

1R - 426-286

REPORTS

DATE:

3-18-11

1R426-286

BD Jct. G-23

2010

DISCLOSURE

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

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
Blinebry-Drinkard (BD)	Jct. G-23	G	23	22S	37E	Lea	Length 5'	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: 20

Date Started 1/29/2010 Date Completed 3/12/2010 OCD Witness no

Soil Excavated 400.0 cubic yards Excavation Length 30 Width 30 Depth 12 feet

Soil Disposed 156 cubic yards Offsite Facility Sundance Location Eunice, NM

FINAL ANALYTICAL RESULTS: Sample Date 2/17/2010, 3/01/2010 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.

Sample Location	PID (field) ppm	GRO mg/kg	DRO mg/kg	Chlorides mg/kg
4-WALL COMP.	3.1	<10.0	<10.0	432
BOTTOM COMP.	4.7	<10.0	<10.0	1,790
BACKFILL COMP.	1.8	<10.0	<10.0	672
BLENDED BACKFILL WITH IMPORTED SOIL	N/A	N/A	N/A	480

CHLORIDE FIELD TESTS

LOCATION	DEPTH	mg/kg
4-wall comp.	n/a	750
bottom comp.	12'	1,661
backfill comp.	n/a	752
background	6"	88
vertical delineation 15 ft. east of junction (source)	2'	294
	4'	688
	6'	1,254
	8'	984
	10'	1,089
	12'	1,575

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 30x30x12-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 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 6 ft below ground surface (bgs). At 6-5 ft. BGS, a 1-ft. thick clay layer was installed and compaction test performed on

3/1/2010. 156 yards of the blended backfill was hauled to a NMOCD approved facility and the remaining blended backfill was blended with

clean imported soil. A representative sample was collect and sent to a commercial laboratory for analysis of chloride. The remaining

excavation was backfilled with the blended backfill with imported soil to ground surface and contoured to the surrounding area. An

identification marker was placed on the surface at the former junction box to mark the presence of clay below. On 3/25/2010, the 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 2/21/2011

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* DATE 3-18-11

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

BD Jct. G-23

Unit G, Section 23, T22S, R37E



Site prior to excavation

1/27/2010



Collecting sample

1/29/2010



Backfilling excavation

3/11/2010



Seeding excavation

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: 02/17/10
Reporting Date: 03/01/10**
Project Number: NOT GIVEN
Project Name: BD JCT. G.-23
Project Location: NOT GIVEN

Sampling Date: 02/17/10
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	02/19/10	02/19/10	02/18/10
H19292-1** 5PT BOTTOM COMP @ 12'	<10.0	<10.0	1,790
H19292-2 4-WALL COMP	<10.0	<10.0	432
H19292-3 BLENDED BACKFILL	<10.0	<10.0	672
Quality Control	553	536	500
True Value QC	500	500	500
% Recovery	111	107	100
Relative Percent Difference	8.4	12.1	<0.1

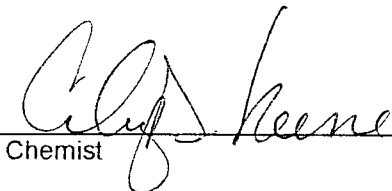
METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl: Std. Methods 4500-ClB

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

Reported on wet weight.

**REVISED REPORT.

COPY


Chemist

03/01/10
Date

H19292 TCL RICE

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(805) 393-2326 FAX (805) 393-2476 (325) 873-7001 FAX (325) 873-7020

ANALYSIS REQUEST												
Company Name: <u>Rice Operating Company</u>												
Project Manager: <u>Bruce Baker</u>												
Address: <u>122 W. Taylor</u>												
City: <u>Hobbs</u> State: <u>NM</u> Zip: <u>88240</u>												
Phone #: <u>575-393-9174</u> Fax #: <u>575-397-1471</u>												
Project #: _____												
Project Name: <u>BD Jct. G. - 23</u>												
Project Location: _____												
Sampler Name: <u>Robert Egans</u>												
FOR LAB USE ONLY												
Lab I.D.	Sample I.D.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER:	ACTIVATED	ICE / COOL	OTHER:	DATE	TIME
H19292												
-1	5PT Bottom Comp 12'	1									2-17-10	1:27pm
-2	4-Wall Comp	1									2-17-10	1:58pm
-3	Blended backfill	1									2-17-10	2:09pm
COPY												
<p>PLEASE NOTE: Liability and damages, Cardinal's liability and does not exclude remedy for any claim arising whether used in contract or tort, shall be limited to the amount paid by the client for the analysis. 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 analysis. In no event shall Cardinal be held 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 in connection with the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.</p>												
<p>Relinquished By: <u>Robert Egans</u> Date: <u>2-17-10</u> Time: _____</p>												
<p>Received By: <u>Jodi Henderson</u> Date: <u>2/17/10</u> Time: <u>4:10</u></p>												
<p>Delivered By: (Circle One) _____</p>												
<p>Sampler - UPS - Bus - Other: _____</p>												
<p>Checked By: (Initials) <u>JHE</u></p>												
<p>Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone #: _____</p>												
<p>Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Fax #: _____</p>												
<p>REMARKS: <u>F-Mail Results To:</u></p>												
<p><u>J Purvis@RiceSWO.com</u></p>												
<p><u>Baker " " " " "</u></p>												
<p><u>R Egans " " " " "</u></p>												

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

#26

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: 100 ppm

ACCURACY : +/- 2%

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

SAMPLE ID	PID	SAMPLE ID	PID
4Wall Composite	3.1		
Bottom Spt Composite	4.7		
Blended Backfill	1.8		

COPY

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

SIGNATURE: *Robert Jones*

DATE: 2-17-2010



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ANALYTICAL RESULTS FOR
RICE OPERATING COMPANY
ATTN: BRUCE BAKER
122 WEST TAYLOR
HOBBS, NM 88240
FAX TO: (575) 397-1471

Receiving Date: 03/01/10
Reporting Date: 03/08/10*
Project Owner: NOT GIVEN
Project Name: BD JCT G-23*
Project Location: NOT GIVEN

Analysis Date: 03/02/10
Sampling Date: 03/01/10
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: JH
Analyzed By: HM

[illegible]

METHOD: Standard Methods

4500-CIB

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

*Revised Report.

Chad Keene
Chemist

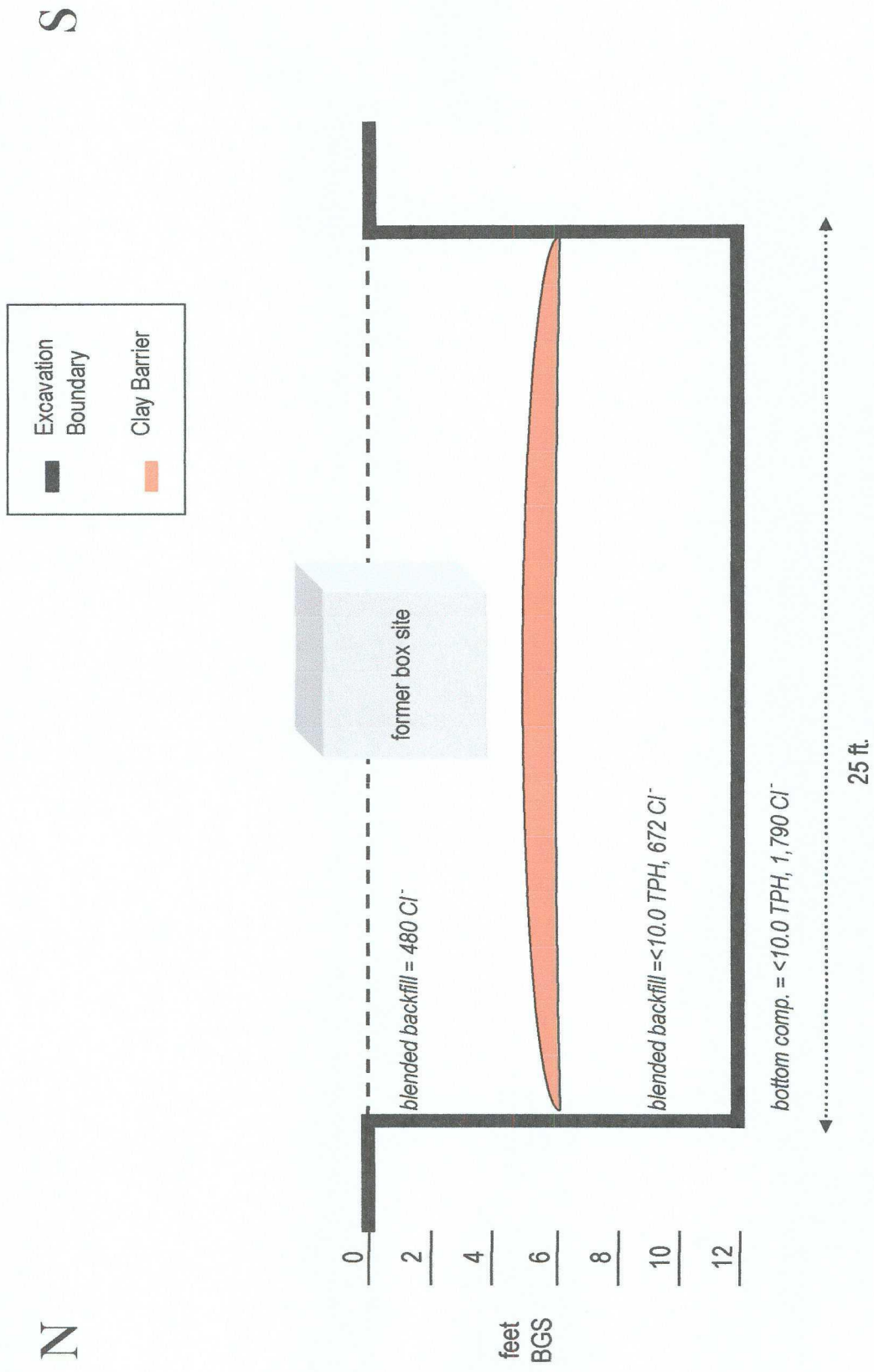
03/08/10
Date

H19361 Rice

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BD Jct. G-23
Unit 'G', 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: ^{Jct. 283}
BD G-23 EOL 22/37
Project No. 2010.1062

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 - 15' E. & 10' N. of SW Corner	94.6	16.6	FSG

COPY

Control Density: 102.3
ASTM: D 698

Optimum Moisture: 20.3%

Required Compaction: 90-95%

Densometer ID: 815
PETTIGREW & ASSOCIATES

Lab No.: 10 2231-2232

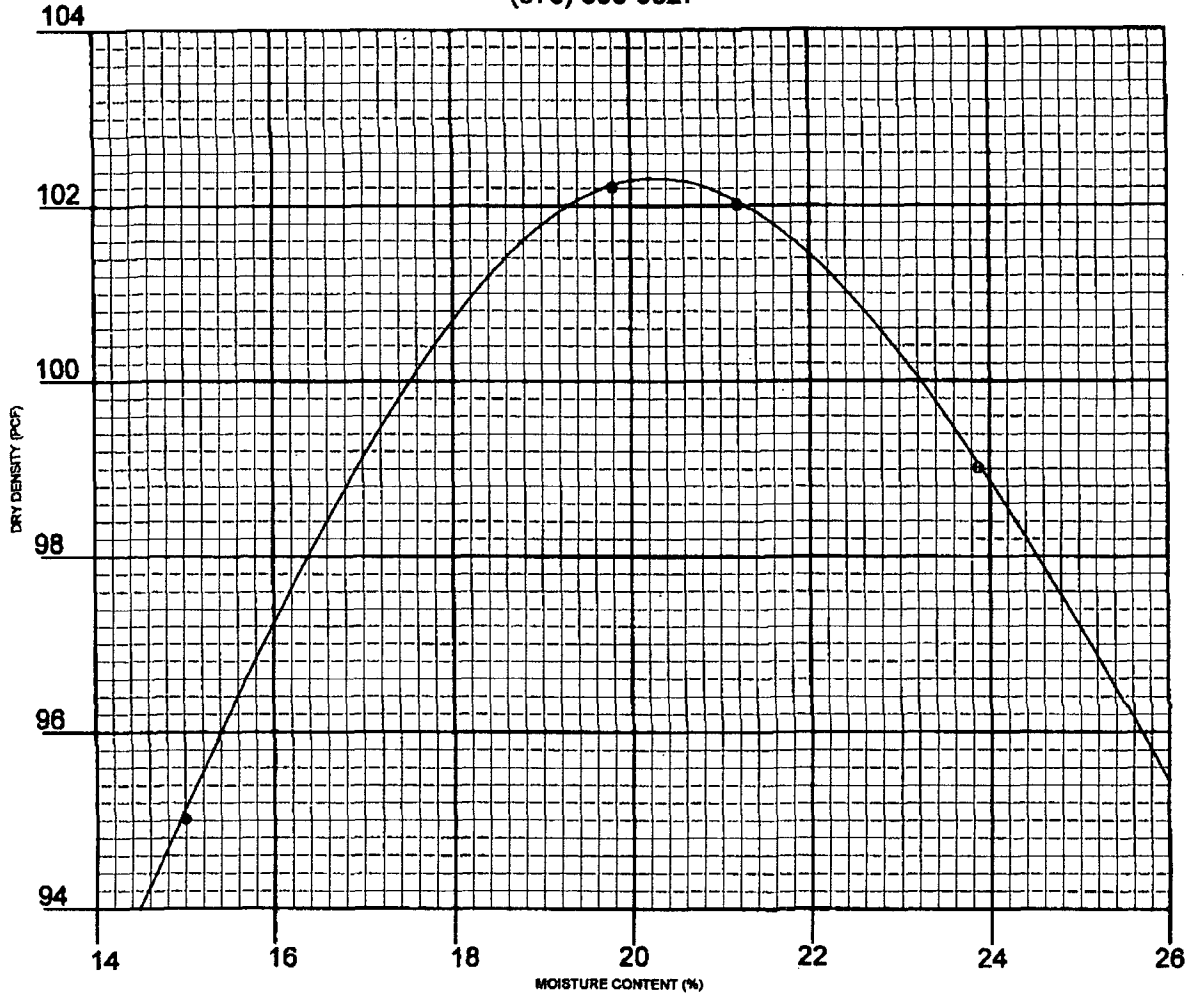
Copies To: Rice Operating

BY: Erica M. Hart

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



*Corrected Copy 2/17/10
PETTIGREW & ASSOCIATES, P.A.
1110 N. GRIMES ST.
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.



ETTL Engineers & Consultants Inc.

GEOTECHNICAL * MATERIALS * ENVIRONMENTAL * DRILLING * LANDFILLS

HYDRAULIC CONDUCTIVITY DETERMINATION FLEXIBLE WALL PERMEAMETER - CONSTANT VOLUME (Mercury Permometer 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 4535-101 Permometer Data
Boring No.:
Sample: 9840
Depth (ft):
Other Location: Wallach Plant Eunice
Material Description: Red Clay (Your Sample No 10 1422-1424) Compacted D 898 at 95% of your M/D curve (wet side)

ap =	0.031416 cm2	Set Mercury to	Equilibrium	1.8	cm3
as =	0.787120 cm2	Start No. 1	Pipet Rp	6.7	cm3
M1 =	0.030180	C =	Annulus Ra	1.6	cm3
M2 =	1.040853	T =			

SAMPLE DATA

Wet Wt. sample + ring or tare:	581.37 g	Before Test	After Test
Tare or ring Wt.:	0.0 g	Tare No.: T 6	Tare No.: T 3
Wet Wt. of Sample:	581.37 g	Wet Wt. + tare:	Wet Wt. + tare:
Diameter:	2.77 in	731.80	800.51
Length:	2.79 in	Dry Wt. + tare:	Dry Wt. + tare:
Area:	6.04 in ²	641.76	690.35
Volume:	18.84 in ³	Tare Wt:	Tare Wt:
Unit Wt. (wet):	128.85 pcf	218.78	220.89
Unit Wt. (dry):	104.65 pcf	Dry Wt.:	Dry Wt.:
		422.97	469.66
		Water Wt.:	Water Wt.:
		90.15	110.10
		% moist.:	% moist.:
		21.3	23.5

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

TEST READINGS

Z1(Mercury Height Difference @ t1):		5.1	cm	Hydraulic Gradient =		0.10		
Date	elapsed t	Z	ΔZ _n	temp	α	k	k	Reset = *
	(seconds)	(plot @ t)	(cm)	(deg C)	(temp corr)	(cm/sec)	(ft./day)	
2/5/2010	4740	6	0.666997	25	0.889	1.17E-08	3.32E-05	
2/5/2010	5940	5.9	0.766997	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	7600	5.7	0.956997	25	0.889	1.08E-08	3.05E-05	

SUMMARY

ka =	1.10E-08 cm/sec	Acceptance criteria =	25 %
kl		Vm	
k1 =	1.17E-08 cm/sec	6.3 %	Vm = $\frac{ k_2 - k_1 }{k_a} \times 100$
k2 =	1.09E-08 cm/sec	1.2 %	
k3 =	1.08E-08 cm/sec	2.5 %	
k4 =	1.08E-08 cm/sec	2.5 %	

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/cm3	127.0 pcf
Water Content	W =	0.36 cm3/cm3	(at 20 deg C)
Intrinsic Permeability	k _{int} =	1.13E-13 cm2	(at 20 deg C)

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

210 Beach Street
Tomball, AR 71854
870-772-0013 Phone
870-218-2413 Fax

1717 East Erwin
Tyler, Texas 75702
903-686-4421 Phone
903-698-8113 Fax
www.ettiline.com

707 West Cotton Street
Longview, Texas 75604-5505
903-768-0915 Phone
903-768-8245 Fax

CHLORIDE CONCENTRATION CURVE

RICE Operating Company

BD JCT G-23

Unit G', Sec. 23, T22S, R37E

Depth bgs (ft)	[Cl ⁻] ppm
2	294
4	688
6	1254
8	984
10	1089
12	1575

Groundwater = 59 ft

