

1R - 426-281

REPORTS

DATE:

1-29-11

1R426-281

BD B-23 EOL

2010

APR 14 2011
APR - 1 2011
San Bernardino Division
1220 S. St. Francis Drive
San Bernardino, CA 92415

DISCLOSURE

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

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
Blinebry-Drinkard (BD)	B-23 EOL	B	23	22S	37E	Lea	Length 8'	Width 6'	Depth 4'
							eliminated		

LAND TYPE: BLM _____ STATE _____ FEE LANDOWNER Walco Ranch, LLC OTHER _____

Depth to Groundwater 59 feet NMOCD SITE ASSESSMENT RANKING SCORE: 40*

Date Started 2/1/2010 Date Completed 3/1/2010 OCD Witness no

Soil Excavated 111.1 cubic yards Excavation Length 25 Width 10 Depth 12 feet

Soil Disposed 108 cubic yards Offsite Facility Sundance Location Eunice, NM

FINAL ANALYTICAL RESULTS: Sample Date 2/8/2010 Sample Depth 12'

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.

Sample Location	PID (field) ppm	GRO mg/kg	DRO mg/kg	Chlorides mg/kg
4-WALL COMP.	0.0	<10.0	<10.0	3,320
BOTTOM COMP.	0.1	<10.0	<10.0	9,520
BACKFILL COMP.	0.0	<10.0	<10.0	4,560

CHLORIDE FIELD TESTS

LOCATION	DEPTH	mg/kg
4-wall comp.	n/a	2,356
bottom comp.	12'	5886
backfill comp.	n/a	4,294
vertical delineation trench at 5 ft south of the junction (source)	2'	2,332
	4'	1,783
	6'	4,457
	8'	2,775
	10'	5,216
	12'	9,297

General Description of Remedial Action: This junction and line were eliminated during the pipeline replacement/upgrade program. After the former box was removed, an investigation was conducted using a backhoe to collect soil samples at regular intervals producing a 25x10x12-ft deep excavation. Chloride field tests were performed on each sample which did not relent with depth. Organic vapors were measured using a PID, which yielded relatively low concentrations. The excavated soil was blended on site and representative composite samples were collected from the blended backfill, the bottom of the excavation, and the excavation walls. The representative samples were sent to a commercial laboratory for analysis of chloride and TPH. The blended backfill was returned to the excavation to 5 ft below ground surface (bgs). At 5-4 ft. BGS, a 1-ft. thick clay layer was installed and compaction test performed on 3/1/2010. The remaining blended backfill was hauled to a NMOCD approved facility and the remaining excavation was backfilled with clean imported soil to ground surface and contoured to the surrounding area. An identification plate was placed on the surface of the former junction box site to mark the presence of clay below. On 3/25/2010, site was seeded with a blend of native vegetation and is expected to return to a productive capacity at a normal rate. NMOCD was notified of potential groundwater impact on 8/04/2010.

* inactive windmill, housing 614 ft. east

ADDITIONAL EVALUATION IS HIGH PRIORITY

enclosures: photos, lab reports, PID (field) screenings, cross-section, compaction test, hydraulic conductivity, proctor, chloride curve

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

SITE SUPERVISOR Robert Eagans SIGNATURE *Robert Eagans* COMPANY RICE OPERATING COMPANY

REPORT ASSEMBLED BY Larry Bruce Baker Jr. INITIAL LB

PROJECT LEADER Larry Bruce Baker Jr. SIGNATURE *Larry Bruce Baker Jr.* DATE 1-29-11
 *This site is a "DISCLOSURE." It will be placed on a prioritized list of similar sites for further consideration.

BD B-23 EOL

Unit B, Section 23, T22S, R37E



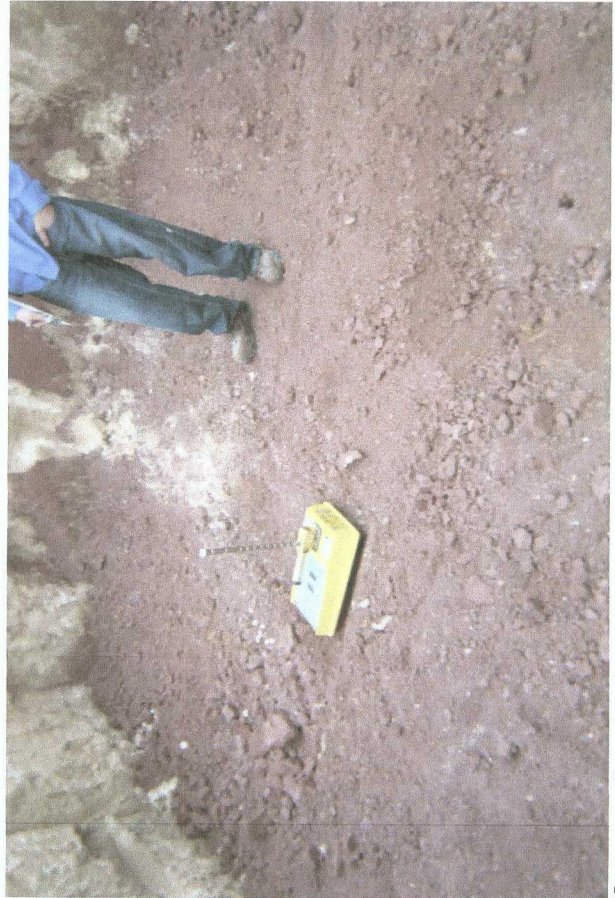
Site prior to excavation

1/27/2010



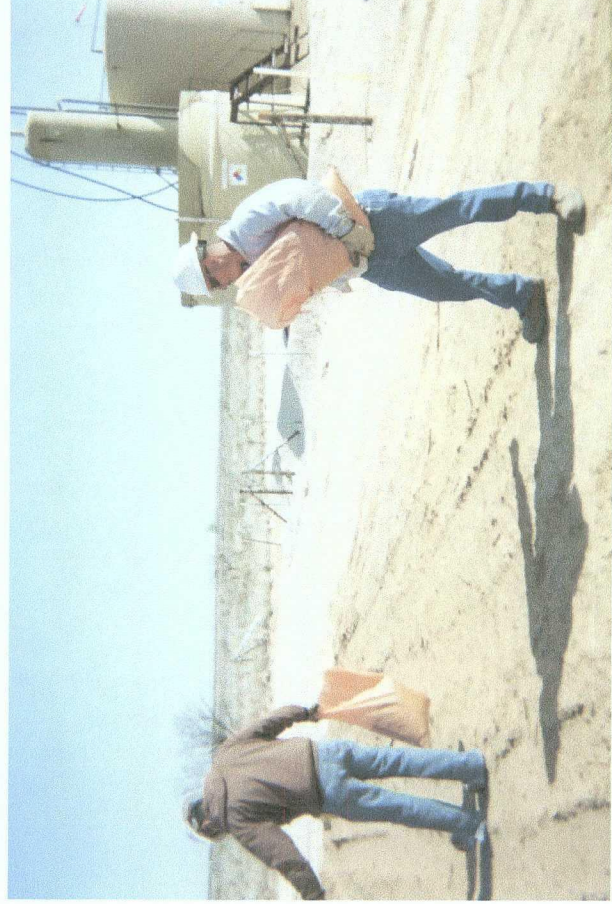
Samples being taken

2/1/2010



Compaction test

3/1/2010



Seeding Site

3/25/2010



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: BRUCE BAKER
122 W. TAYLOR
HOBBS, NM 88240

Receiving Date: 02/08/10
Reporting Date: 02/11/10
Project Number: NOT GIVEN
Project Name: BD JCT. B-23 EOL
Project Location: NOT GIVEN

Sampling Date: 02/08/10
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: JH
Analyzed By: AB/HM

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)	DRO (>C ₁₀ -C ₂₈) (mg/kg)	Cl* (mg/kg)
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ANALYSIS DATE	02/11/10	02/11/10	02/09/10
H19230-1 5 PT BOTTOM COMP @ 12'	<10.0	<10.0	9,520
H19230-2 4-WALL COMP.	<10.0	<10.0	3,320
H19230-3 BLENDED BACKFILL	<10.0	<10.0	4,560
Quality Control	526	510	510
True Value QC	500	500	500
% Recovery	105	102	102
Relative Percent Difference	1.0	3.3	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.

Reported on wet weight.

COPY

Chemist

Date

H19230 TCL RICE

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
 (505) 393-2328 FAX (505) 393-2476 (325) 873-7001 FAX (325) 873-7020

Company Name: Rice Operating Company
Project Manager: Bruce Baker
Address: 122 W. Taylor
City: Hobbs **State:** NM **Zip:** 88240
Phone #: 576-393-9174 **Fax #:** 576-393-1471
Project #:
Project Name: BD Jct. 6-23 EOL
Project Location:
Sampler Name: Robert Egans

Lab I.D.	Sample I.D.	MATRIX				PRESERV		SAMPLING		DATE	TIME
		GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER:		
H19230-1	5PT Bottom Campe 12'	✓	✓	✓	✓	✓	✓	✓	✓	2-8-10	9:35am
-2	4-Wall Comp	✓	✓	✓	✓	✓	✓	✓	✓	2-8-10	10:10am
-3	Blended backfill	✓	✓	✓	✓	✓	✓	✓	✓	2-8-10	10:30am

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Relinquished By: Robert Egans **Date:** 2-8-10 **Time:** 4:35
Relinquished By: Jodi Benson **Date:** 2-8-10 **Time:** 4:35
Delivered By: (Circle One) **Sampler - UPS - Bus - Other:**
Sample Condition: Cool ☒ Intact ☐ Yes ☐ No ☐
Checked By: Jodi Benson (Initials) JH
REMARKS: F-Mail Results To:
 J Purvis @ Rice.swo.com
 B Baker " " " " "
 R Egans " " " " "

† Cardinal cannot accept verbal changes. Please fax written changes to 805-393-2476

#126

RICE OPERATING COMPANY

122 West Taylor Hobbs, NM 88240
 PHONE: (575) 393-9174 FAX: (575) 397-1471
 PID METER CALIBRATION & FIELD REPORT FORM

Check Model Number:

✓

Model: PGM 7300 Serial No: 590-000183
 Model: PGM 7300 Serial No: 590-000508
 Model: PGM 7300 Serial No: 590-000504

Model: PGM 7600 Serial No: 110-023920
 Model: PGM 7600 Serial No: 110-013744
 Model: PGM 7600 Serial No: 110-013676

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT NO: 925621	EXPIRATION DATE: 9-27-2012
FILL DATE: 9-28-09	METER READING ACCURACY: 100ppm

ACCURACY : +/- 2%

SYSTEM	JUNCTION	UNIT	SECTION	TOWN SHIP	RANGE
BD	B-23 FOL	B	23	22	37

SAMPLE ID	PID	SAMPLE ID	PID
Bottom Spt Comp	0.1		
Blended Backfill	0		
4-Wall Composite	0		

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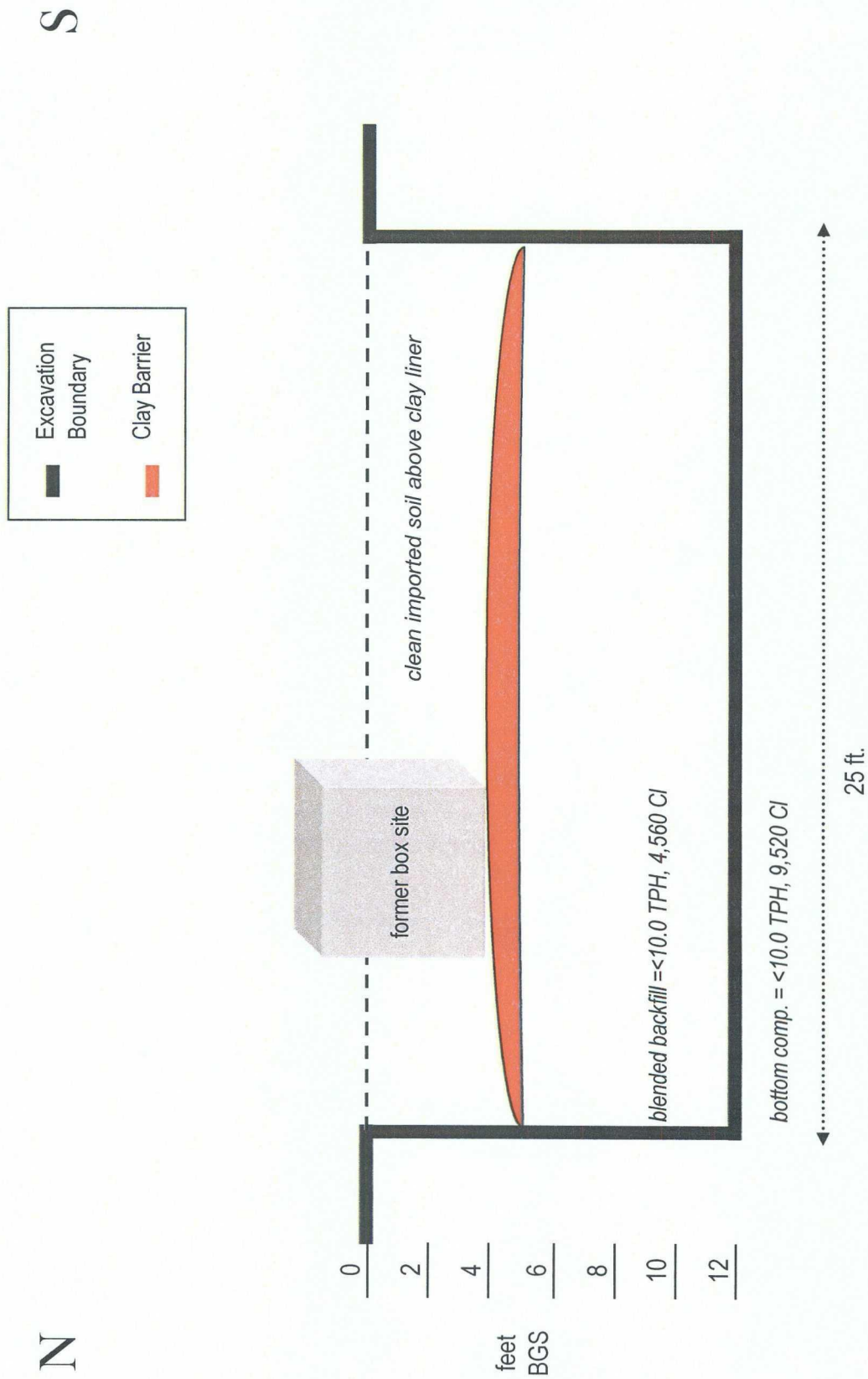
I verify that I have calibrated the above instrument in accordance to the manufacture operation manual.

SIGNATURE: Robert Young

DATE: 2-8-2010

BD B-23 EOL
Unit 'B', Sec. 23, T22S, R37E

Excavation Cross-Section





LABORATORY TEST REPORT
PETTIGREW & ASSOCIATES, P.A.
1110 N. GRIMES
HOBBS, NM 88240
(575) 393-9827



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

To: Rice Operating Company
122 W. Taylor
Hobbs, NM 88240

Material: Wallach Red Clay

Project: BD B-23 EOL 22/37
Project No. 2010.1061

Test Method: ASTM: D 2922

Date of Test: March 1, 2010

Depth: See Below

Depth of Probe: 12"

Test No.	Location	*Dry Density % Max	% Moisture	Depth
SG 1	Pit - 5' W. & 10' S. of NE Corner	91.6	15.2	FSG

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Control Density: 102.3
ASTM: D 698

Optimum Moisture: 20.3%

Required Compaction: 90-95%

Densometer ID: 815

Lab No.: 10 2230

PETTIGREW & ASSOCIATES

Copies To: Rice Operating

BY: Erica M. Hart

BY: G. J. [Signature] P.E.



ETTL Engineers & Consultants Inc.

GEOTECHNICAL * MATERIALS * ENVIRONMENTAL * DRILLING * LANDFILLS

HYDRAULIC CONDUCTIVITY DETERMINATION FLEXIBLE WALL PERMEAMETER - CONSTANT VOLUME (Mercury Permeometer Test)

Project : Pettigrew & Associates, P.A., Hobbs, NM - Project #2010.1028 Report No: 1-1201-000003
Date: 2/5/2010 Panel Number : P 3 ; ASTM D 5084
Project No. : C 4635-101 Permeometer Data
Boring No.: sp = 0.031418 cm² Set Mercury to Direct Read at Equilibrium 1.8 cm³
Sample: 8540 aa = 0.767120 cm² Pipet Rp 6.7 cm³
Depth (ft): M1 = 0.030180 C = 0.000434704 Annulus Ra 1.5 cm³
Other Location: Wallach Plant Eunice M2 = 1.040953 T = 0.203790528
Material Description : Red Clay (Your Sample No 10 1422-1424) Compacted D 698 at 95% of your M/D curve (wet side)

SAMPLE DATA

Wet Wt. sample + ring or tare :	581.37 g		
Tare or ring Wt. :	0.0 g		
Wet Wt. of Sample :	581.37 g	Before Test	After Test
Diameter : 2.77 in	7.06 cm ²	Tare No.: T 5	Tare No.: T 3
Length : 2.79 in	7.08 cm	Wet Wt.+tare: 731.90	Wet Wt.+tare: 800.61
Area: 6.04 in ²	38.99 cm ²	Dry Wt.+tare: 641.75	Dry Wt.+tare: 680.35
Volume : 18.84 in ³	276.92 cm ³	Tare Wt: 218.78	Tare Wt: 220.69
Unit Wt.(wet): 128.95 pcf	2.03 g/cm ³	Dry Wt.: 422.97	Dry Wt.: 469.68
Unit Wt.(dry): 104.65 pcf	1.68 g/cm ³	Water Wt.: 90.15	Water Wt.: 110.16
		% moist.: 21.3	% moist.: 23.5

Specific Gravity: 2.77 Max Dry Density(pcf) = 104.6948 OMC = 21.3135683
% of max = 100.0 +/- OMC = 0.00
Calculated % saturation: 99.58 Void ratio (e) = 0.65 Porosity (n) = 0.39

TEST READINGS

Z1(Mercury Height Difference @ t1): 5.1 cm Hydraulic Gradient = 9.10

Date	elapsed t (seconds)	Z (inches)	ΔZ _r (cm)	temp (deg C)	α (temp corr)	k (cm/sec)	k (ft./day)	Reset = *
2/5/2010	4740	6	0.656997	25	0.889	1.17E-08	3.32E-05	
2/5/2010	5940	5.9	0.756997	25	0.889	1.09E-08	3.09E-05	
2/5/2010	6900	5.8	0.856997	25	0.889	1.08E-08	3.05E-05	
2/5/2010	7800	5.7	0.956997	25	0.889	1.08E-08	3.05E-05	

SUMMARY

ka = 1.10E-08 cm/sec	Acceptance criteria = 25 %
kl	V _m
k1 = 1.17E-08 cm/sec	8.3 %
k2 = 1.09E-08 cm/sec	1.2 %
k3 = 1.08E-08 cm/sec	2.5 %
k4 = 1.08E-08 cm/sec	2.5 %

V_m = $\frac{|k_a - k_l|}{k_a} \times 100$

Hydraulic conductivity	k = 1.10E-08 cm/sec	3.13E-05 ft/day
Void Ratio	e = 0.65	
Porosity	n = 0.39	
Bulk Density	γ = 2.03 g/cm ³	127.0 pcf
Water Content	W = 0.36 cm ³ /cm ³	(at 20 deg C)
Intrinsic Permeability	k _{int} = 1.13E-13 cm ²	(at 20 deg C)

Liquid Limit LL	
Plastic Limit PL	
Plasticity Index PI	
- 200 Sieve	%
+ No 40 Sieve	%
+ No 4 Sieve	%

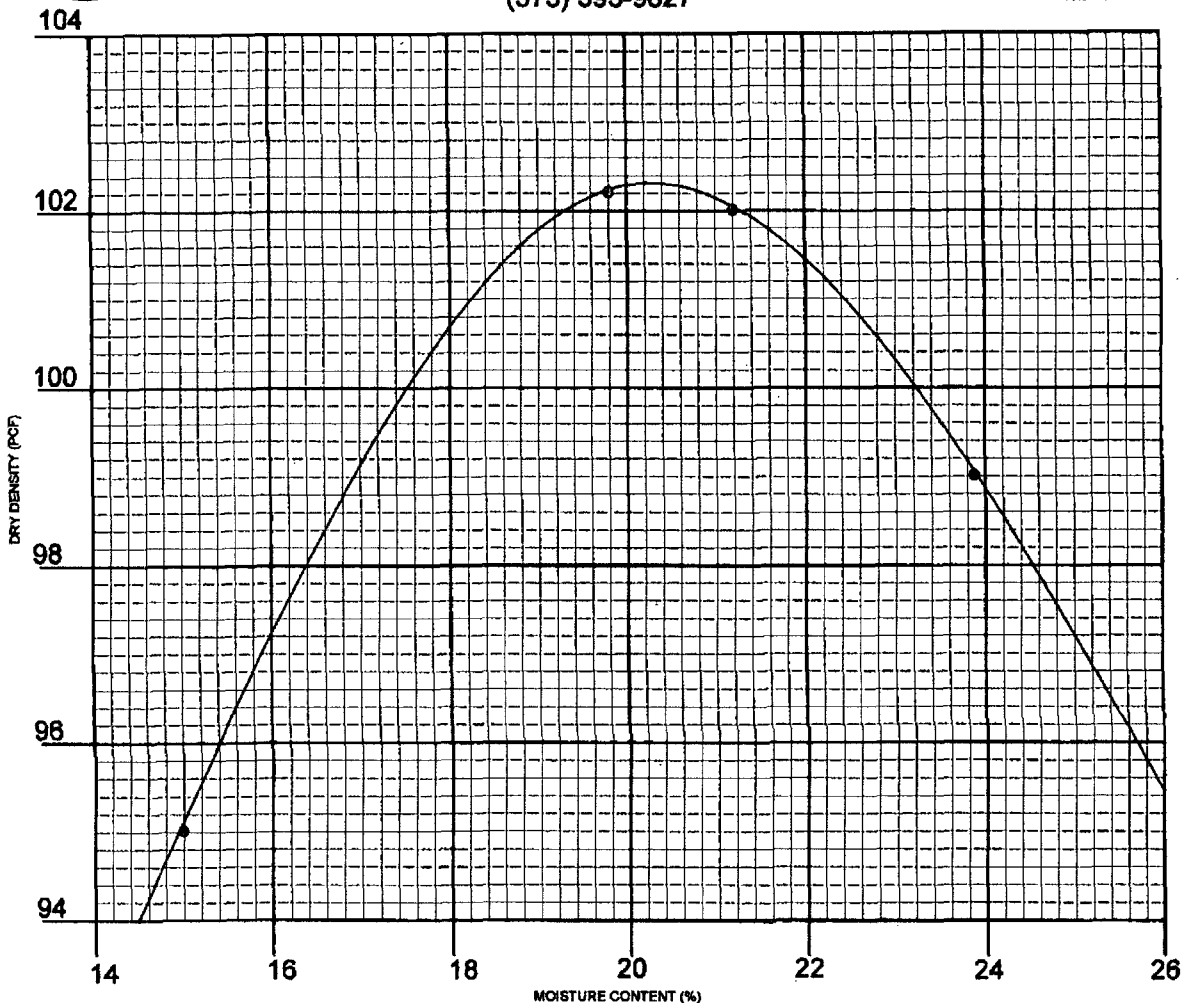
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*Corrected Copy 2/17/10
PETTIGREW & ASSOCIATES, P.A.
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HOBBS, NM 88240
(575) 393-9827



General Information

CLIENT: Rice Operating PROJECT: Project No. 2010.1026
SAMPLE LOCATION: Eunice Wallach Plant
SOIL DESCRIPTION: Wallach Red Clay
SOIL CLASSIFICATION: _____ TEST METHOD: ASTM: D 698
ATTERBERG: LL _____ PI _____ Sampled & Delivered 2/8/10
DATE: 2/12/10 LAB NO. 10 1422-1424

DRY WEIGHT LB/CU. FT. 102.3 MOISTURE CONTENT % 20.3

SIEVE ANALYSIS - % PASSING									

PETTIGREW & ASSOCIATES

BY: Erica M. Hart

COPIES: Rice Operating

BY: C. J. [Signature] P.E.

BD Jct. B-23 EOL

Unit 'B', Sec. 23, T22S, R37E

Backhoe samples at 5 ft. south of junction (source)

Depth bgs (ft)	[Cl ⁻] ppm
2	2332
4	1783
6	4457
8	2775
10	5216
12	9297

Groundwater = 59 ft

