

1R - 426-91

# REPORTS

DATE:

9/15/2004

BD Vent C-2

1R0426-91

**FINAL  
REPORT**

**RICE OPERATING COMPANY  
JUNCTION BOX FINAL REPORT**

**BOX LOCATION**

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
BD	vent C-2	C	2	22S	37E	Lea	12	7	7

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

Depth to Groundwater 50 feet NMOCD SITE ASSESSMENT RANKING SCORE: 10

Date Started 4/22/2004 Date Completed 7/15/2004 OCD Witness No

Soil Excavated 200 cubic yards Excavation Length 30 Width 30 Depth 6 feet

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

**FINAL ANALYTICAL RESULTS:** Sample Date 4/26/2004, 4/27/2004, 7/15/2004 Sample Depth 6, 20, 38 ft

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

**CHLORIDE FIELD TESTS**

Sample Location	PID ppm	GRO mg/kg	DRO mg/kg	Chloride mg/kg
vertical grab @ 20 ft	0.0	<10.0	<10.0	640
4-WALL COMP.	0.0	<10.0	<10.0	352
BOTTOM @ 6 ft	0.0	<10.0	13.7	1020
REMED. BACKFILL	0.0	<10.0	60.3	496
SOIL BORE @ 38 ft	0.0	<10.0	<10.0	160

LOCATION	DEPTH (ft)	ppm
4-wall comp.	1-5 ft	308
bottom comp.	6 ft	1015
remed. backfill	n/a	578
Vertical	8	434
at jct.	9	1083
	10	982
	11	950
	12	1899
	14	2550
	16	2234
	18	1841
	20	685
Soil Bore	25	575
	26	536
	27	646
	30	239
	35	123
	36	150
	37	150
	38	146

General Description of Remedial Action: This junction box contained a vent.

The site was delineated with a backhoe while chloride field tests and PID screenings were conducted at regular intervals. Vertical chloride delineation was extended to 20 ft BGS where a conclusive trend was not observed. PID concentrations were generally minimal throughout the 30 x 30 x 6-ft-deep excavation. NMOCD TPH guidelines were met. To inhibit downward migration of residual chloride, a 1-ft thick clay barrier was installed at the bottom of the hole at 6 ft. The excavation was backfilled with the blended, excavated soils because the junction had to be put back into service with a new watertight junction box. On 7/15/2004, a soil bore was initiated at the site to delineate chloride further. The bore was advanced to 38 ft BGS where a conclusive trend of decline was observed as concentrations fell to background levels (see graph). The bottom of the bore hole was plugged with bentonite and the remainder was filled with drill cutting. The disturbed surface was seeded with a blend of native vegetation on 5/25/04 and will be monitored for growth.

enclosures: chloride graph, photos, lab results, PID screenings, bore log, diagrams

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 Farris Pope SIGNATURE *Kristin Farris Pope*

DATE 9/15/2004 TITLE Project Scientist

# BD C-2 vent



Old junction box before replumbing 7/14/2003



New plumbing at junction 7/16/2003



Delineation 4/22/04



Installing and compacting clay barrier

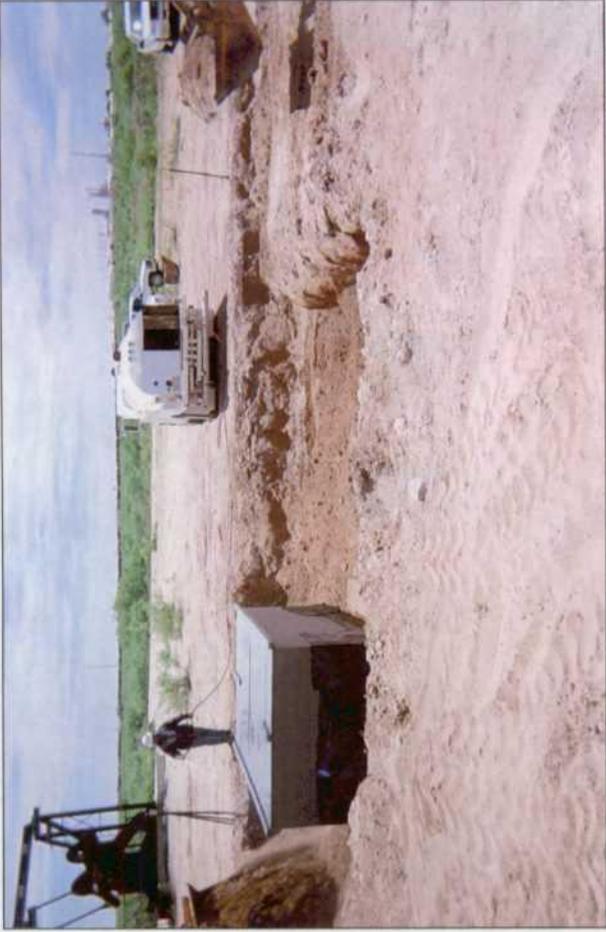
5/4/2004

# BD C-2 vent



testing clay

5/4/2004



completing junction box; compacting surrounding soils

5/25/2004



seeding disturbed surface

6/24/2004



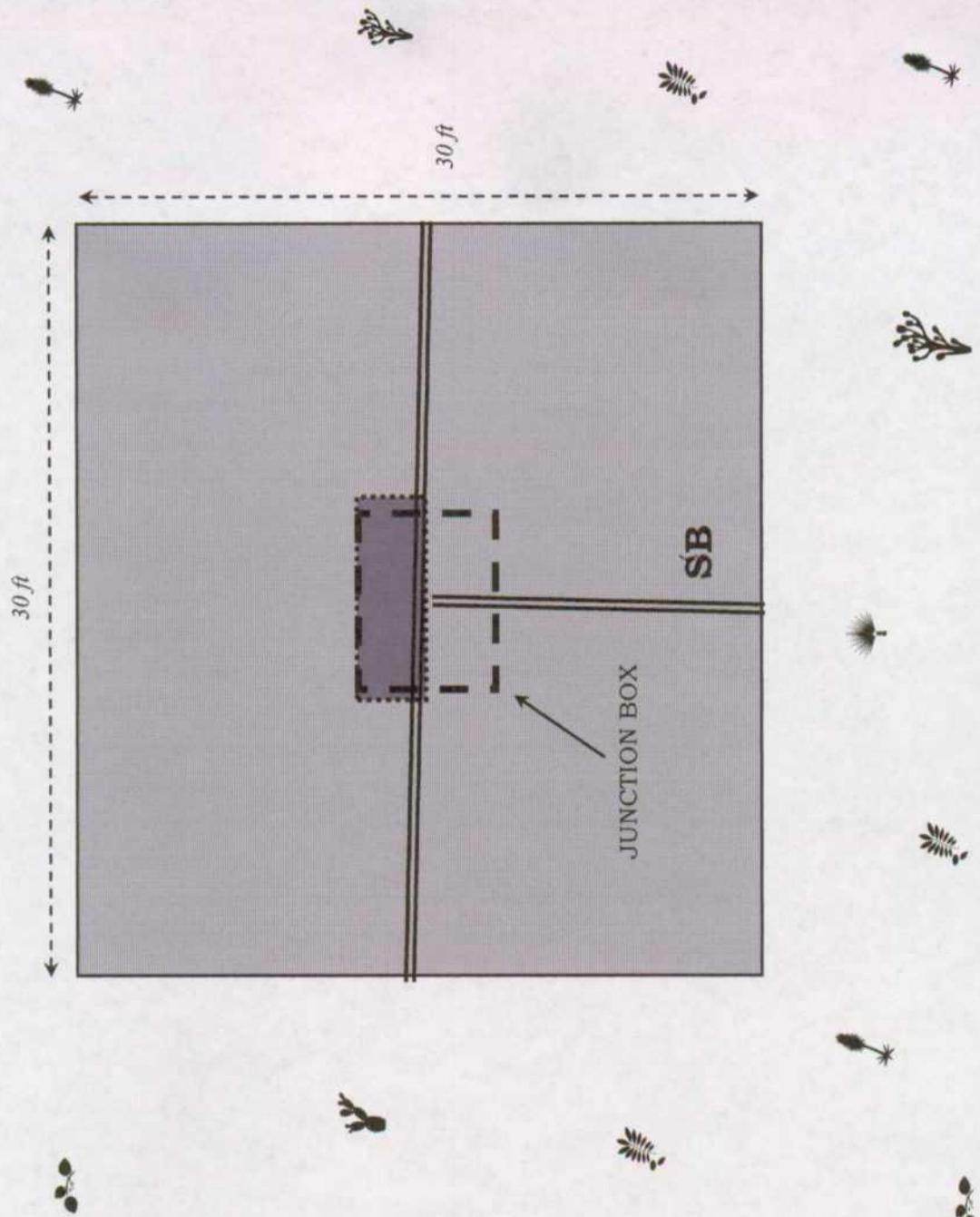
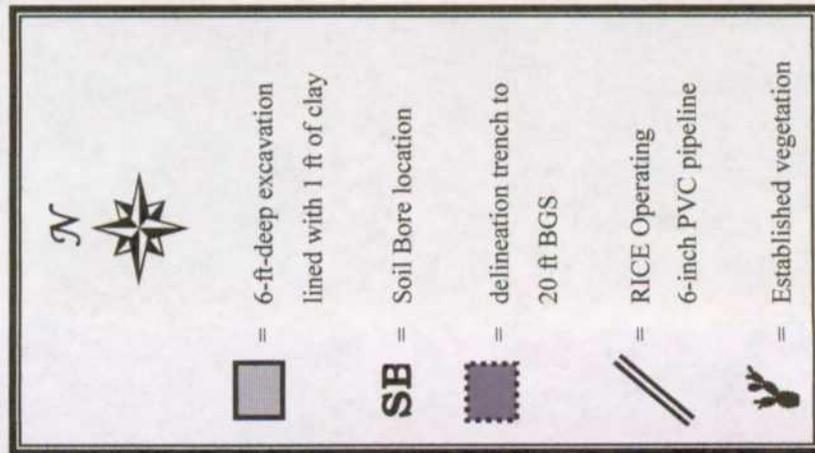
soil bore

7/15/2004

# **BD C-2 vent**

T22S, R37E

# 30 x 30 x 6 ft Excavation

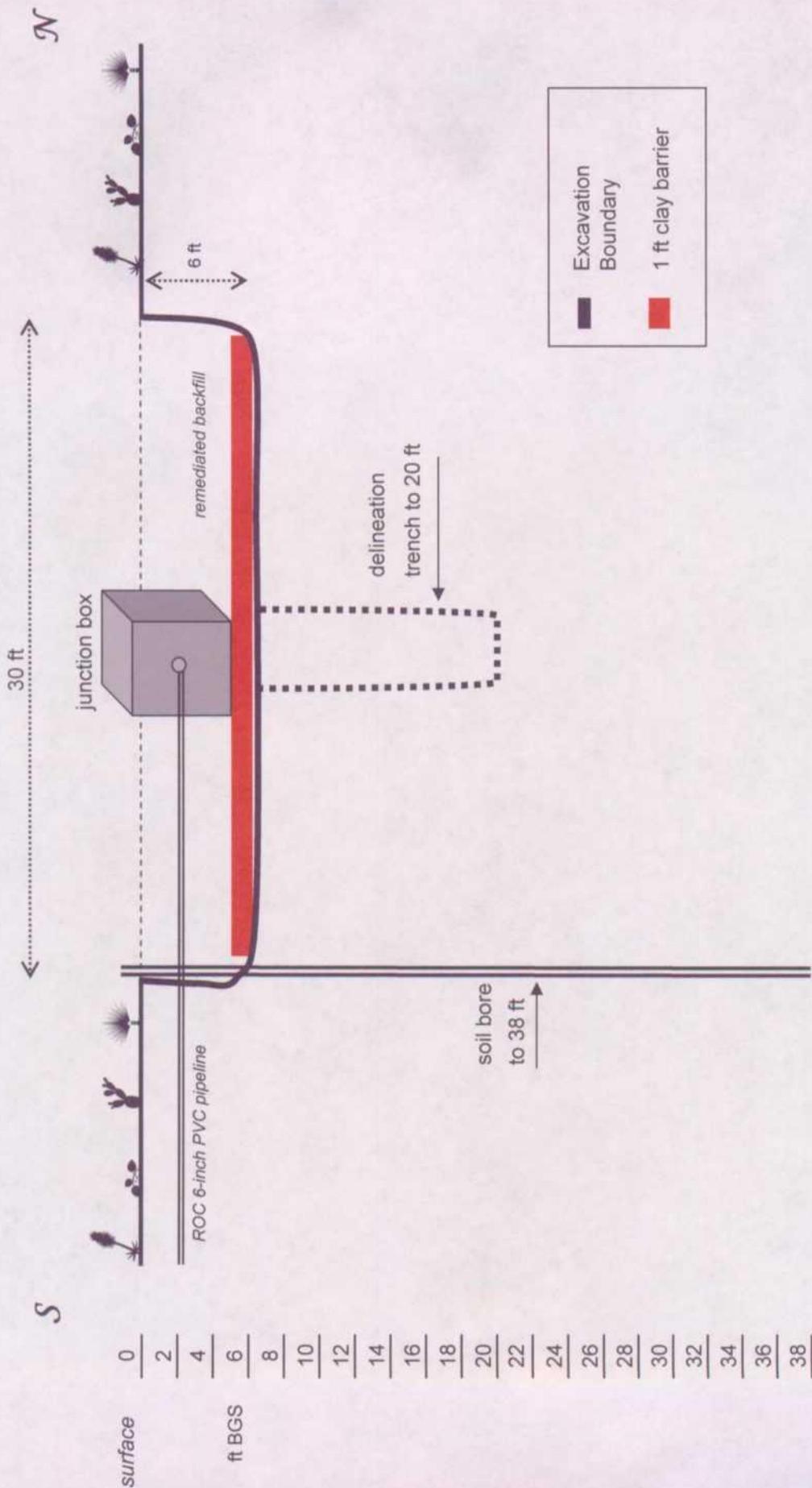


# BD C-2 vent

## 30 x 30 x 6 ft

### Excavation Cross-Section

A delineation trench was extended down to 20 ft BGS; not included in the 6 ft bottom composite sample.

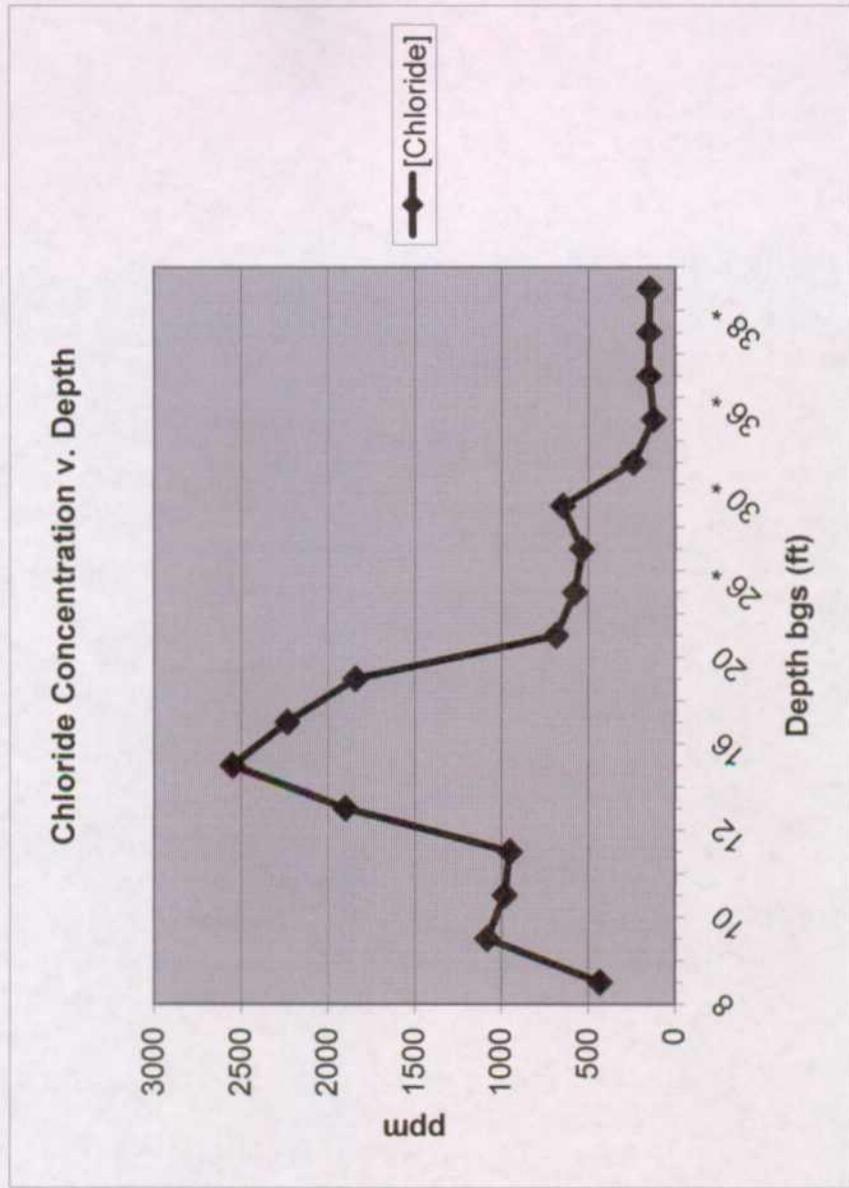


# BD vent C-2

T22S, R37E

Vertical Delineation at Source

Depth bgs (ft)	[Cl <sup>-</sup> ] ppm
8	434
9	1083
10	982
11	950
12	1899
14	2550
16	2234
18	1841
20	685
25 *	575
26 *	536
27 *	646
30 *	239
35 *	123
36 *	150
37 *	150
38 *	146



\* Soil bore samples

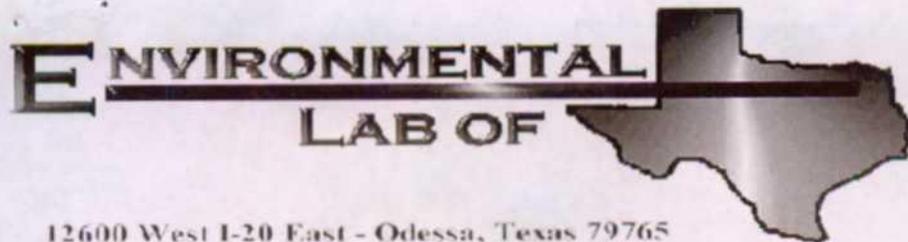
Groundwater = 50 ft

Logger:		Drew Parker, Mort Bates		Client:		RICE Operating Company		Well ID:		SB-1	
Driller:		Atkins Engineering Associates, Inc.		Project Name:		BD C-2 vent					
Drilling Method:		Hollow Stem Auger		Location:		BD SWD System					
Start Date:		7/14/2004				Sec. 2, T22S, R37E					
End Date:		7/15/2004				Lea County, NM					
<b>Notes:</b>				15 ft south of junction box TD = 38 ft      Groundwater = 50 ft							
Depth (feet)	Split Spoon chloride	PID	Description	Lithology	Additional Notes						
0.0			0 - 2 ft SILTY SAND-CALICHE MIXTURE loose, tan & white, dry								
1.0											
2.0											
3.0											
4.0			2 - 7 ft SILTY SAND loose, brown, damp								
5.0											
6.0											
7.0											
8.0											
9.0			7 - 12 ft SILTY SAND w/SMALL AMOUNT CALICHE loose, tan, damp								
10.0											
11.0											
12.0											
13.0											
14.0											
15.0	858	1.1	12 - 18 ft SILTY SAND loose, reddish tan, damp								
16.0											
17.0											
18.0											
19.0											
20.0	869	1.2	18 - 24 ft SILTY SAND w/CALICHE firm, tan, dry								
21.0											
22.0											
23.0											
24.0											
25.0	575	0.8	24 - 31 ft CEMENTED SANDSTONE w/SILTY SAND hard, light tan, dry								
26.0	536	0.2									
27.0	646	0.7									
28.0											
29.0											
30.0	239	0.3									
31.0											
32.0											
33.0											
34.0											
35.0	123	0.5	31 - 38 ft CALICHE w/SILTY SAND loose, reddish tan, dry								
36.0	150	0.1									
37.0	150	0.0									
38.0	146	0.0									

remainder of bore hole backfilled with drill cuttings

bentonite seal

lab = 160 ppm Cl



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

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

Project: C-2 Vent Soil Bore  
Project Number: None Given  
Location: BD

Lab Order Number: 4G20004

Report Date: 07/26/04

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240	Project: C-2 Vent Soil Bore Project Number: None Given Project Manager: Roy Rascon	Fax: (505) 397-1471 <b>Reported:</b> 07/26/04 10:20
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**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
15' South Grab @ 38' Bgs	4G20004-01	Soil	07/15/04 10:30	07/20/04 08:00

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

Project: C-2 Vent Soil Bore  
Project Number: None Given  
Project Manager: Roy Rascon

Fax: (505) 397-1471

**Reported:**  
07/26/04 10:20

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>15' South Grab @ 38' Bgs (4G20004-01) Soil</b>									
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EG42013	07/20/04	07/22/04	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		89.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		75.6 %	70-130		"	"	"	"	

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

Project: C-2 Vent Soil Bore  
Project Number: None Given  
Project Manager: Roy Rascon

Fax: (505) 397-1471

**Reported:**  
07/26/04 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>15' South Grab @ 38' Bgs (4G20004-01) Soil</b>									
<b>Chloride</b>	<b>160</b>	20.0	mg/kg Wet	2	EG42111	07/20/04	07/21/04	SW 846 9253	
<b>% Solids</b>	<b>91.0</b>		%	1	EG42011	07/20/04	07/20/04	% calculation	

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

Project: C-2 Vent Soil Bore  
Project Number: None Given  
Project Manager: Roy Rascon

Fax: (505) 397-1471

Reported:  
07/26/04 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 EG42013 - Solvent Extraction (GC)**

**Blank (EG42013-BLK1)**

Prepared: 07/20/04 Analyzed: 07/22/04

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	47.1		mg/kg	50.0		94.2	70-130			
Surrogate: 1-Chlorooctadecane	37.9		"	50.0		75.8	70-130			

**LCS (EG42013-BS1)**

Prepared: 07/20/04 Analyzed: 07/22/04

Gasoline Range Organics C6-C12	470	10.0	mg/kg wet	500		94.0	75-125			
Diesel Range Organics >C12-C35	488	10.0	"	500		97.6	75-125			
Total Hydrocarbon C6-C35	958	10.0	"	1000		95.8	75-125			
Surrogate: 1-Chlorooctane	39.6		mg/kg	50.0		79.2	70-130			
Surrogate: 1-Chlorooctadecane	40.6		"	50.0		81.2	70-130			

**Calibration Check (EG42013-CCV1)**

Prepared: 07/20/04 Analyzed: 07/22/04

Gasoline Range Organics C6-C12	420		mg/kg	500		84.0	80-120			
Diesel Range Organics >C12-C35	474		"	500		94.8	80-120			
Total Hydrocarbon C6-C35	894		"	1000		89.4	80-120			
Surrogate: 1-Chlorooctane	57.2		"	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	42.3		"	50.0		84.6	70-130			

**Matrix Spike (EG42013-MS1)**

Source: 4G20004-01

Prepared: 07/20/04 Analyzed: 07/22/04

Gasoline Range Organics C6-C12	481	10.0	mg/kg dry	549	ND	87.6	75-125			
Diesel Range Organics >C12-C35	514	10.0	"	549	ND	93.6	75-125			
Total Hydrocarbon C6-C35	995	10.0	"	1100	ND	90.5	75-125			
Surrogate: 1-Chlorooctane	51.6		mg/kg	50.0		103	70-130			
Surrogate: 1-Chlorooctadecane	41.9		"	50.0		83.8	70-130			

**Matrix Spike Dup (EG42013-MSD1)**

Source: 4G20004-01

Prepared: 07/20/04 Analyzed: 07/22/04

Gasoline Range Organics C6-C12	471	10.0	mg/kg dry	549	ND	85.8	75-125	2.10	20	
Diesel Range Organics >C12-C35	492	10.0	"	549	ND	89.6	75-125	4.37	20	
Total Hydrocarbon C6-C35	963	10.0	"	1100	ND	87.5	75-125	3.27	20	
Surrogate: 1-Chlorooctane	53.5		mg/kg	50.0		107	70-130			
Surrogate: 1-Chlorooctadecane	39.0		"	50.0		78.0	70-130			

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

Project: C-2 Vent Soil Bore  
Project Number: None Given  
Project Manager: Roy Rascon

Fax: (505) 397-1471

Reported:  
07/26/04 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
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**Batch EG42011 - General Preparation (Prep)**

**Blank (EG42011-BLK1)** Prepared & Analyzed: 07/20/04

% Solids 100 %

**Duplicate (EG42011-DUP1)** Source: 4G16012-01 Prepared & Analyzed: 07/20/04

% Solids 99.0 % 98.0 1.02 20

**Batch EG42111 - Water Extraction**

**Blank (EG42111-BLK1)** Prepared: 07/20/04 Analyzed: 07/21/04

Chloride ND 20.0 mg/kg Wet

**Matrix Spike (EG42111-MS1)** Source: 4G20003-01 Prepared: 07/20/04 Analyzed: 07/21/04

Chloride 2200 20.0 mg/kg Wet 500 1720 96.0 80-120

**Matrix Spike Dup (EG42111-MSD1)** Source: 4G20003-01 Prepared: 07/20/04 Analyzed: 07/21/04

Chloride 2210 20.0 mg/kg Wet 500 1720 98.0 80-120 0.454 20

**Reference (EG42111-SRM1)** Prepared: 07/20/04 Analyzed: 07/21/04

Chloride 5000 mg/kg 5000 100 80-120

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

Project: C-2 Vent Soil Bore  
Project Number: None Given  
Project Manager: Roy Rascon

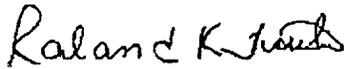
Fax: (505) 397-1471

**Reported:**  
07/26/04 10:20

### Notes and Definitions

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:



Date:

7/26/04

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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# ARDINAL LABORATORIES

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

PHONE (505) 383-2326 • 101 E. MARLAND • HOBBS, NM 88240

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

Receiving Date: 04/27/04  
 Reporting Date: 04/28/04  
 Project Number: NOT GIVEN  
 Project Name: C-2  
 Project Location: B-D

Sampling Date: 04/27/04  
 Sample Type: SOIL  
 Sample Condition: COOL & INTACT  
 Sample Received By: GP  
 Analyzed By: BC/GP

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	04/27/04	04/27/04	04/28/04
H8647-1 4 WALL COMP.	<10.0	<10.0	352
H8647-2 BOTT. COMP. AT 6'	<10.0	13.7	1020
H8647-3 REMD. BACKFILL	<10.0	60.3	496
Quality Control	790	762	1010
True Value QC	1000	1000	1000
% Recovery	98.8	95.3	101
Relative Percent Difference	2.5	6.3	3.0

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

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

*Burgess J. A. Cook*  
 Chemist

*4/28/04*  
 Date

H8647.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



# ARDINAL LABORATORIES, INC.

2111 Beechwood, Athens, TX 79603 101 East Marland, Hobbs, NM 89240  
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: RIPE Operating  
 Project Manager: Kristin Ferris  
 Address: 128 W. Taylor  
 City: Hobbs State: NM Zip: 89240  
 Phone #: (505) 393-9174 Fax #: (505) 397-1471  
 Project #: \_\_\_\_\_ Project Owner: \_\_\_\_\_  
 Project Name: C-2 City: \_\_\_\_\_  
 Project Location: B-D State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Sample Name: K. Ferris Phone #: \_\_\_\_\_  
 For Lab Use Only: \_\_\_\_\_ Fax #: \_\_\_\_\_

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX							DATE	TIME	ANALYSIS REQUEST
				GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV			
A86421	HWALL Comp	C	1			X					4/27/04	11:30	TPH 8015
	-2 Both Comp at 6'	C	1			X					4/27/04	11:37	CI
	-3 Revol Backfill	C	1			X					4/27/04	11:45	

**LABORATORY USE ONLY**  
 This form is to be used by the laboratory to document the chain of custody for samples received for analysis. It is the responsibility of the laboratory to ensure that the chain of custody is maintained from the time of collection to the time of analysis. This form is to be filled out by the laboratory and is not to be filled out by the client. The laboratory is responsible for the accuracy of the information provided on this form. The laboratory is not responsible for the accuracy of the information provided by the client. The laboratory is not responsible for the accuracy of the information provided by the client. The laboratory is not responsible for the accuracy of the information provided by the client.

Requested By: Kristin Ferris Date: 4/27/04 Received By: [Signature]  
 Sample Condition:  Good  Intact  Damaged  
 Checked By: [Signature]  
 Sample ID: 4.30  
 Date: 4/27/04  
 Time: 11:30  
 Project Name: C-2  
 Project Location: B-D  
 Project Manager: Kristin Ferris  
 Phone #: (505) 393-9174  
 Fax #: (505) 397-1471  
 City: Hobbs State: NM Zip: 89240

4/28/2004 12:13  
 Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.



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

PHONE (505) 393-2328 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
 RICE OPERATING CO.  
 ATTN: JOE GATTS  
 122 W. TAYLOR  
 HOBBS, NM 88240  
 FAX TO:

Receiving Date: 04/27/04  
 Reporting Date: 04/28/04  
 Project Number: NOT GIVEN  
 Project Name: C-2  
 Project Location: B-D

Sampling Date: 04/26/04  
 Sample Type: SOIL  
 Sample Condition: COOL & INTACT  
 Sample Received By: BC  
 Analyzed By: BC/GP

LAB NUMBER SAMPLE ID	GRO	DRO	Cl <sup>-</sup>
	(C <sub>6</sub> -C <sub>10</sub> ) (mg/Kg)	(>C <sub>10</sub> -C <sub>28</sub> ) (mg/Kg)	(mg/Kg)
ANALYSIS DATE	04/27/04	04/27/04	04/27/04
H8643-1 20' BGS AT SOURCE	<10.0	<10.0	640
Quality Control	790	762	1010
True Value QC	1000	1000	1000
% Recovery	98.8	95.3	101
Relative Percent Difference	2.5	6.3	3.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl<sup>-</sup>: Std. Methods 4500-Cl<sup>-</sup>B  
 \*Analysis performed on a 1:4 w:v aqueous extract.

*Bryant A. Cook*  
 Chemist

4/28/04  
 Date

H8643.XLS

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**RICE OPERATING COMPANY**

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

SERIAL NO: 104412

CALIBRATION GAS

GAS COMPOSITION: ISOBUTYLENE

100 PPM

AIR

BALANCE

LOT NO: 02-22-30

FILL DATE: 5/20/03

EXP. DATE: 11/20/04

ACCURACY: ±0.2%

METER READING

ACCURACY: 99.8

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
B D	C-2	C	2	22	37

SAMPLE	PID RESULT	SAMPLE	PID RESULT
N. WALL	0		
S. WALL	0		
E. WALL	0		
W. WALL	0		
Both Comp	0		
Revers Back	0		
4 WALL Comp	0		

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

J. Galt  
Signature

4/27/04  
Date