1R - 426-268

REPORTS

DATE:

10-6-10

IR426-268

BD J-24 EOL

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)	J-24 EOL	J	24	22S	37E	Lea	eliminated		

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

Depth to Groundwater 100 feet NMOCD SITE ASSESSMENT RANKING SCORE: 10

Date Started 4/6/2010 Date Completed 4/21/2010 OCD Witness no

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

Soil Disposed 180 cubic yards Offsite Facility Sundance Location Eunice, NM

FINAL ANALYTICAL RESULTS: **Sample Date** 4/9/2010 **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.	0.0	<10.0	<10	3,920
BOTTOM COMP.	6.8	<10.0	127	2,920
BACKFILL COMP.	42.5	<10	164	1,800

CHLORIDE FIELD TESTS

LOCATION	DEPTH	mg/kg
4-wall comp.	n/a	3,163
bottom comp.	12'	3,075
backfill com.	n/a	1,438
vertical delineation trench at 15' north of source	2'	1,954
	4'	2,220
	6'	1,964
	8'	3,690
	10'	4,724
	12'	4,709

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 excavation. Chloride field tests performed on each sample yielded elevated concentrations that did not relent with depth. Organic vapors were measured using a PID which yielded relative low concentrations. Representative composite samples were sent to a commercial laboratory for analysis of chloride and TPH. The excavated soil was blended on site and returned to the excavation up to 6 ft. below ground surface (BGS). At 6-5 ft. BGS, a 1-ft. thick clay barrier was installed and compaction test performed on 4/14/2010. The remaining blended backfill was hauled to an 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 at the former junction box site to mark the presence of clay below. On 4/21/2010, 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 10/05/2010.

ADDITIONAL EVALUATION IS MEDIUM PRIORITY

enclosures: photo's, 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 10-6-10

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

BD J-24 EOL

Unit J, Section 24, T22S, R37E

Delineation trench being excavated 4/06/2010

Sample being collected 4/06/2010

Clay barrier being installed 4/14/2010

Backfilling above clay barrier with imported soil 4/14/2010

Seeding excavation 4/21/2010

Site complete 4/21/2010

CARDINAL LABORATORIES

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

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

Receiving Date: 04/09/10
Reporting Date: 04/19/10
Project Number: NOT GIVEN
Project Name: BD J-24 EOL (22/37)
Project Location: BD J-24 EOL (22/37)

Sampling Date: 04/09/10
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)
ANALYSIS DATE		04/15/10	04/15/10	04/12/10
H19643-1	5PT BOTTOM COMP @ 12'	<10.0	127	2,920
H19643-2	4-WALL COMP	<10.0	<10.0	3,920
H19643-3	BLENDED BACKFILL	<10.0	164	1,800
Quality Control		481	544	480
True Value QC		500	500	500
% Recovery		96.2	109	96.0
Relative Percent Difference		0.2	11.9	4.1

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.

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Chemist

04/19/10
Date

H19643 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: BDJ-24 EOL (22/3P)	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
H19643-1	5pt Bottom Comp @ 12'	C	1			✓					✓		4-9-10	2:10pm	✓	✓
-2	4-Wall Comp	C	1			✓					✓		4-9-10	2:20pm	✓	✓
-3	Blended backfill	C	1			✓					✓		4-9-10	2:30pm	✓	✓

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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.

Relinquished By:	Date:	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time:		Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By: Robert	Date: 4/9/10 Time: 4:35	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) JH

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

#26 JH

RICE OPERATING COMPANY

122 West Taylor Hobbs, NM 88240
PHONE: (505) 393-9174 FAX: (505) 397-1471
PID METER CALIBRATION & FIELD REPORT FORM

CK. MODEL NO.	✓	MODEL: PGM 7300	SERIAL NO: 590-000508
		MODEL: PGM 7300	SERIAL NO: 590-000504
		MODEL: PGM 7320	SERIAL NO: 592-903318
		MODEL: PGM 7300	SERIAL NO: 590-000183

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

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

ACCURACY : +/- 2%

SYSTEM	JUNCTION	UNIT	SECTION	TOWN SHIP	RANGE
BD	J-24	J	24	22	37

SAMPLE ID	PID	SAMPLE ID	PID
5pt Bottom	6.8		
4 Wall Composite	0		
Blended Backfill	42.5		
		COPY	

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

SIGNATURE: Robert Ryan DATE: 4-9-2010

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 24 EOL (22/37)
Project No. 2010.1101

Date of Test: April 14, 2010

Depth: See Below

Depth of Probe: 12"

Test No.	Location	*Dry Density % Max	% Moisture	Depth
SG 1	6' N. & 10' E. of SW Corner of Pit	91.0	16.0	FSG

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Control Density: 102.3
ASTM: D 698

Optimum Moisture: 20.3%

Required Compaction: 90-95%

Densometer ID: 5572

Lab No.: 10 4442-4443

Copies To: Rice Operating

PETTIGREW & ASSOCIATES

BY: _____

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 #2010.1026 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 Direct Reading	Equilibrium	1.8	cm3
Sample:	9840	aa =	0.767120 cm2		Pipet Rp	6.7	cm3
Depth (ft):		M1 =	0.030160	C = 0.000434704	Annulus Ra	1.6	cm3
Other Location:	Wallach Plant Eunice	M2 =	1.040853	T = 0.203780628			

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 :			581.37	g				
Tare or ring Wt. :			0.0	g				
Wet Wt. of Sample :			581.37	g	Tare No.:	T 5	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:	220.69
Volume :	16.84	in^3	275.92	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: 99.58 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 (pipet @ t)	ΔZn (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	%
k2 =	1.09E-08 cm/sec	1.2	%
k3 =	1.08E-08 cm/sec	2.5	%
k4 =	1.08E-08 cm/sec	2.5	%

Vm = $\frac{|ka-ki|}{ka} \times 100$

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/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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903-758-8245 Fax

*Corrected Copy 2/17/10

PETTIGREW & ASSOCIATES, P.A.
1110 N. GRIMES ST.
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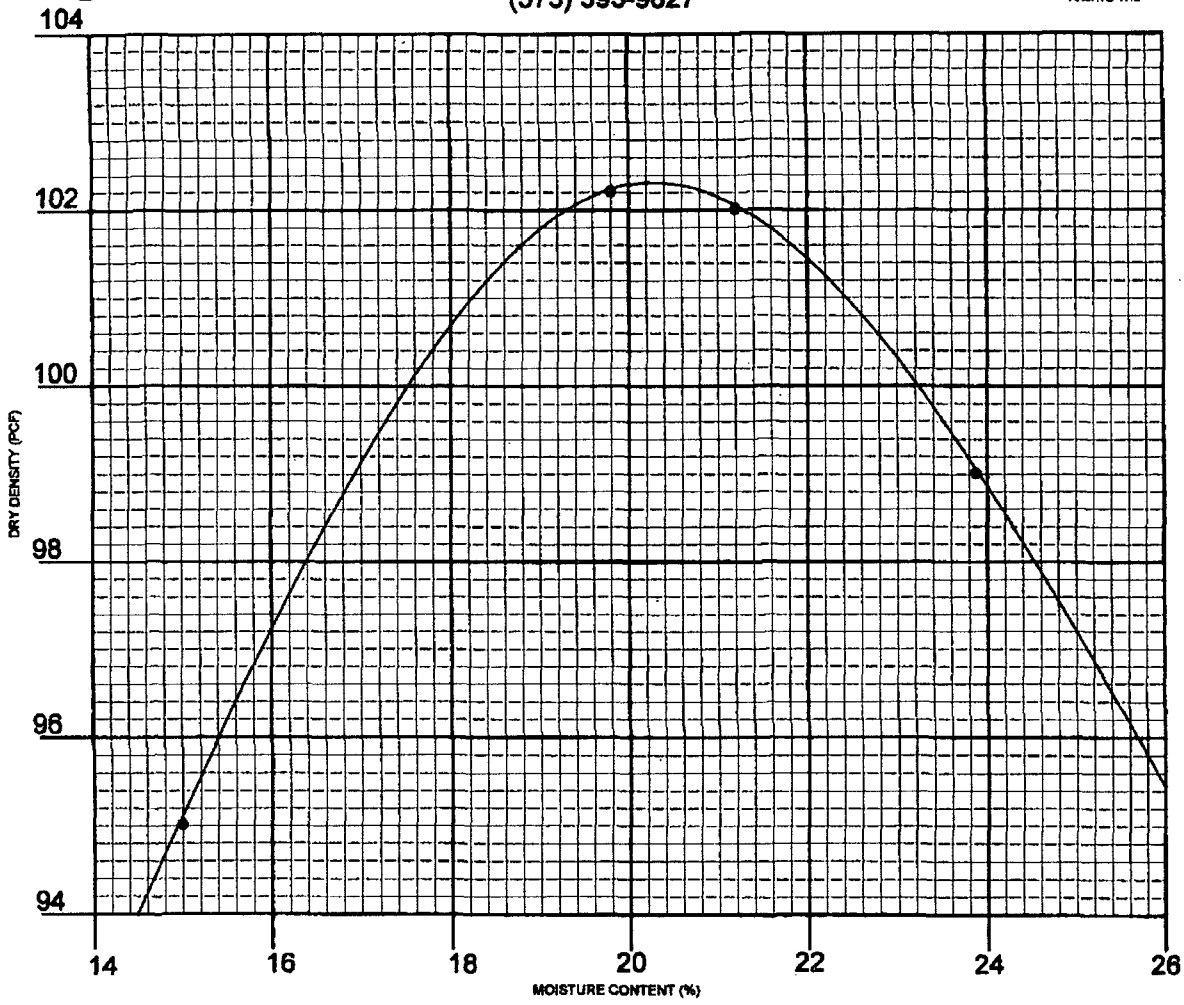

General Information

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									

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PETTIGREW & ASSOCIATES

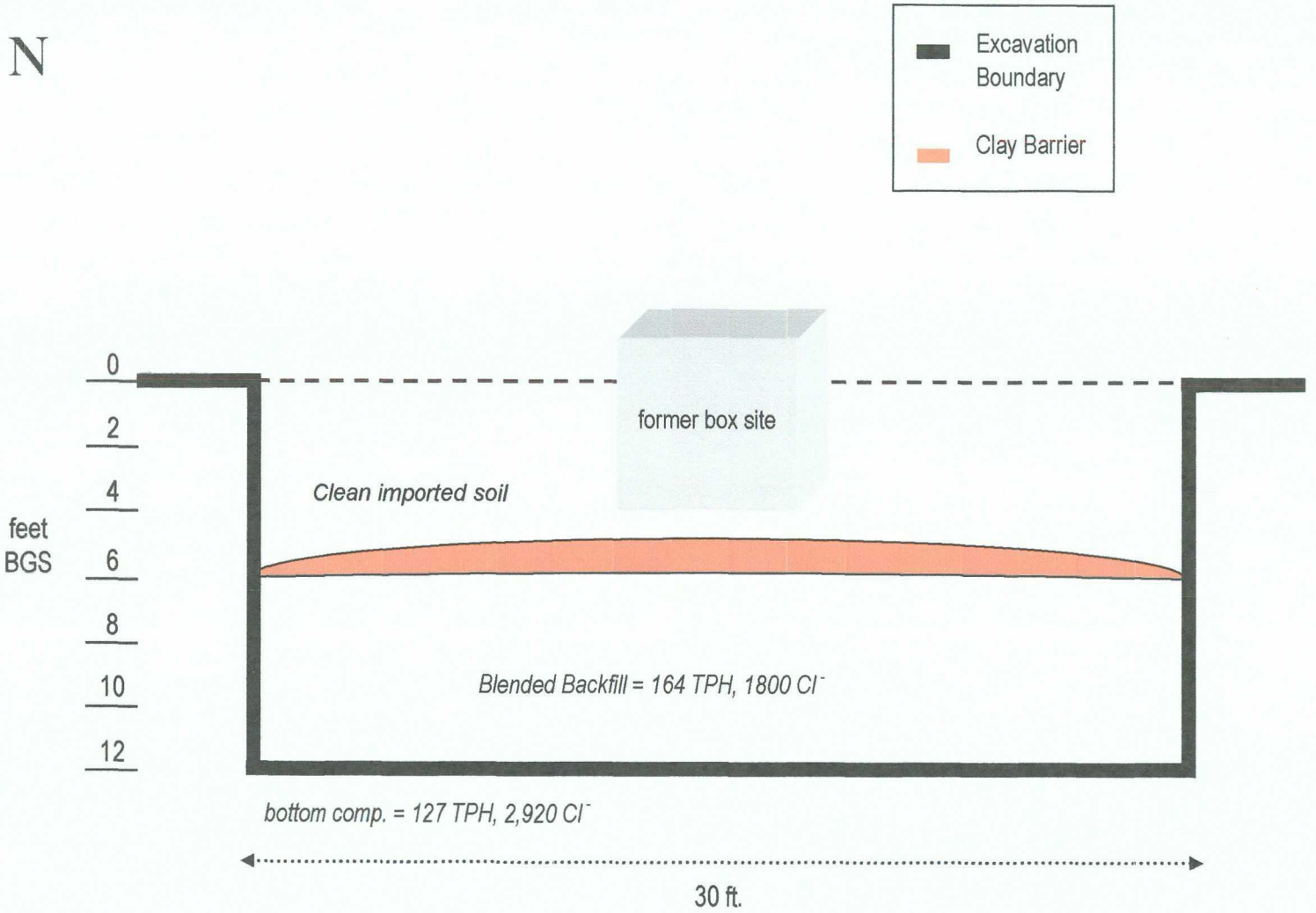
BY: Erica M Hart

BY: _____ P.E

COPIES: Rice Operating

BD J-24 EOL
Unit 'J', Sec. 24, T22S, R37E

Excavation Cross-Section

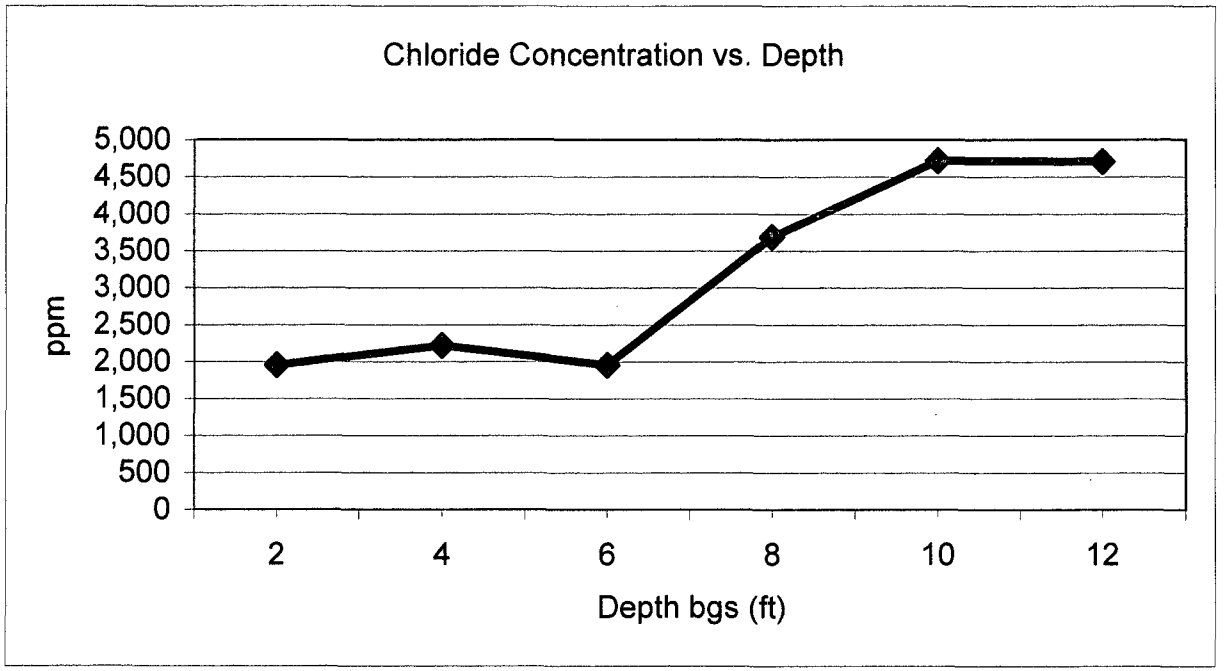


BD J-24 EOL

Unit 'J', Sec. 24, T22S, R37E

Backhoe samples at15 ft. north of the junction (source)

Depth bgs (ft)	[Cl⁻] ppm
2	1,954
4	2,220
6	1,954
8	3,690
10	4,724
12	4,709



Groundwater = 100 ft.