comp @12' bgs	4F28001-10	Soil	06/22/04 13:20	06/28/04 07:52

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>West Wall Pt #1,2,3,4,5 (4F28001-01) Soil</b> <i>LAB COMP.</i>									
Benzene	ND	0.0250	mg/kg dry	25	EF42907	06/25/04	06/28/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		96.5 %	80-120	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	80-120	"	"	"	"	"	
<b>South Wall Pt #1,2,3,4,5 (4F28001-02) Soil</b> <i>LAB COMP.</i>									
Benzene	ND	0.0250	mg/kg dry	25	EF42907	06/25/04	06/28/04	EPA 8021B	
Toluene	0.0289	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.0656	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.188	0.0250	"	"	"	"	"	"	
Xylene (o)	0.0462	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		96.0 %	80-120	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.5 %	80-120	"	"	"	"	"	
<b>East Wall Pt #1,2,3,4,5 (4F28001-03) Soil</b> <i>LAB COMP.</i>									
Benzene	ND	0.0250	mg/kg dry	25	EF42907	06/25/04	06/28/04	EPA 8021B	
Toluene	0.100	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.186	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.820	0.0250	"	"	"	"	"	"	
Xylene (o)	0.269	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		96.3 %	80-120	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.3 %	80-120	"	"	"	"	"	
<b>North Wall Pt #1,2,3,4,5 (4F28001-04) Soil</b> <i>LAB COMP.</i>									
Benzene	ND	0.0250	mg/kg dry	25	EF42907	06/25/04	06/28/04	EPA 8021B	
Toluene	0.0977	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.350	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.845	0.0250	"	"	"	"	"	"	
Xylene (o)	0.274	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		103 %	80-120	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.4 %	80-120	"	"	"	"	"	

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Bottom Pt #1,2,3,4,5 @ 12' Bgs (4F28001-05) Soil</b>									
<b>LAB COMP</b>									
Benzene	0.0268	0.0250	mg/kg dry	25	EF42907	06/25/04	06/28/04	EPA 8021B	
Toluene	0.139	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.155	0.0250	"	"	"	"	"	"	
Xylene (p/m)	1.08	0.0250	"	"	"	"	"	"	
Xylene (o)	0.128	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		131 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		97.9 %	80-120		"	"	"	"	
<b>East Wall Field Comp (4F28001-06) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EG40101	06/29/04	06/29/04	EPA 8021B	
Toluene	0.135	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.126	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.701	0.0250	"	"	"	"	"	"	
Xylene (o)	0.222	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		89.2 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	183	10.0	mg/kg dry	1	EF42803	06/28/04	06/28/04	EPA 8015M	
Diesel Range Organics >C12-C35	1070	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	1250	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		86.8 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		105 %	70-130		"	"	"	"	
<b>West Wall Field Comp (4F28001-07) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EG40101	06/29/04	06/29/04	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		92.8 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	J [8.82]	10.0	mg/kg dry	1	EF42803	06/28/04	06/28/04	EPA 8015M	J
Diesel Range Organics >C12-C35	27.9	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	27.9	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		82.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		83.8 %	70-130		"	"	"	"	

Environmental Lab of Texas

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>North Wall Field Comp (4F28001-08) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EG40101	06/29/04	06/29/04	EPA 8021B	
Toluene	0.0796	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.184	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.700	0.0250	"	"	"	"	"	"	
Xylene (o)	0.259	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		91.2 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.8 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	141	10.0	mg/kg dry	1	EF42803	06/28/04	06/28/04	EPA 8015M	
Diesel Range Organics >C12-C35	911	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	1050	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		90.8 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		105 %	70-130		"	"	"	"	
<b>South Wall Field Comp (4F28001-09) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EG40101	06/29/04	06/29/04	EPA 8021B	
Toluene	0.0265	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.0433	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.131	0.0250	"	"	"	"	"	"	
Xylene (o)	0.0336	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		86.5 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.6 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	19.0	10.0	mg/kg dry	1	EF42803	06/28/04	06/28/04	EPA 8015M	
Diesel Range Organics >C12-C35	183	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	202	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		93.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		93.6 %	70-130		"	"	"	"	
<b>Bottom Wall Field Comp @12' bgs (4F28001-10) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EG40101	06/29/04	06/29/04	EPA 8021B	
Toluene	0.123	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.113	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.829	0.0250	"	"	"	"	"	"	
Xylene (o)	0.133	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		87.9 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.8 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	156	10.0	mg/kg dry	1	EF42803	06/28/04	06/28/04	EPA 8015M	
Diesel Range Organics >C12-C35	984	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	1140	10.0	"	"	"	"	"	"	

Environmental Lab of Texas

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471  
Reported:  
07/01/04 10:20

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Bottom Wall Field Comp @12' bgs (4F28001-10) Soil</b>									
Surrogate: 1-Chlorooctane		96.6 %	70-130		EF42803	06/28/04	06/28/04	EPA 8015M	
Surrogate: 1-Chlorooctadecane		110 %	70-130		"	"	"	"	

Oilfield Services Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>West Wall Pt #1,2,3,4,5 (4F28001-01) Soil</b>									
% Solids	89.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>South Wall Pt #1,2,3,4,5 (4F28001-02) Soil</b>									
% Solids	89.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>East Wall Pt #1,2,3,4,5 (4F28001-03) Soil</b>									
% Solids	90.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>North Wall Pt #1,2,3,4,5 (4F28001-04) Soil</b>									
% Solids	90.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>Bottom Pt #1,2,3,4,5 @ 12' Bgs (4F28001-05) Soil</b>									
% Solids	90.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>East Wall Field Comp (4F28001-06) Soil</b>									
Chloride	383	20.0 mg/kg Wet		2	EF43008	06/29/04	06/29/04	SW 846 9253	
% Solids	89.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>West Wall Field Comp (4F28001-07) Soil</b>									
Chloride	585	20.0 mg/kg Wet		2	EF43008	06/29/04	06/29/04	SW 846 9253	
% Solids	89.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>North Wall Field Comp (4F28001-08) Soil</b>									
Chloride	436	20.0 mg/kg Wet		2	EF43008	06/29/04	06/29/04	SW 846 9253	
% Solids	89.0		%	1	EF42901	06/28/04	06/28/04	% calculation	
<b>South Wall Field Comp (4F28001-09) Soil</b>									
Chloride	617	20.0 mg/kg Wet		2	EF43008	06/29/04	06/29/04	SW 846 9253	
% Solids	89.0		%	1	EF42901	06/28/04	06/28/04	% calculation	

Environmental Lab of Texas

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Page 6 of 13

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Bottom Water Field Comp @12' bgs (4F28001-10) Soil</b>									
Chloride	372	20.0	mg/kg Wet	2	EF43008	06/29/04	06/29/04	SW 846 9253	
% Solids	90.0		%	1	EF42901	06/28/04	06/28/04	% calculation	

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

**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
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**Batch EF42803 - Solvent Extraction (GC)**

**Blank (EF42803-BLK1)**

Prepared & Analyzed: 06/28/04

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	37.0		mg/kg	50.0		74.0	70-130			
Surrogate: 1-Chlorooctadecane	37.0		"	50.0		74.0	70-130			

**LCS (EF42803-BS1)**

Prepared & Analyzed: 06/28/04

Gasoline Range Organics C6-C12	411	10.0	mg/kg wet	500		82.2	75-125			
Diesel Range Organics >C12-C35	424	10.0	"	500		84.8	75-125			
Total Hydrocarbon C6-C35	835	10.0	"	1000		83.5	75-125			
Surrogate: 1-Chlorooctane	48.6		mg/kg	50.0		97.2	70-130			
Surrogate: 1-Chlorooctadecane	35.6		"	50.0		71.2	70-130			

**Calibration Check (EF42803-CCV1)**

Prepared & Analyzed: 06/28/04

Gasoline Range Organics C6-C12	445		mg/kg	500		89.0	80-120			
Diesel Range Organics >C12-C35	485		"	500		97.0	80-120			
Total Hydrocarbon C6-C35	930		"	1000		93.0	80-120			
Surrogate: 1-Chlorooctane	57.8		"	50.0		104	70-130			
Surrogate: 1-Chlorooctadecane	36.6		"	50.0		73.2	70-130			

**Matrix Spike (EF42803-MS1)**

Source: 4F25003-06

Prepared & Analyzed: 06/28/04

Gasoline Range Organics C6-C12	533	10.0	mg/kg dry	538	ND	99.1	75-125			
Diesel Range Organics >C12-C35	576	10.0	"	538	ND	107	75-125			
Total Hydrocarbon C6-C35	1110	10.0	"	1080	ND	103	75-125			
Surrogate: 1-Chlorooctane	57.1		mg/kg	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	48.6		"	50.0		97.2	70-130			

**Matrix Spike Dup (EF42803-MSD1)**

Source: 4F25003-06

Prepared & Analyzed: 06/28/04

Gasoline Range Organics C6-C12	517	10.0	mg/kg dry	538	ND	96.1	75-125	3.05	20	
Diesel Range Organics >C12-C35	577	10.0	"	538	ND	107	75-125	0.173	20	
Total Hydrocarbon C6-C35	1090	10.0	"	1080	ND	101	75-125	1.82	20	
Surrogate: 1-Chlorooctane	55.3		mg/kg	50.0		111	70-130			
Surrogate: 1-Chlorooctadecane	48.1		"	50.0		96.2	70-130			

Environmental Lab of Texas

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Page 8 of 13

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471  
Reported:  
07/01/04 10:20

**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
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**Batch EF42907 - EPA 5030C (GC)**

**Blank (EF42907-BLK1)**

Prepared & Analyzed: 06/25/04

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	85.6		ug/kg	100		85.6	80-120			
Surrogate: 4-Bromofluorobenzene	90.2		"	100		90.2	80-120			

**LCS (EF42907-BS1)**

Prepared: 06/25/04 Analyzed: 06/28/04

Benzene	99.8		ug/kg	100		99.8	80-120			
Toluene	103		"	100		103	80-120			
Ethylbenzene	103		"	100		103	80-120			
Xylene (p/m)	207		"	200		104	80-120			
Xylene (o)	105		"	100		105	80-120			
Surrogate: a,a,a-Trifluorotoluene	101		"	100		101	80-120			
Surrogate: 4-Bromofluorobenzene	107		"	100		107	80-120			

**Calibration Check (EF42907-CCV1)**

Prepared: 06/25/04 Analyzed: 06/28/04

Benzene	98.0		ug/kg	100		98.0	80-120			
Toluene	103		"	100		103	80-120			
Ethylbenzene	101		"	100		101	80-120			
Xylene (p/m)	202		"	200		101	80-120			
Xylene (o)	101		"	100		101	80-120			
Surrogate: a,a,a-Trifluorotoluene	107		"	100		107	80-120			
Surrogate: 4-Bromofluorobenzene	100		"	100		100	80-120			

**Matrix Spike (EF42907-MS1)**

Source: 4F28001-01

Prepared: 06/25/04 Analyzed: 06/29/04

Benzene	106		ug/kg	100	ND	106	80-120			
Toluene	110		"	100	ND	110	80-120			
Ethylbenzene	109		"	100	ND	109	80-120			
Xylene (p/m)	218		"	200	ND	109	80-120			
Xylene (o)	107		"	100	ND	107	80-120			
Surrogate: a,a,a-Trifluorotoluene	109		"	100		109	80-120			
Surrogate: 4-Bromofluorobenzene	104		"	100		104	80-120			

Oilfield Services Operating Co.  
 122 W. Taylor  
 Hobbs NM, 88240

Project: C-4-3  
 Project Number: None Given  
 Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
 07/01/04 10:20

**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
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**Batch EF42907 - EPA 5030C (GC)**

Matrix Spike Dup (EF42907-MSD1)      Source: 4F28001-01      Prepared: 06/25/04      Analyzed: 06/29/04

Benzene	100		ug/kg	100	ND	100	80-120	5.83	20	
Toluene	104		"	100	ND	104	80-120	5.61	20	
Ethylbenzene	104		"	100	ND	104	80-120	4.69	20	
Xylene (p/m)	209		"	200	ND	104	80-120	4.69	20	
Xylene (o)	107		"	100	ND	107	80-120	0.00	20	
Surrogate: a,a,a-Trifluorotoluene	102		"	100		102	80-120			
Surrogate: 4-Bromofluorobenzene	110		"	100		110	80-120			

**Batch EG40101 - EPA 5030C (GC)**

Blank (EG40101-BLK1)

Prepared & Analyzed: 06/29/04

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	91.9		ug/kg	100		91.9	80-120			
Surrogate: 4-Bromofluorobenzene	101		"	100		101	80-120			

LCS (EG40101-BS1)

Prepared & Analyzed: 06/29/04

Benzene	96.3		ug/kg	100		96.3	80-120			
Toluene	102		"	100		102	80-120			
Ethylbenzene	103		"	100		103	80-120			
Xylene (p/m)	205		"	200		102	80-120			
Xylene (o)	104		"	100		104	80-120			
Surrogate: a,a,a-Trifluorotoluene	94.4		"	100		94.4	80-120			
Surrogate: 4-Bromofluorobenzene	104		"	100		104	80-120			

Environmental Lab of Texas

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Page 10 of 13

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

**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 EG40101 - EPA 5030C (GC)**

**Calibration Check (EG40101-CCV1)**

Prepared: 06/29/04 Analyzed: 06/30/04

Benzene	86.1		ug/kg	100		86.1	80-120			
Toluene	90.0		"	100		90.0	80-120			
Ethylbenzene	92.0		"	100		92.0	80-120			
Xylene (p/m)	184		"	200		92.0	80-120			
Xylene (o)	97.8		"	100		97.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	89.9		"	100		89.9	80-120			
Surrogate: 4-Bromofluorobenzene	98.3		"	100		98.3	80-120			

**Matrix Spike (EG40101-MS1)**

Source: 4F28001-07

Prepared: 06/29/04 Analyzed: 06/30/04

Benzene	90.7		ug/kg	100	ND	90.7	80-120			
Toluene	95.6		"	100	ND	95.6	80-120			
Ethylbenzene	98.6		"	100	ND	98.6	80-120			
Xylene (p/m)	198		"	200	ND	99.0	80-120			
Xylene (o)	100		"	100	ND	100	80-120			
Surrogate: a,a,a-Trifluorotoluene	94.6		"	100		94.6	80-120			
Surrogate: 4-Bromofluorobenzene	102		"	100		102	80-120			

**Matrix Spike Dup (EG40101-MSD1)**

Source: 4F28001-07

Prepared: 06/29/04 Analyzed: 06/30/04

Benzene	90.0		ug/kg	100	ND	90.0	80-120	0.775	20	
Toluene	94.4		"	100	ND	94.4	80-120	1.26	20	
Ethylbenzene	97.2		"	100	ND	97.2	80-120	1.43	20	
Xylene (p/m)	195		"	200	ND	97.5	80-120	1.53	20	
Xylene (o)	101		"	100	ND	101	80-120	0.995	20	
Surrogate: a,a,a-Trifluorotoluene	92.9		"	100		92.9	80-120			
Surrogate: 4-Bromofluorobenzene	107		"	100		107	80-120			

Environmental Lab of Texas

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Page 11 of 13

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471  
Reported:  
07/01/04 10:20

**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 EF42901 - General Preparation (Prep)**

Blank (EF42901-BLK1) Prepared & Analyzed: 06/28/04

% Solids 100 %

Duplicate (EF42901-DUP1) Source: 4F28001-01 Prepared & Analyzed: 06/28/04

% Solids 89.0 % 89.0 0.00 20

**Batch EF43008 - Water Extraction**

Blank (EF43008-BLK1) Prepared & Analyzed: 06/29/04

Chloride ND 20.0 mg/kg Wet

Matrix Spike (EF43008-MS1) Source: 4F28001-06 Prepared & Analyzed: 06/29/04

Chloride 851 20.0 mg/kg Wet 500 383 93.6 80-120

Matrix Spike Dup (EF43008-MSD1) Source: 4F28001-06 Prepared & Analyzed: 06/29/04

Chloride 830 20.0 mg/kg Wet 500 383 89.4 80-120 2.50 20

Reference (EF43008-SRM1) Prepared & Analyzed: 06/29/04

Chloride 5210 mg/kg 5000 104 80-120

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

Project: C-4-3  
Project Number: None Given  
Project Manager: Kristin Farris

Fax: (505) 397-1471

Reported:  
07/01/04 10:20

### 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:

7-01-04

Raland K. Tuttle, QA Officer

Celey D. Keene, Lab Director, Org. Tech Director

Jeanne Mc Murrey, Inorg. Tech Director

James L. Hawkins, Chemist/Geologist

Sara Molina, Chemist

Sandra Biezugbe, Lab Tech.

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Environmental Lab of Texas

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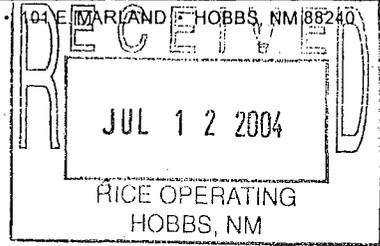


# ARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 104 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
RICE OPERATING CO.  
ATTN: ROY RASCON  
122 W. TAYLOR  
HOBBS, NM 88240  
FAX TO: (505) 397-1471



Receiving Date: 07/06/04  
Reporting Date: 07/08/04  
Project Number: NOT GIVEN  
Project Name: C-4-3  
Project Location: BD

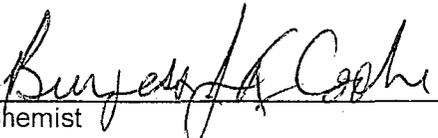
Sampling Date: 07/01/04  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: BC  
Analyzed By: BC/HM

LAB NUMBER SAMPLE ID	GRO	DRO	CI*
	(C <sub>6</sub> -C <sub>10</sub> ) (mg/Kg)	(>C <sub>10</sub> -C <sub>28</sub> ) (mg/Kg)	(mg/Kg)
ANALYSIS DATE	07/06/04	07/06/04	07/06/04
H8879-1 REMD. BACKFILL	<10.0	414	289**
Quality Control	778	819	1000
True Value QC	800	800	1000
% Recovery	97.3	102	100
Relative Percent Difference	12.4	10.8	2.0

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

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

\*\*Matrix interference (color) observed.

  
Chemist

7/8/04  
Date

H8879A.XLS



# CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240  
(916) 673-7001 Fax (916) 673-7020 (605) 393-2328 Fax (505) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page      of     

BILLY										ANALYSIS REQUEST									
Company Name: RICE Operating										P.O. #:									
Project Manager: Roy Boskan										Company:									
Address: 122 W. Taylor										Attn:									
City: Hobbs										Address:									
Phone #: 393-9174										City:									
Project #:										State:									
Project Name: C-4-3										Phone #:									
Project Location: <del>000000</del> B0										Fax #:									
Sampler Name: Joe Gatts										PRESERV.									
FOR LAB USE ONLY										MATRIX					SAMPLING				
Lab I.D.										# CONTAINERS					DATE				
Sample I.D.										(GRAB OR C)MP.					TIME				
118873-1 REMD BACKfill										C 1					7/1/04 9:00				
										GROUNDWATER									
										WASTEWATER									
										SOIL									
										OIL									
										SLUDGE									
										OTHER:									
										ACID/BASE:									
										ICE/COOL									
										OTHER:									
															BTEX				
															CL				
															TPH 8015				

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Sampler Relinquished: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received By: \_\_\_\_\_ Date: 7/1/04 Time: 4:20

Relinquished By: \_\_\_\_\_ Received By: (Lab Staff) *Rosemary Cook*

Delivered By: (Circle One) *J. Gatts* Sample Condition: \_\_\_\_\_ Checked By: \_\_\_\_\_

Sampler - UPS - Bus - Other: \_\_\_\_\_ Temp: 50  Yes  No

Phone Results:  Yes  No

Fax Results:  Yes  No

REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to (916) 673-7020.



# ARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
RICE OPERATING CO.  
ATTN: J. GATTS  
122 W. TAYLOR  
HOBBS, NM 88240  
FAX TO: (505) 397-1471

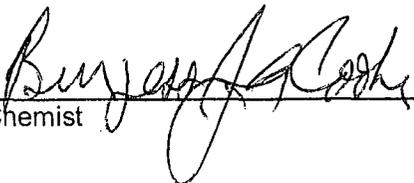
Receiving Date: 06/17/04  
Reporting Date: 06/18/04  
Project Number: NOT GIVEN  
Project Name: C-4-3  
Project Location: BD

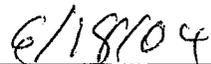
Sampling Date: 06/17/04  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: BC  
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO	DRO	Cl*
		(C <sub>6</sub> -C <sub>10</sub> ) (mg/Kg)	(>C <sub>10</sub> -C <sub>28</sub> ) (mg/Kg)	(mg/Kg)
ANALYSIS DATE		06/17/04	06/17/04	06/18/04
H8834-1	SOURCE @ 17' BGS	21.7	2640	64
Quality Control		803	808	1020
True Value QC		800	800	1000
% Recovery		100	101	102
Relative Percent Difference		3.9	1.8	1.0

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

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

  
Chemist

  
Date

H8834A.XLS



PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
 RICE OPERATING CO.  
 ATTN: J. GATTS  
 122 W. TAYLOR  
 HOBBS, NM 88240  
 FAX TO: (505) 397-1471

Receiving Date: 06/17/04  
 Reporting Date: 06/18/04  
 Project Number: NOT GIVEN  
 Project Name: C-4-3  
 Project Location: BD

Sampling Date: 06/17/04  
 Sample Type: SOIL  
 Sample Condition: COOL & INTACT  
 Sample Received By: BC  
 Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		06/17/04	06/17/04	06/17/04	06/17/04
H8834-1	SOURCE @ 17' BGS	0.298	0.065	4.78	5.71
Quality Control		0.102	0.098	0.093	0.273
True Value QC		0.100	0.100	0.100	0.300
% Recovery		102	98.4	93.4	90.9
Relative Percent Difference		5.6	3.1	1.2	0.8

METHOD: EPA SW-846 8260

*Bryson J. Cosh*  
 Chemist

6/18/04  
 Date

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