1R - 426-280

REPORTS

DATE:

8-26-10

1R426-2

BD Jct. M-1

2010

DISCLOSURE

RICE OPERATING COMPANY
JUNCTION BOX DISCLOSURE* REPORT

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
Blinebry-Drinkard (BD)	Jct. M-1	M	1	22S	37E	Lea	Eliminated		

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

Depth to Groundwater 65 feet NMOCD SITE ASSESSMENT RANKING SCORE: 10

Date Started 3/16/2010 Date Completed 3/29/2010 OCD Witness no

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

Soil Disposed 204 cubic yards Offsite Facility Sundance Location Eunice, NM

FINAL ANALYTICAL RESULTS: **Sample Date** 3/22/2010 **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	Chloride mg/kg
4-WALL COMP.	49.4	<10.0	866	1440
BOTTOM COMP.	78.6	74.9	1720	4160
BACKFILL COMP.	49.5	44.7	2170	2960

CHLORIDE FIELD TESTS

LOCATION	DEPTH	mg/kg
4-wall comp.	n/a	1311
bottom comp.	12'	2761
backfill comp.	n/a	2493
vertical delineation trench at 10 ft. west of source	2'	821
	4'	1151
	6'	1100
	8'	2661
	10'	3170
	12'	3836

General Description of Remedial Action: This junction and line were eliminated during the pipeline replacement/upgrade program. After the former junction 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 test performed on each sample yielded concentrations that did not relent with depth. Organic vapors were measured using a PID. 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 3/29/2010. The remaining blended backfill was hauled to a NMOCD approved facility. 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 3/29/2010, 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 8/04/2010.

ADDITIONAL EVALUATION IS MEDIUM PRIORITY

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

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

SITE SUPERVISOR Robert Egans SIGNATURE Robert Egans COMPANY RICE OPERATING COMPANY

REPORT ASSEMBLED BY Larry Bruce Baker Jr. INITIAL LBB

PROJECT LEADER Larry Bruce Baker Jr. SIGNATURE Larry Bruce Baker Jr. DATE 8-26-10

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

BD Jct. M-1

Unit M, Section 1, T22S, R37E

Taking a sample 3/22/2010

Final excavation 3/22/2010

Clay layer installed 3/26/2010

Seeding site 3/29/2010

CARDINAL LABORATORIES

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: 03/22/10
Reporting Date: 03/25/10
Project Number: NOT GIVEN
Project Name: BD JCT. M-1 (22/37)
Project Location: NOT GIVEN

Sampling Date: 03/22/10
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: JH
Analyzed By: AB/SJ

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/kg)	DRO (>C_{10}-C_{28}) (mg/kg)	Cl* (mg/kg)
ANALYSIS DATE		03/25/10	03/25/10	03/23/10
H19509-1	5PT BOTTOM COMP @ 12'	74.9	1,720	4,160
H19509-2	4-WALL COMP	<10.0	866	1,440
H19509-3	BLENDED BACKFILL	44.7	2,170	2,960
Quality Control		506	535	450
True Value QC		500	500	500
% Recovery		101	107	90.0
Relative Percent Difference		0.6	13.6	6.5

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl^-: Std. Methods 4500-Cl^-B
*Analyses performed on 1:4 w:v aqueous extracts.
Reported on wet weight.
Not accredited for GRO/DRO and Chloride.

Chemist

03/25/10
Date

H19509 TCL RICE

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name:	Rice Operating Company	BILL TO	
Project Manager:	Bruce Baker	P.O. #:	
Address:	122 W. Taylor	Company:	
City:	Hobbs State: NM Zip: 88240	Attn:	
Phone #:	575-393-9174 Fax #: 575-397-1471	Address:	
Project #:	Project Owner:	City:	
Project Name:	BD ICT M-1 (22137)	State: Zip:	
Project Location:		Phone #:	
Sampler Name:	Robert Egans	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME			Cl	TPH 8015M							
H19509-1	5pT Bottom Comp @ 12'	C	1			✓					✓		3-22-10	2:06pm			✓	✓							
-2	4-Wall Comp	C	1			✓					✓		3-22-10	2:55pm			✓	✓							
-3	Blended backfill	C	1			✓					✓		3-22-10	3:10pm			✓	✓							

COPY

Relinquished By:	Date:	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time:		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By: Robert Egans	Date: 3/22/10 Time: 4:40	Received By: Jodi Henson	REMARKS: E-Mail Results To: JPurvis@RiceSWO.com BBaker " " " " REgans " " " "
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) AA

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

#26

RICE OPERATING COMPANY

122 West Tayor 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 7600	Serial No: 110-023920
✓	Model: PGM 7300	Serial No: 590-000508		Model: PGM 7600	Serial No: 110-013744
	Model: PGM 7300	Serial No: 590-000504		Model: PGM 7600	Serial No: 110-013676

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT NO : 928167	EXPIRATION DATE: 1-17-2013
FILL DATE:	METER READING ACCURACY: 100 ppm

ACCURACY : +/- 2%

SYSTEM	JUNCTION	UNIT	SECTION	TOWN SHIP	RANGE
BD	M-1	M	1	22	37

SAMPLE ID	PID	SAMPLE ID	PID
4-Wall Composite	49.4		
Spt Bottom Composite	78.6		
Blended Back Fill	49.5		
		COPY	

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

SIGNATUE: Robert Ryan DATE: 3-22-2010

LABORATORY TEST REPORT

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

AASHTO R18
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

Test Method: ASTM: D 2922

Project: BD JCT M-1 (22/37)
Project No. 2010.1083

Date of Test: March 29, 2010

Depth: See Below

Depth of Probe: 6"

Test No.	Location	*Dry Density % Max	% Moisture	Depth
SG 1	10' N. & 10' E. of SW Corner of Pit	94.0	14.8	FSG

COPY

Control Density: 102.3
ASTM: D 698

Optimum Moisture: 20.3%

Required Compaction: 90-95%

Densometer ID: 5572

Lab No.: 10 3375-3376

Copies To: Rice Operating

PETTIGREW & ASSOCIATES

BY: Erica McClent

BY: _____ **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 4635-101 Permometer Data

Boring No.:		ap =	0.031416	cm2	Set Mercury to Final Read	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	1.6	cm3
Other Location:	Wallach Plant Eunice	M2 =	1.040953	T = 0.203790628				

Material Description : Red Clay (Your Sample No 10 1422-1424) Compacted D 698 at 95% of your M/D curve (wet side)

SAMPLE DATA

					Before Test		After Test	
Wet Wt. sample + ring or tare :			561.37	g				
Tare or ring Wt. :			0.0	g				
Wet Wt. of Sample :			561.37	g	Tare No.:	T 6	Tare No.:	T 3
Diameter :	2.77	in	7.05	cm2	Wet Wt.+tare:	731.90	Wet Wt.+tare:	800.51
Length :	2.79	in	7.08	cm	Dry Wt.+tare:	641.76	Dry Wt.+tare:	690.35
Area:	6.04	in^2	38.99	cm2	Tare Wt:	218.78	Tare Wt:	220.89
Volume :	16.84	in^3	276.92	cm3	Dry Wt.:	422.97	Dry Wt.:	469.66
Unit Wt.(wet):	126.95	pcf	2.03	g/cm^3	Water Wt.:	90.15	Water Wt.:	110.16
Unit Wt.(dry):	104.65	pcf	1.68	g/cm^3	% 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: 99.56 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 (pipet @ t)	ΔZπ (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 %

ki		Vm		
k1 =	1.17E-08 cm/sec	6.3	%	Vm = $\frac{\lvert ka-ki \rvert}{ka} \times 100$
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	kint =	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		%

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Texarkana, AR 71854
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Tyler, Texas 75702
903-595-4421 Phone
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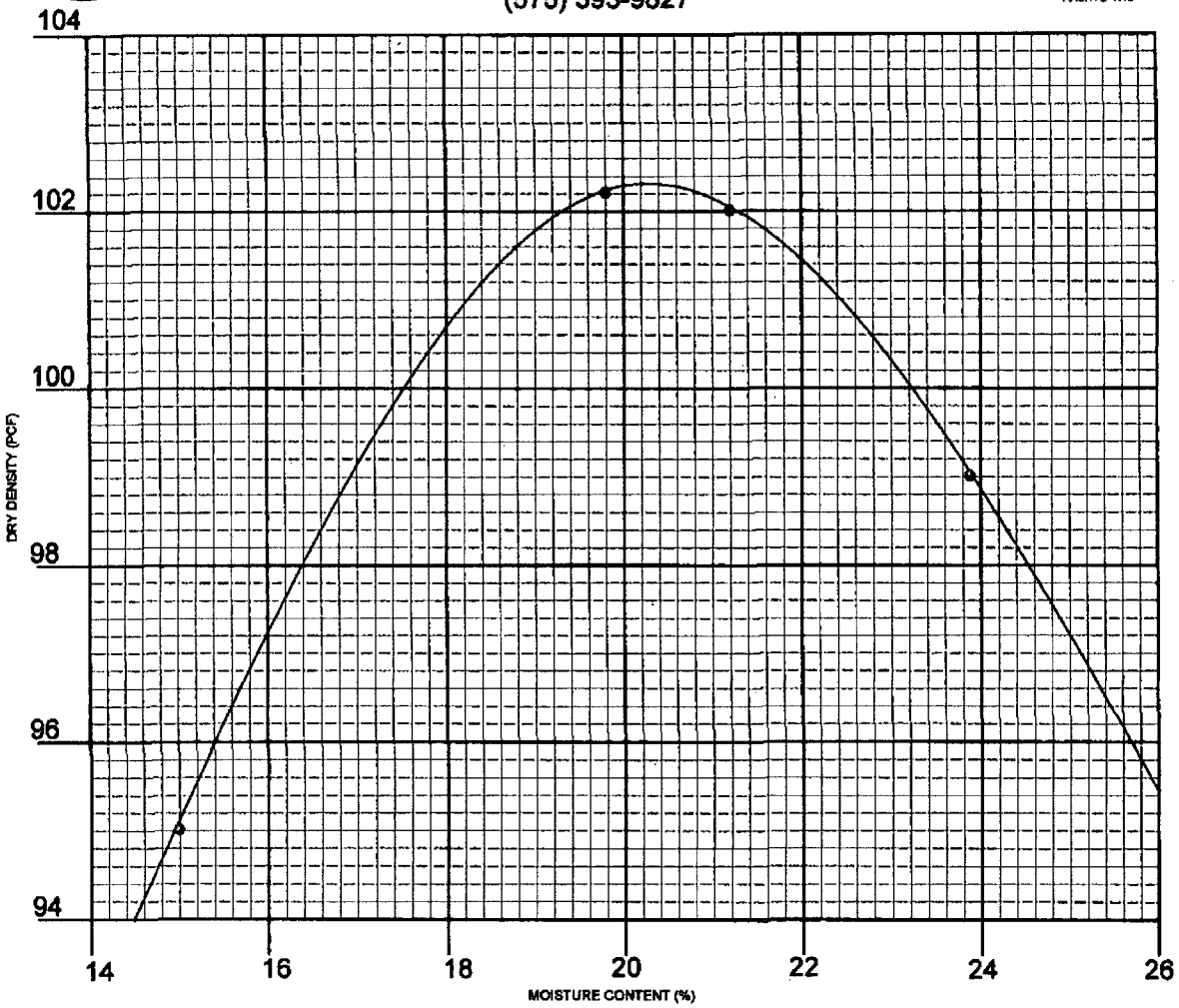
707 West Cotton Street
Longview, Texas 75604-5503
903-758-0815 Phone
903-758-8245 Fax

*Corrected Copy 2/17/10

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

AASHTO R18



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

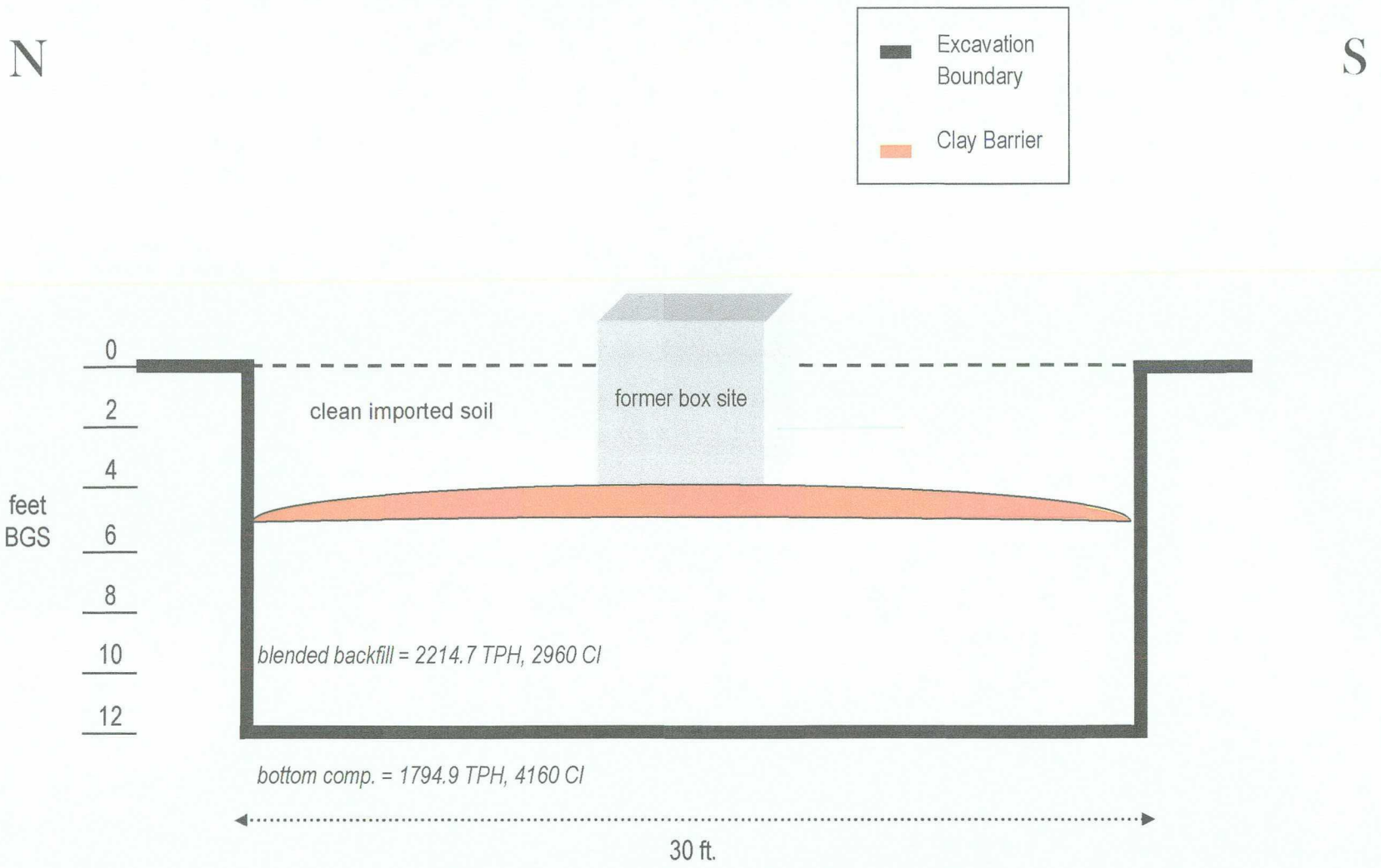
BY: Erica M Hart

COPIES: Rice Operating

BY: _____ P.E

BD Jct. M-1
Unit 'M', Sec. 1, T22S, R37E

Excavation Cross-Section

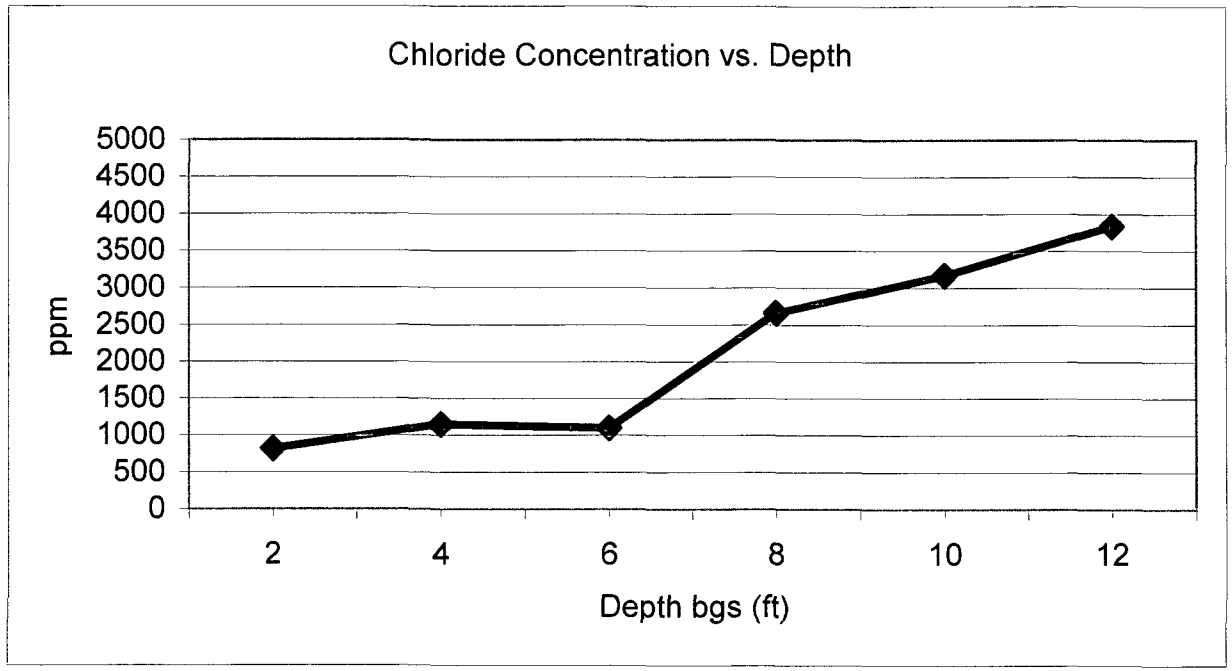


BD Jct. M-1

Unit 'M', Sec. 1,T22S, R37E

Backhoe samples 10 ft. west of the junction (source)

Depth bgs (ft)	[Cl⁻] ppm
2	821
4	1151
6	1100
8	2661
10	3170
12	3836



Groundwater = 65 ft.