

1R - 426-96

REPORTS

DATE:

8/02/2004

BD Jct. M-16-1

180426-96

FINAL REPORT

**RICE OPERATING COMPANY
JUNCTION BOX FINAL REPORT**

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
BD	M-16-1	M	16	21S	37E	Lea	Length	Width	Depth
							No box--eliminated		

LAND TYPE: BLM _____ STATE X FEE LANDOWNER _____ OTHER _____

Depth to Groundwater 72 feet NMOCD SITE ASSESSMENT RANKING SCORE: 10

Date Started 4/1/2004 Date Completed 7/15/2004 OCD Witness No

Soil Excavated 307 cubic yards Excavation Length 23 Width 30 Depth 12 feet

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

FINAL ANALYTICAL RESULTS: Sample Date 4/15/2004 Sample Depth 12 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
4-WALL COMP.	0.0	<10.0	<10.0	256
BOTTOM @ 12 ft	0.0	<10.0	<10.0	544
REMED. BACKFILL	1.9	<10.0	55.4	496
SOIL BORE 27 ft	0.1	<10.0	<10.0	170

LOCATION	DEPTH (ft)	ppm
Vertical	8	1574
at jct.	9	1676
	10	1306
	11	1156
	12	989
	13	1128
	14	974
	15	1096
Soil Bore	20	350
	25	244
	26	241
	27	144
4-wall comp.	2-10	295
bottom comp.	12	673
remed. backfill	n/a	422

General Description of Remedial Action: This junction box site was delineated using a backhoe while PID field screenings and chloride field tests were conducted at regular intervals. PID readings throughout the 30 x 23 x 12-ft-deep excavation were relatively low and laboratory analysis confirmed TPH concentrations well below NMOCD guidelines.

To 15 ft BGS, a conclusive trend of chloride concentration decline was not observed so on 7/15 a soil bore was initiated to further investigate chloride concerns. The hollow stem auger was advanced to a depth of 27 ft BGS where a conclusive trend of chloride decline was observed, indicating non-saturated vadose conditions (see graph). The excavated soils were blended on site and backfilled into the hole to 6 ft BGS where a 1.5 ft compacted clay barrier was installed to safeguard against further downward migration of chloride. The remaining soils were backfilled on top of the clay and contoured to the surrounding terrain. This junction box has been eliminated. The disturbed surface will be seeded with a blend of native vegetation and will be monitored for growth.

enclosures: chloride graph, photos, lab results, PID screenings, bore log, clay test, diagram

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 8/2/2004 TITLE Project Scientist

BD jct. M-16-1

page 1



old junction box before excavation 4/1/2004



excavation & delineation 8 ft north of junction 4/1/2004



installing & compacting clay liner 5/11/2004

BD jct. M-16-1



testing clay liner

5/12/2004



backfilled location

5/20/2004



soil bore

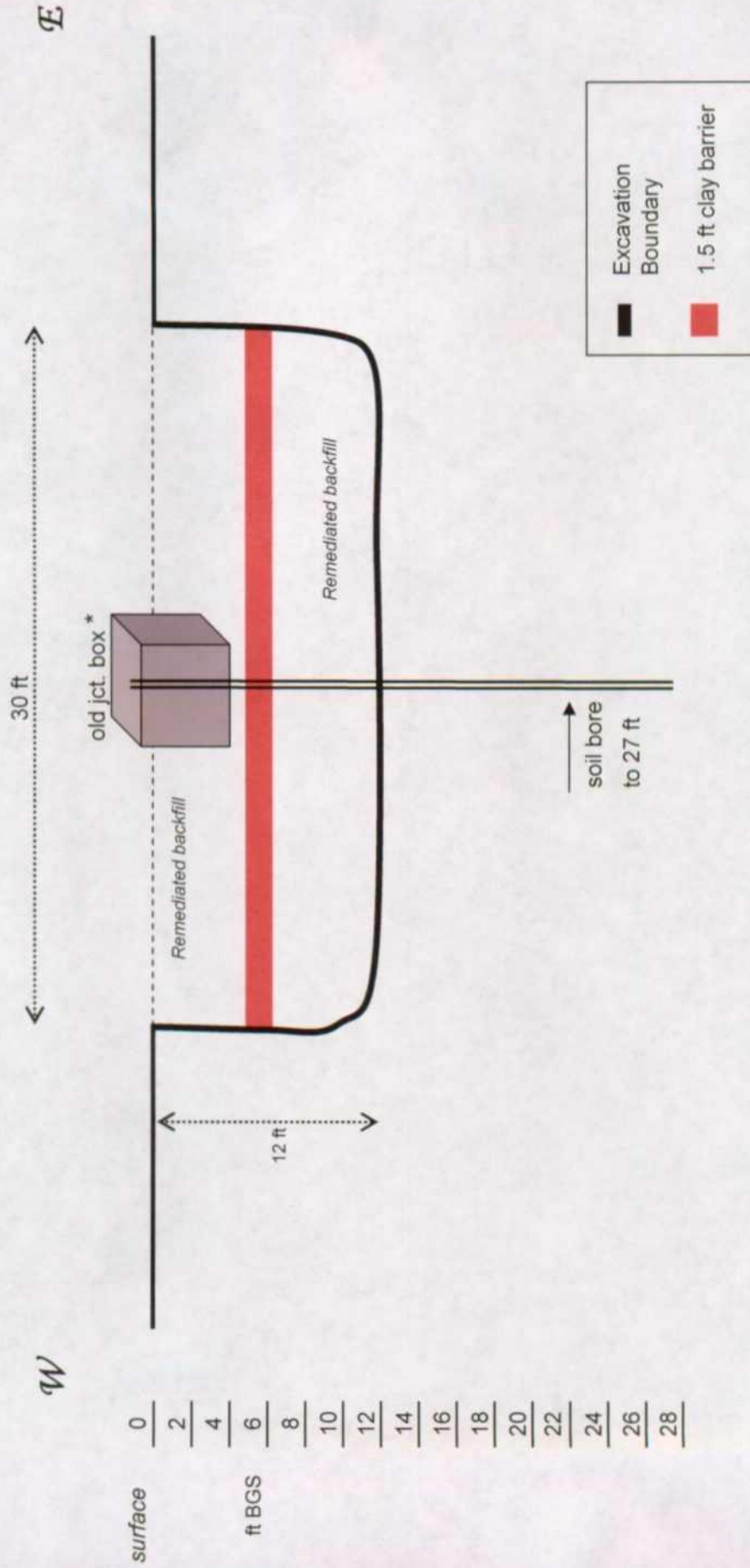
7/15/2004

BD jct. M-16-1

30 x 23 x 12 ft

Excavation Cross-Section

some delineation trenches extended down to 15 ft BGS;
not included in the 12 ft bottom composite sample.



* Junction box has been eliminated

LOG OF SOIL BORE

Kristin Farris Pope
RICE Operating Company

Logger:		Drew Parker; Mort Bates		Client:		RICE Operating Company		Well ID:	
Driller:		Atkins Engineering Associates, Inc.		Project Name:					
Drilling Method:		Hollow Stem Auger		jct. M-16-1					
Start Date:		7/15/2004		Location:					
End Date:		7/15/2004		BD SWD System					
Notes:		8 ft south of former junction box				Sec. 16, T21S, R37E			
		TD = 27 ft Groundwater = 72 ft				Lea County, NM			
Depth (feet)	Split Spoon		Description	Lithology	bore hole	Additional Notes			
	chloride	PID							
0.0									
1.0									
2.0									
3.0									
4.0									
5.0									
6.0									
7.0			0 - 14 ft SILTY SAND w/CALICHE loose, tan & white, dry		remainder of bore hole backfilled with drill cuttings				
8.0									
9.0									
10.0									
11.0									
12.0									
13.0									
14.0									
15.0	391	5.8	14 - 16 ft SILTY SAND w/CALICHE loose, reddish tan & white, dry						
16.0									
17.0									
18.0									
19.0			16 - 22 ft SILTY GRAVELS w/CALICHE SAND MIXTURE loose, tan to white, dry						
20.0	350	1.5							
21.0									
22.0									
23.0									
24.0			22 - 27 ft CALICHE loose, white, dry		bentonite seal ←				
25.0	244	1.0							
26.0	241	0.8							
27.0	144	0.1							
							lab = 170 ppm C		

remainder of bore hole backfilled with drill cuttings

← bentonite seal

lab = 170 ppm Cl⁻

BD jct. M-16-1

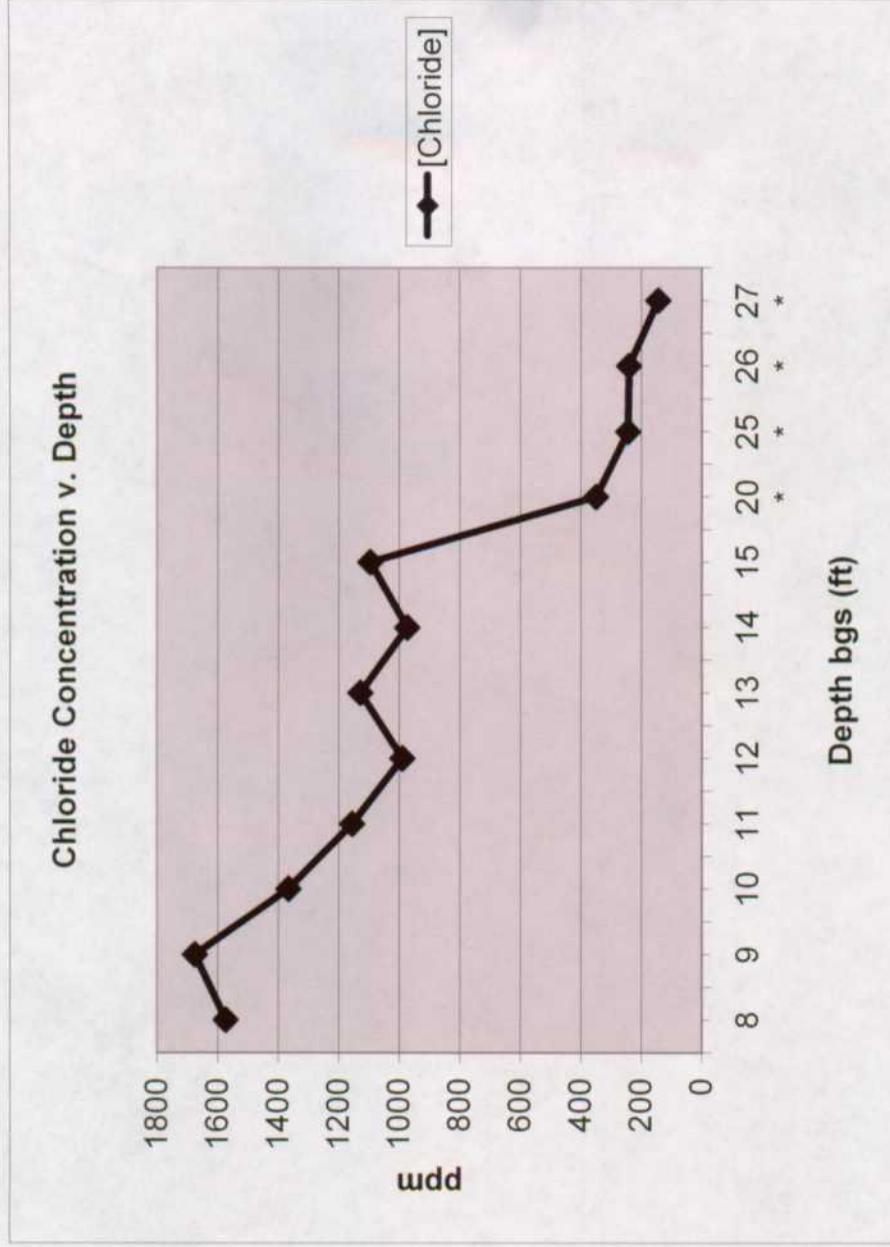
T21S, R37E

Vertical Delineation at Source

Depth bgs (ft)	[Cl ⁻] ppm
8	1574
9	1676
10	1366
11	1156
12	989
13	1128
14	974
15	1096
20 *	350
25 *	244
26 *	241
27 *	144

* Soil bore samples

Groundwater = 71 ft





ARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79803

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

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

Receiving Date: 04/15/04
Reporting Date: 04/19/04
Project Number: NOT GIVEN
Project Name: M-16-1
Project Location: BD

Sampling Date: 04/15/04
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/Kg)	DRO (>C ₁₀ -C ₂₈) (mg/Kg)	CI* (mg/Kg)
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ANALYSIS DATE	04/16/04	04/16/04	04/16/04
H8609-1 4 WALL COMP.	<10.0	<10.0	256
H8609-2 REMD. BACKFILL	<10.0	55.4	496
H8609-3 BOTT. COMP. 12' BGS	<10.0	<10.0	544
Quality Control	793	827	950
True Value QC	800	800	1000
% Recovery	99.2	103	95.0
Relative Percent Difference	4.3	0.4	6.0

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

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

Chemist

Date

H8609.XLS

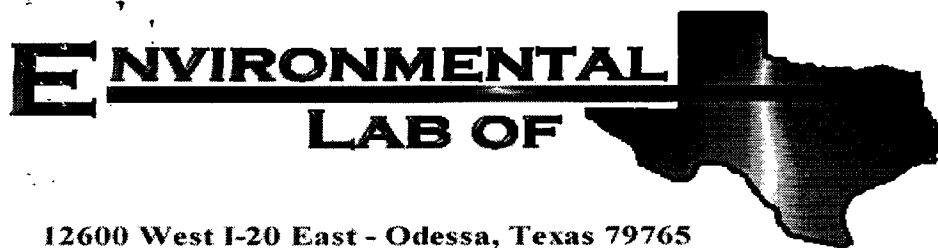
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Page of

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12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

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

Project: M-16-1 Jct Soil Bore
Project Number: None Given
Location: BD

Lab Order Number: 4G20006

Report Date: 07/23/04

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

Project: M-16-1 Jct Soil Bore
Project Number: None Given
Project Manager: Roy Rascon

Fax: (505) 397-1471

Reported:
07/23/04 10:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
8' South Grab @ 27' Bgs	4G20006-01	Soil	07/15/04 14:30	07/20/04 08:00

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

Project: M-16-1 Jct Soil Bore
Project Number: None Given
Project Manager: Roy Rascon

Fax: (505) 397-1471

Reported:
07/23/04 10:16

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
8' South Grab @ 27' Bgs (4G20006-01) Soil									
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		91.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		73.0 %	70-130		"	"	"	"	

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

Project: M-16-1 Jct Soil Bore
Project Number: None Given
Project Manager: Roy Rascon

Fax: (505) 397-1471

Reported:
07/23/04 10:16

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
8' South Grab @ 27' Bgs (4G20006-01) Soil									
Chloride	170	20.0	mg/kg Wet	2	EG42111	07/20/04	07/21/04	SW 846 9253	
% Solids	97.0		%	1	EG42011	07/20/04	07/20/04	% calculation	

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

Project: M-16-1 Jct Soil Bore
Project Number: None Given
Project Manager: Roy Rascon

Fax: (505) 397-1471

Reported:
07/23/04 10:16

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%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: M-16-1 Jct Soil Bore
Project Number: None Given
Project Manager: Roy Rascon

Fax: (505) 397-1471

Reported:
07/23/04 10:16

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	%
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Duplicate (EG42011-DUP1)

Source: 4G16012-01

Prepared & Analyzed: 07/20/04

% Solids	99.0	%	98.0	1.02	20
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Batch EG42111 - Water Extraction

Blank (EG42111-BLK1)

Prepared: 07/20/04 Analyzed: 07/21/04

Chloride	ND	20.0 mg/kg Wet
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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
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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
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Reference (EG42111-SRM1)

Prepared: 07/20/04 Analyzed: 07/21/04

Chloride	5000	mg/kg	5000	100	80-120
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Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: M-16-1 Jct Soil Bore
Project Number: None Given
Project Manager: Roy Rascon

Fax: (505) 397-1471

Reported:
07/23/04 10:16

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:

Raland K Tuttle

Date:

7-23-04

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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12600 West I-20 East
Odessa, Texas 79763

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Ray Rascon

Company Name RICE Operating

Company Address: 122 W. Taylor

City/State/Zip: Hobbs, NM 88240

Fax No: (505) 397-1471

[Signature]

[illegible]

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: + or - 2%

METER READING

ACCURACY: 99.8

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
BD	M-16-1	M.	16	21	37

SAMPLE	PID RESULT	SAMPLE	PID RESULT
N. WALL	0		
S. WALL	0		
E. WALL	0		
W. WALL	0		
Bot. Comp	0		
4 WALL Comp	0		
Rend Backfill	1.9		

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


Signature

4/15/04
Date



LABORATORY TEST REPORT
PETTIGREW & ASSOCIATES, P.A.
1110 N. GRIMES
HOBBS, NM 88240
(505) 393-9827



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

To: Rice Operating
Attn: Carolyn Haynes
122 W. Taylor
Hobbs, NM 88240

Material: Red Clay

Test Method: ASTM: D 2922

Project: BD M - 16-1

Date of Test: May 12, 2004

Depth: Finished Subgrade

Test No.	Location	Dry Density % Maximum	% Moisture	Depth
SG-1	Pit - 15' E. & 10' S. of the NW Corner	102.7	16.7	

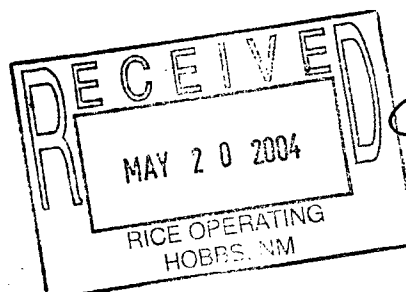
Control Density: 109.5
ASTM: D 698

Optimum Moisture: 16.6%

Required Compaction: 95%

Lab No.: 04 6424-6425

Copies To: Rice



PETTIGREW & ASSOCIATES

BY Don Ray S.E.T.