1R - 426-93

REPORTS

DATE:

3/23/2005

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	L-25	L	25	21S	37E	Lea	eliminated--no box		

LAND TYPE: BLM _____ STATE _____ FEE LANDOWNER Mark Owen Estate OTHER _____

Depth to Groundwater 37 feet NMOCD SITE ASSESSMENT RANKING SCORE: 20

Date Started 5/28/2004 Date Completed 6/9/2004 NMOCD Witness no

Soil Excavated 89 cubic yards Excavation Length 20 Width 20 Depth 6 feet

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

FINAL ANALYTICAL RESULTS:

Sample Date 6/2/2004 **Sample Depth** 6 ft

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

Sample Location	PID ppm	GRO mg/kg	DRO mg/kg	Chloride mg/kg
4-WALL COMP.	PID screenings were not performed on these samples	<10.0	<10.0	2320
BOTTOM COMP.		<10.0	19.4	2080

CHLORIDE FIELD TESTS

LOCATION	DEPTH (ft)	ppm
vertical at junction box	7	2441
	8	2136
	9	2389
	10	1673
	11	1104
	12	1286
	13	1260
	14	421
	15	528
10 ft SOUTH of junction	6	233
	8	167
	10	182
	12	328
10 ft NORTH of junction	6	1181
	8	1588
	10	660
	12	769
4-wall comp.	n/a	2249
bottom comp.	6	1730
backfill 3-6 ft	n/a	2298
final backfill	surface	921
	3	1401

General Description of Remedial Action:

This junction box was located approx. 12 ft east of an active lease road. The junction was removed and re-plumbed straight through with a new 3-inch poly pipeline. The site was delineated using a backhoe while PID field screenings and chloride field tests were conducted at regular intervals. Chloride concentrations exhibited significant trends of decline with depth (see graph), indicative of non-saturated vadose conditions. PID levels remained relatively low throughout the excavation and concentrations only exceeded 100 ppm at 7-9 ft BGS directly below the junction box. A 20 x 20 x 6-ft-deep excavation was created during the delineation activities with some trenches extended to down to 15 ft BGS (see diagram). Composite samples were collected for lab analysis. NMOCD TPH guidelines were met. At the bottom of the excavation at 6 ft BGS, a 1-ft-thick compacted clay barrier was installed to inhibit further downward migration of chloride. The remaining spoils were blended on site and backfilled into the excavation on top of the clay. The soil was contoured to the surrounding surface and the disturbed surface will be seeded with a blend of native vegetation and is expected to return to productive capacity at a normal rate. Although the extent of lateral chloride impact was not contained within the 20 x 20 ft area, the established vegetation at the excavation perimeter acts as a hindrance to vertical migration of remaining chloride due to effect of evapo-transpiration. Although the junction was eliminated, a metal identification plate has been placed on the surface at the former box location to mark the presence of a clay barrier below at 6 ft.

enclosures: chloride graph, photos, lab results, PID field screenings, clay test, cross-section, 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 not available COMPANY RICE Operating Company

REPORT ASSEMBLED BY Kristin Farris Pope SIGNATURE Kristin Farris Pope

DATE 3/23/2005 TITLE Project Scientist

BD jct. L-25

unit 'L', sec. 25, T21S, R37E

undisturbed junction box (looking NW) 4/28/2003

box site after NORM decon. (looking North) 5/8/2003

delineation & excavation May 2004

testing compacted clay at 6 ft BGS 6/9/2004

backfilling excavation 6/9/2004

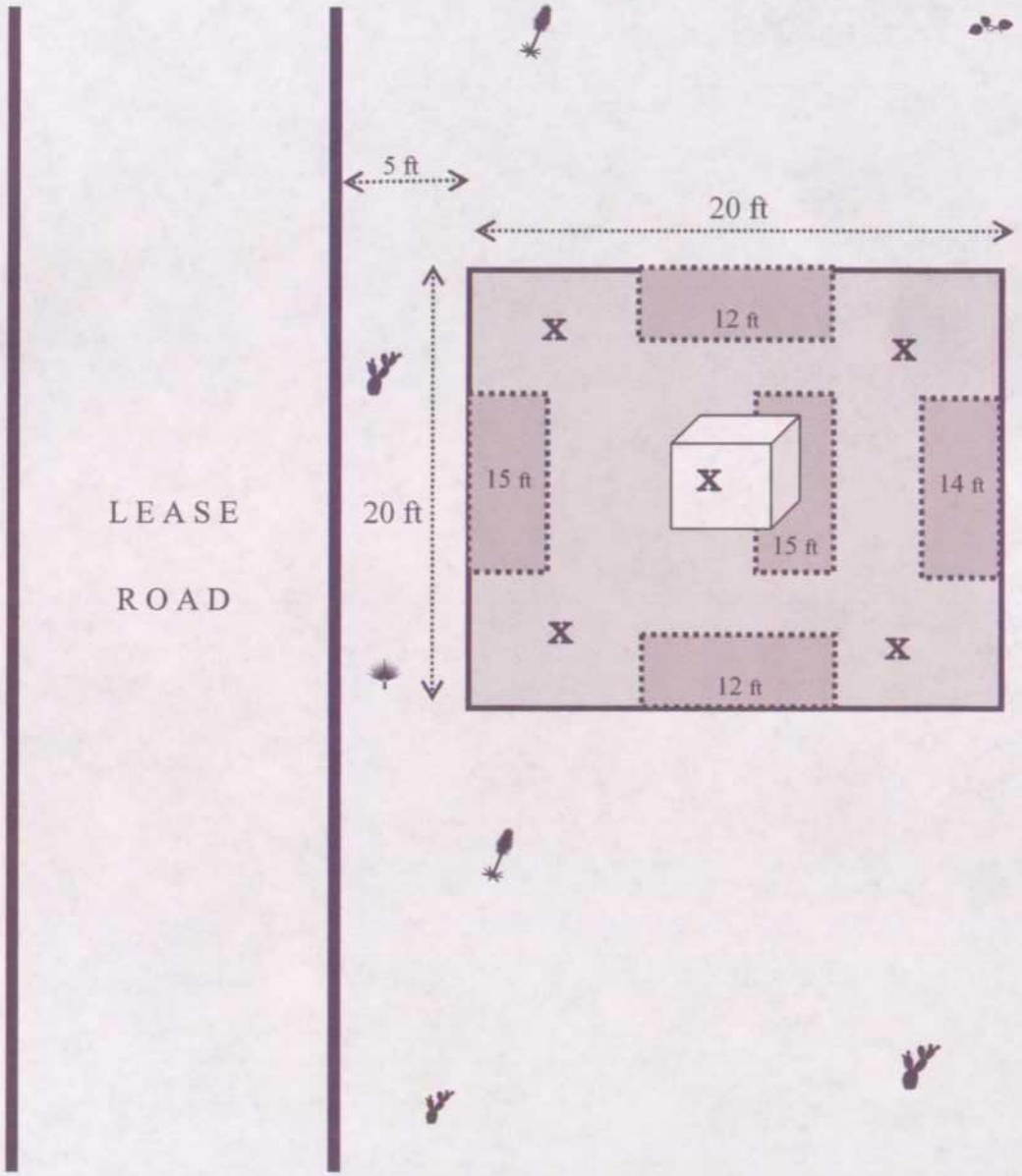
backfilled; clay identification plate on surface at former junction box site 2/15/2005

BD jct. L-25

Delineation Excavation

20 x 20 x 6-ft-deep

Plan View



= 2 x 2 ft

N

= former junction box

= Excavation 6 ft deep (lined with clay)

= Delineation trenches showing depth

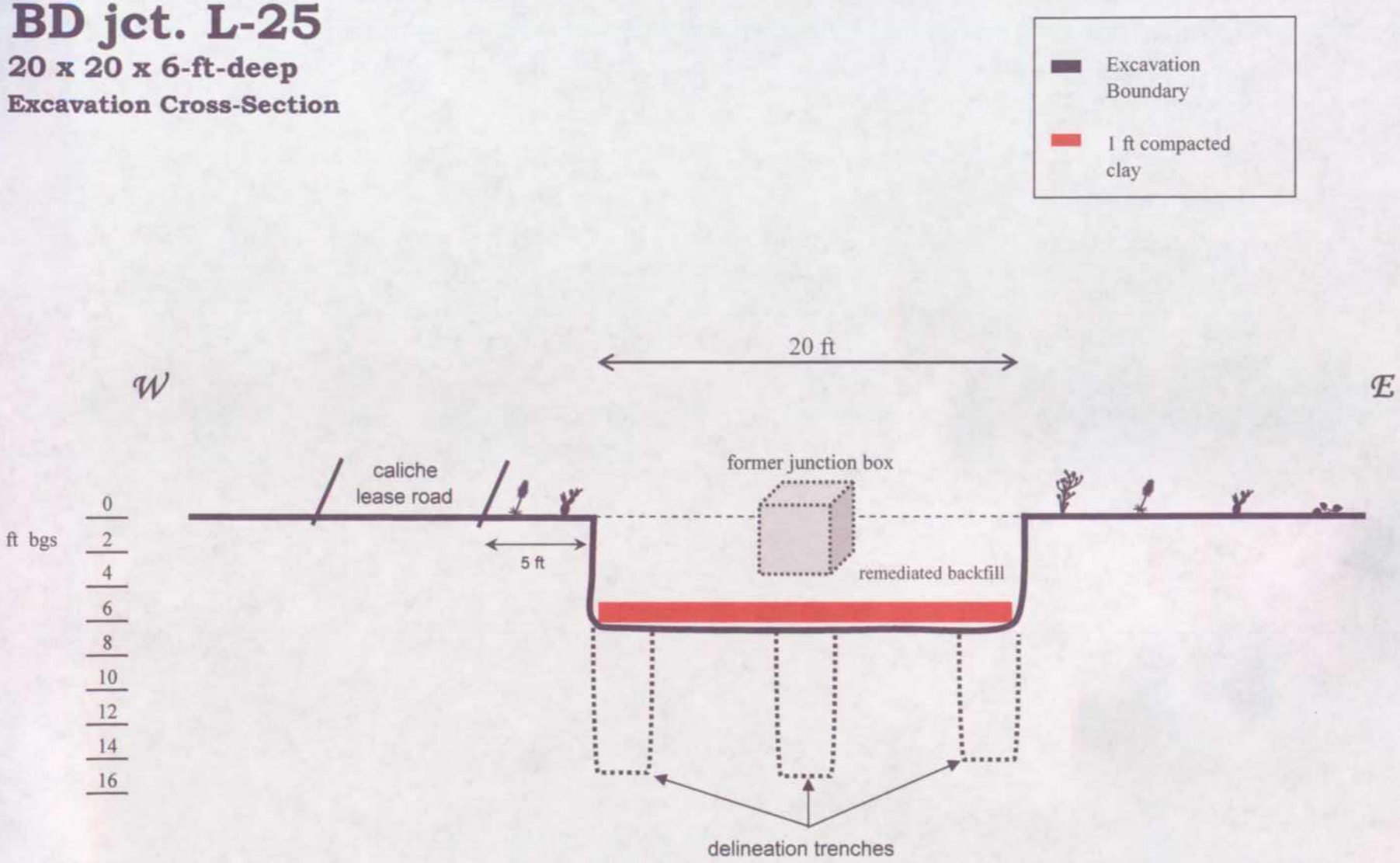
X = Sample component of bottom composite

= Established vegetation

BD jct. L-25

20 x 20 x 6-ft-deep

Excavation Cross-Section



BD jct. L-25

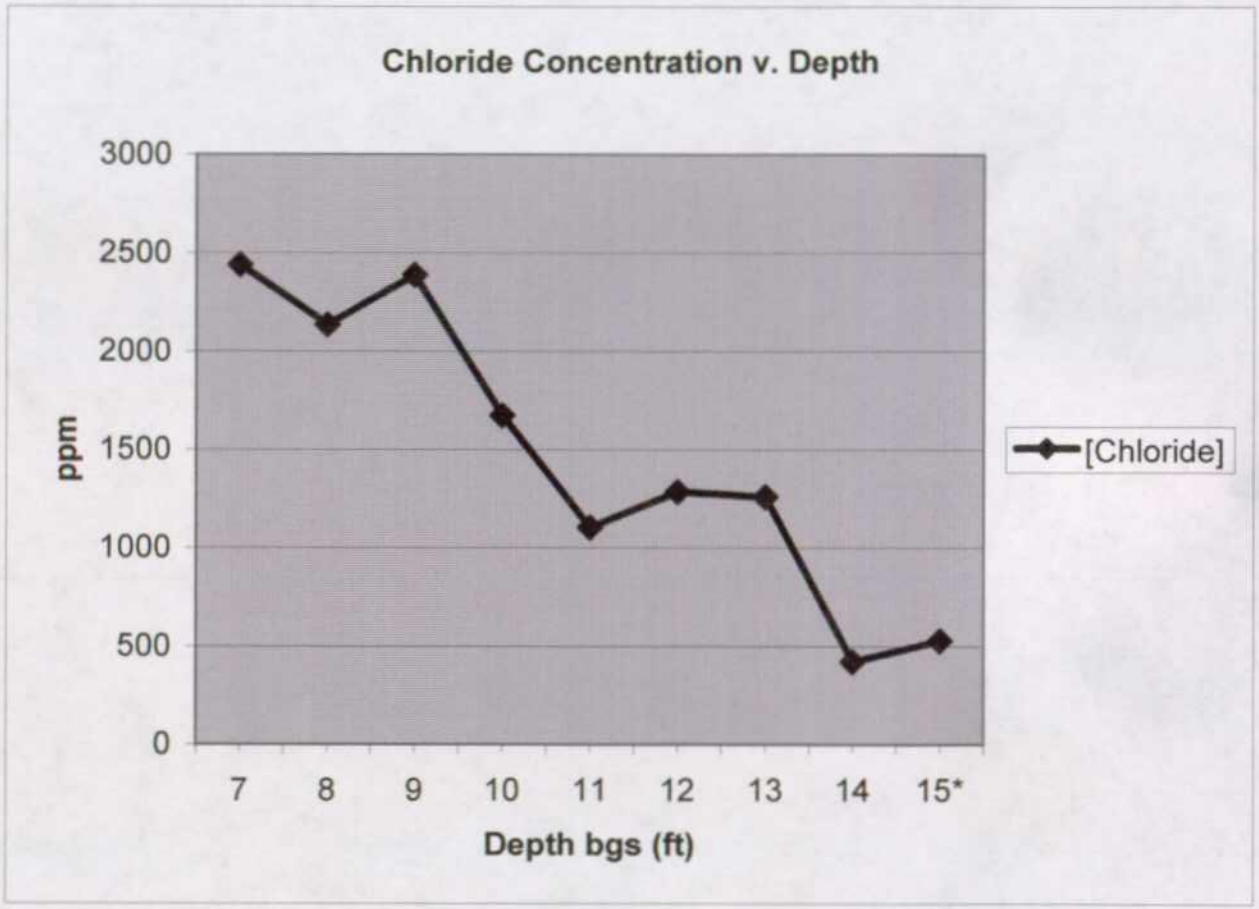
unit 'L', sec. 25, T21S, R37E

Vertical Delineation at Source (junction)

Depth bgs (ft)	[Cl⁻] ppm
7	2441
8	2136
9	2389
10	1673
11	1104
12	1286
13	1260
14	421
15*	528

* lab analysis

Groundwater = 37 ft



CARDINAL 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:

Receiving Date: 06/03/04
Reporting Date: 06/03/04
Project Number: NOT GIVEN
Project Name: L-25
Project Location: BD

Sampling Date: 06/02/04
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		06/03/04	06/03/04	06/03/04
H8776-1	BOTT. COMP. @ 6' BGS	<10.0	19.4	2080
H8776-2	4 WALL COMP.	<10.0	<10.0	2320
H8776-3	REMD. BACKFILL	<10.0	24.4	2240
H8776-4	SOURCE @ 15' BGS	<10.0	<10.0	528
Quality Control		781	785	950
True Value QC		800	800	1000
% Recovery		97.6	98.1	95.0
Relative Percent Difference		2.3	6.5	6.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl^-: Std. Methods 4500-Cl^-B
*Analyses performed on 1:4 w:v aqueous extracts.

Chemist

6/3/04
Date

H8776.XLS

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

Page ____ of ____

Company Name: Rice Operating	BILL TO
Project Manager: J. Batts	P.O. #:
Address: 122 W. Taylor	Company:
City: Hobbs State: NM Zip: 88240	Attn:
Phone #: 393-9174 Fax #:	Address:
Project #: Project Owner:	City:
Project Name: L-25	State: Zip:
Project Location: BD	Phone #:
Sampler Name: J. Batts	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	ANALYSIS REQUEST: TPH 8015	Cl.
H87764-1	Batt. Comp at 6' bgs	C	1			X							6/2/04	10:15	X	X
-2	4 WALL Comp	C	1			X							6/2/04	10:25	X	X
-3	REMD BACKfill	C	1			X							6/2/04	10:35	X	X
-4	Source at 15' bgs	G	1			X							6/1/04	11:00	X	X

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 the client for the 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 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.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	Date:	Received By:	Phone Result: ☐ Yes ☐ No
	Time:		Fax Result: ☐ Yes ☐ No
Relinquished By: J. Batts	Date: 6/3/04	Received By: (Lab Staff) Brenda Cook	REMARKS:
	Time: 8:40		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Temp. °C: cool; Intact? ☒ Yes ☐ No	Checked By: (Initials)	

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

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: 100.1

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
BD	L-25	L	25	21	37

SAMPLE	PID RESULT	SAMPLE	PID RESULT
Source 6'	57		
Source 7'	252		
Source 8'	240		
Source 9'	171		
Source 10'	72		
Source 11'	0		
Source 12'	0		

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

J Sott
Signature

5/28/04
Date

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: 100.1

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
BD	2-25	L	25	21	37

SAMPLE	PID RESULT	SAMPLE	PID RESULT
Source 13'	.1	10'East 4'	1.8
Source 14'	.1	10'East 6'	6.8
Source 15'	.1	10'East 8'	2.1
10'West 2'	2.2	10'East 10'	.1
10'West 4'	1.8	10'East 12'	.2
10'West 6'	1.4	10'East 13'	.1
10'West 8'	1.8	10'East 14'	.1
10'West 10'	1.4	10'South 6'	1.8
10'West 12'	.1	10'South 8'	1.8
10'West 13'	.1	10'South 10'	2.1
10'West 14'	.2	10'South 12'	.1
10'West 15'	.2	10'North 6'	2.1
10'East 2'	2.1	10'North 8'	36.1

10'North .1
10'North 1.2 1.8

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

J. Ratt
Signature

6/2/04
Date

LABORATORY TEST REPORT

PETTIGREW & ASSOCIATES, P.A.

1110 N. GRIMES
HOBBS, NM 88240
(505) 393-9827

AASHTO R18

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

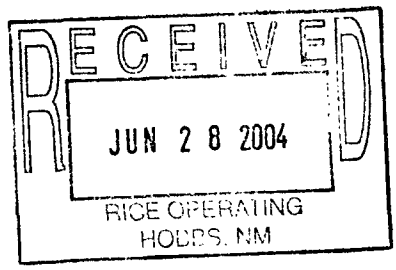
Test Method: ASTM: D 2922

Project: BD L-25

Date of Test: June 9, 2004

Depth: Finished Subgrade

Test No.	Location	Dry Density % Maximum	% Moisture	Depth
SG-1	Pit - 5' N. & 10' E. of the SW Corner	103.9	15.6	



Control Density: 109.5
ASTM: D 698

Optimum Moisture: 16.6%

Required Compaction: 95%

Lab No.: 04 6982-6983

Copies To: Rice

PETTIGREW & ASSOCIATES

BY: S.E.T.