APPENDIX F Boring and Well Construction Logs

Project Res	board Syst	em Site Waycros	s, Georgi	BORIN	G _EX-5	Sh 1 of _2
Date Starte	7-25-86	_Completed	7-25-86	<u> </u>	ound Elevation	on
Total Depth	52.0'	_Location	The state of the s	Logged b	y S.& M.	E., Inc.
Casing I.D.	Funl oratory	boring back-f	Contractor _	hentonite-cer	nent grout	oftor
Remarks	completion.			· ·		arter
						

						, e.	the second secon	3	
			Sı	mple		U			
m Fe¥.	Depth	Type & Number	Blows per 6 in.	Depth Range	78 96.	Graphic	Sample Description	Remarks	
		J-1 J-2	9-7-6	0.5'			Medium Dense White to Light Brown fine Sand, Slightly Calcareous (SP)	:	
•	- - 5 -	J-3 J-4	11-9-8	6.5' 7.5'	,				
	10						*.		
	-15					•	(16')		
	- - -	J-5 J-6	2-1-2	18.5' 19.5'			Very Loose Red and White Clayey Fine to Medium Sand (SC-SM)		
	-20 -						- Increase in Sand with Depth from 20.0'		
	- 25 -						(27')	•	
	- - - 30	J-7	5-7-8	31.0'			Firm to Stiff Light Grey Fine to Coarse Sandy Clay (CL)		
.	- - - 35	J-8		32.0'					

Fotal De Casing I Remarks	D	er yeng Sama	Comp Locat		Co	Logged by S. & M.E., In ntractor American Drilling Co.	ic.
Feet	Type & Number	Blows Per 6 in.	Depth Range	Nec.	Graphic Log	Sample Description	Remark
- 45		6-3-4	49.0' 50.0' 50'-52.	0'		Sandy Clay (CL) (cont'd) (37') Light Gray Clayey Coarse Sand (SC-SP) Increase in Sand Content from 39.0' -6" Sandy clay saam & 48.0 (49') Dark bluish gray medium to coarse sandy clay (52') (52')	

Seaboard System Wayor	ross, Georg	LABORINGSh 2 of 2
Data Stand 7-26-86 Completed	7-26-86	Ground Elevation
Total Depth 56.0 Location		Logged by S. & M.E. Inc.
Casing I.D.	Contractor_	American Drilling Co.
Remarks		·
Nemarks	*******	

and the second of the second o						<u>, : : </u>		
			Sar	npie		Š.		
Elex.	Depth	Type & Number	Blows per 6 in.	Depth Range	H 86	Graphic Log	Sample Description	Remarks
•							(cont'd)	
•	-	J-7 J-8	9-12-9	37.5; 38.5			Medium dense gray coarse sand with clay traces & phosphate (SP)	
•	40.							
·	-						(43')	
	- 45				٠		Stiff to very stiff bluish green coarse sand clay (CL)	•
	-							
	_ 50 _	J-9 J-10	5–6–6	50.5' 51.5'			- Top of Hawthorn Formation from 50.0'	
	55	ST-1		54'-56'				
		·					(56')	
	- - -60				·			
	 - -							· .
	- -						····	
	-			·			`	
Ì	-							. - -

Project Rail	oad System Waycross, Georgia BORING EX-2 Sh 1 of 2
Date Started	7-22-86 Completed 7-23-86 Ground Elevation
Total Depth_	62.0' Location Logged by S & M.E., Inc. American Drilling Co.
Casing I.D	Exploratory boring back-filled with bentonite-cement grout
Remarks	Exploratory boring back-filled with bentonite-cement grout
	after completion .

			5.	mple	:	º .		
Elev. Feet	Depth	Type & Number	Blows per 6 in.	Depth Range	₩.	Graphic Log	Sample Description	Remarks
		J-1	25-34-	0.1.5			Very dense light tan to gray lime	
		J-2	33 50/5	4		l	Rx. base (fill material)	•
		J - -3		2.0			(3')	
	L		3-5-5	4-5.5			M. dense brown to tan slightly	-
•	- 5	J-5 J-6	6-7-11	6-7.5			clayey silty fine sand (SM)	
	-	3-0	1.				ŀ	4
	-		11-14-15	8-9.5			(8')	4
i	-	J-8					Dense gray clayey fine sand (SC)	
	10	IJ-9	7-6-6	10-11.5			(10')	4
		J-10					Medium dense orange & tan silty	7
	-	7_11	3-5-6	12-13.5			medium sand with traces of clay(SM)]
	•	J-12	3-3-0	12-13.3			Stiff gray clay (CH) w/sparse]
· .	-			İ			silt (14')	. 4
ł	– 15		2-2-2	14-15.5			Very loose to medium dense light.	
ŀ	-	J-14	2-5-6	16-17.5	.		slightly silty (SP)	4
ŀ	-	J-16	2-5-0	10-17.5			(61)	+
ŀ	-		5-8-3	18-19.5	1	l	•	4
	_ 20	J-18 I-19	3-4-8	20.21.5	- 1		. 1	1
		J-20	. [1	I		. 7
		J-21 J-22	3-5-6	22-23.5]
1	:		2-1-3	24-25.5			·	
-	.	J-24			- 1	Ļ	(24')	4
ŀ	- 25	J-25 J-26	2-3-4	26-27.5		ľ	Soft gray to brown sandy clay (CL)	• -
ŀ	.	J-27	.			ļ.	Loose orange to brown clayey fine	4
t	.	- (1-3-4	28-29.5			sand (28')	4
ľ		J-28	1				Firm brown to gray slightly	4
	-30		I				silty clay (CL) w sparse fine sand]
			5-7-6	31.5			and mica (31')	J
		J-30	, ,	,,,,]			Medium dense brown to orange]
-		J-31 J-32	2-3-4	32-33.5			silty fine to medium sand (SM)	4
-	35		3-5-9 3	4-35.5		L	(34')	4
	ا دد	1-34					Medium dense brown to orange	

) 110/111101

Project Raili	oard Syst	em Site Waycro	ss, Georgi	a BORING EX-2 s	h 2 of 2
Data Started	7/22/86	Completed	7/23/86	Ground Elevation	
Total Denth	62.01	Location		Logged by S. & M.E., Inc.	
Casing I.D.			Contractor	American Drilling Co.	
Remarks			•		
1101112170		,	•		

F		<u> </u>	7	Sai	mple		Π.		
Elev	Feet	Depth Feet	Type & Number	Blows in a	Depth Range	78 60.	Graphic	Sample Description	Remarks
		- 40 - 45 - 50 - 55 - 60 - 65	J-35 J-37 J-38 J-39 J-40 J-41 J-42 J-43 J-46 J-46 J-47 J-48 J-49 J-50 J-51 J-52 J-53 J-54	4-7-8 2-2-3 9-14-11 9-25-25 19-25-2 6-21-30 12-7-14 10-16-1 2-4-6 4-7-11 4-6-9	36.5' 37.5' 38.5' 39.5 40.5' 41.5' 42.5' 43.5' 9 44.5' 45.5' 46.5' 47.5			Fine to Coarse Sand (SW) with Sparse Fine Pebbles (37') Firm Light Gray Silty Clay (CL) with Sparse Mica (40') Medium Dense to Dense Orange Slightly Clayey Fine to Coarse Sand (SC-SW) with 6" Seam of Gray Silty Clay @ 42.0' Dense to Very Dense Gray Slightly Silty Fine to Coarse Sand (SM-SW) with 6" Seam of Dark Gray Clay @ 46.0" (52') Loose to medium dense gray clayey fine to coarse sand (SC) (55') Stiff bluish green clay With Sparse Mica (Hawthorn Formation) (62')	

Seaboard Syst	em Waycross, Ge	orgia BORING MW-7 sh.1 of 1
Date Started 7-30-86 Total Depth 32.01	Completed 7-30-86	Ground Elevation
32.0	Location	logged by S. & M.E. Inc.
Total Depth	Contra	American Drilling Co.
Monitoring	well installed in:t	the exploratory boring after completion
Memarks	•	

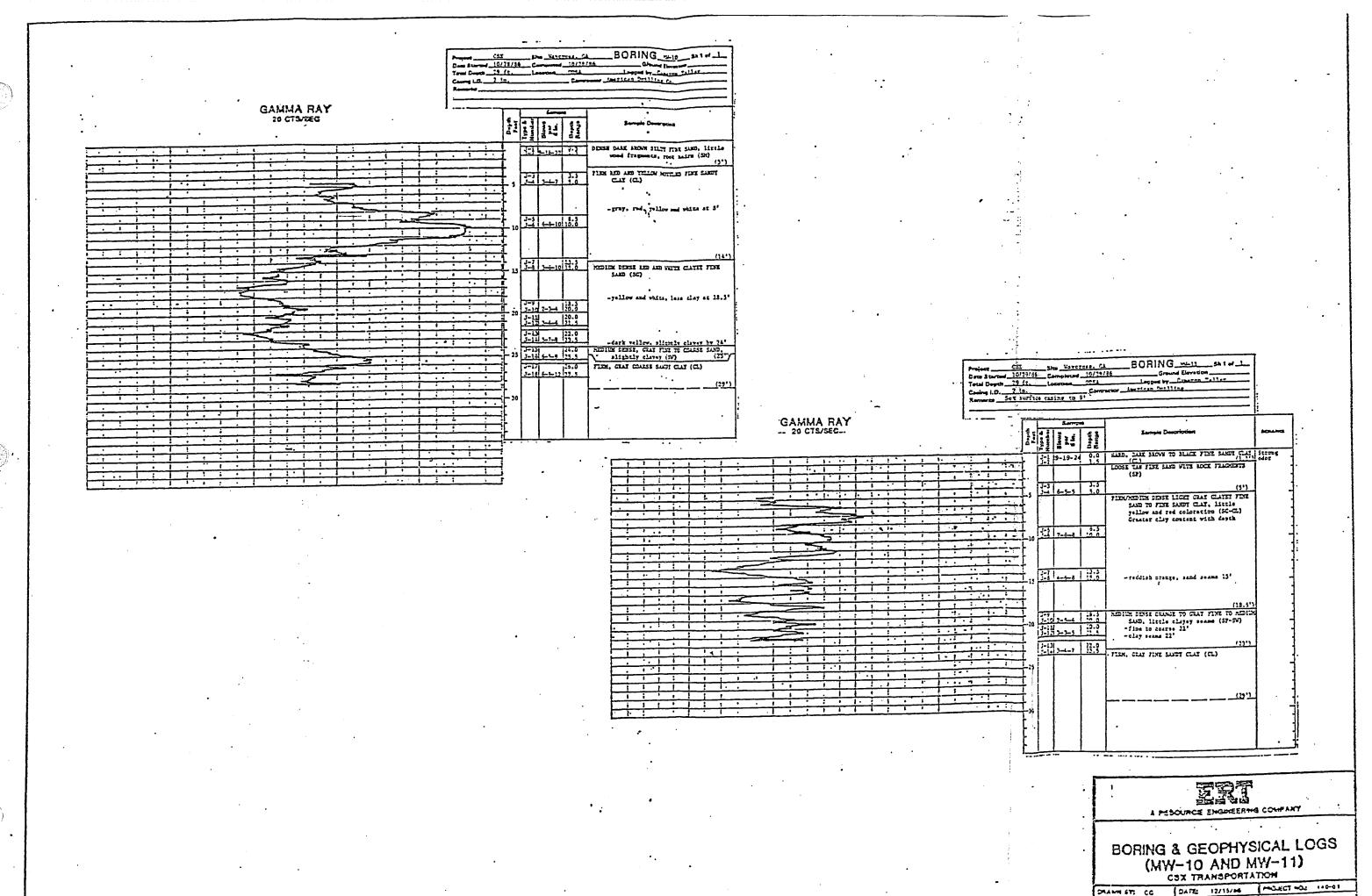
			Sar	nple		۵.		Remarks
Flex.	Depth Feet	Type & Number	Blows Per 6 in.	Depth Range	78 60.	Grephia Log	Sample Description	
	-	J-1 J-2	5-12-8	0.5'			Medium dense tan silty fine sand (SM)	•
	- - 5	J-3 J-4	5-8 - 5	5.5' 6.5'			(5') Medium dense gray clayey sand (SC)	
	-						(8') - Firm to stiff silty to sand clay (CL)	
	-10 -				·			
	15					•		
	-	J-5 J-6		18.5' 19.5'			. (20')	
	- 20 -						Loose light gray clayey coarse (SC)	
	-25			·				
	-	J-7 J-8	2-2-4	28.5' 29.5'			(29.51)	
	- 30 -						Stiff light green silty fine sandy (CL).	-
!	35					,	·	

Seabo Raili	ard System Waycro	ss, Georg	BORING MW-8	Sh ¹ of
Data Started	7-30-86 Completed_ 32.0' Location_	7-30-86	Ground Elevatio	n
Total Depth	32.0' Location	_	Logged by S. & M.E.	Inc.
Casing I.D.	•	A	American Drilling Co.	
Remarks	Monitoring well insta	alled in the	exploratory boring after	completion
Memeras				· · · · · · · · · · · · · · · · · · ·

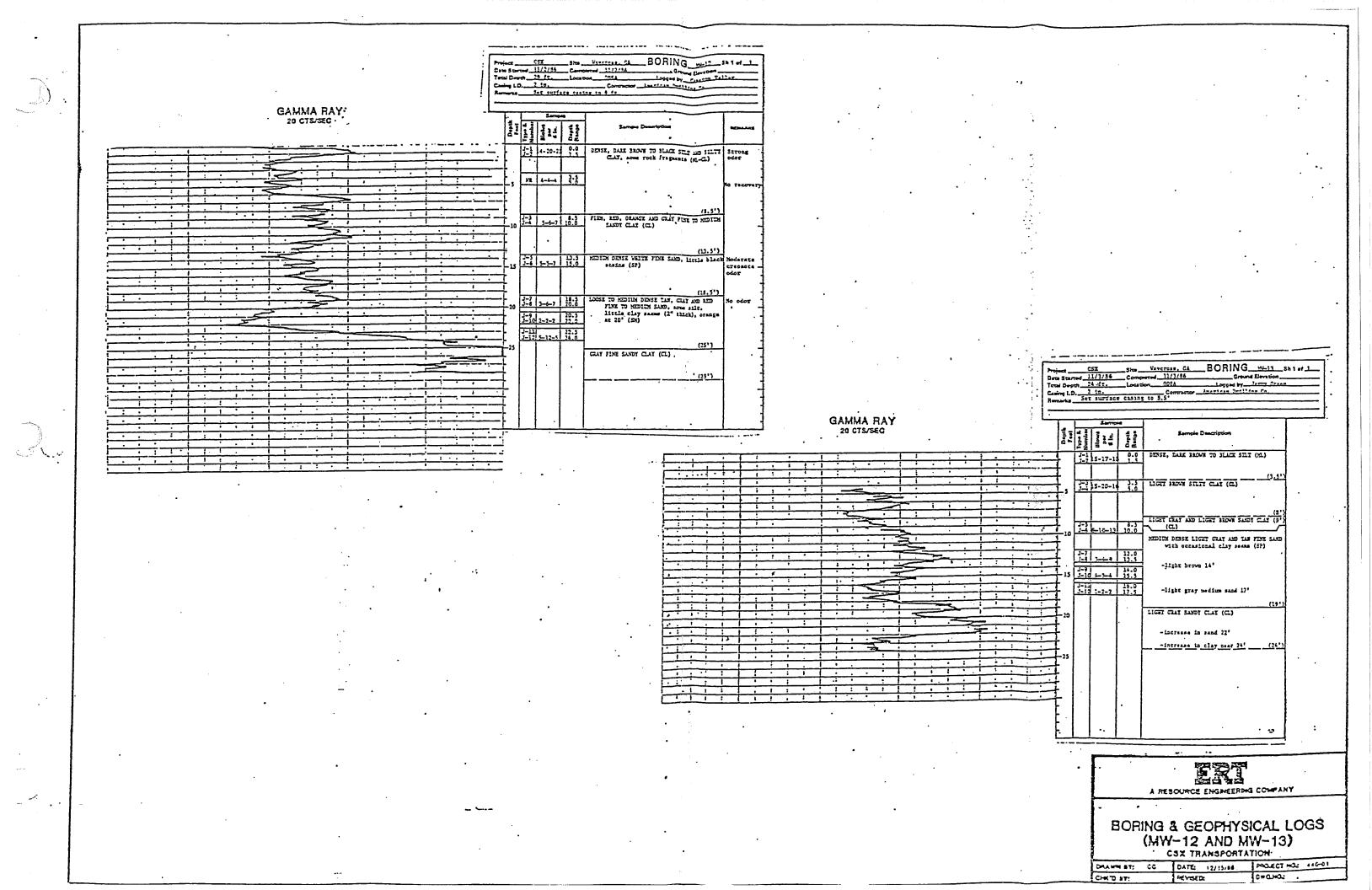
	,	I	242	nple		T :	T i i i i i i i i i i i i i i i i i i i	
m F F F F	Depth Feet	Type & Number	Blows n n	Depth Range	3 6	Graphic	Sample Description	Remarks
	-	J-1 J-2	3-6-18	0.5' 1.5'			Medium dense light tan silty fine sand (SM)	
	5		•	,				
	- - - - - - 15	J-3 J-4	4-4-7	13.5' 14.5'	·		Firm .light gray sandy to silty clay (CL)	
	- - - - - 20	J-5 J-6	3-5-5	21.0' 22.0'	٠		Loose to medium dense tan silty medium to coarse sand · · · (SM)	
	- 25 -							
	- 30 -						(32')	•
	- 35				1			

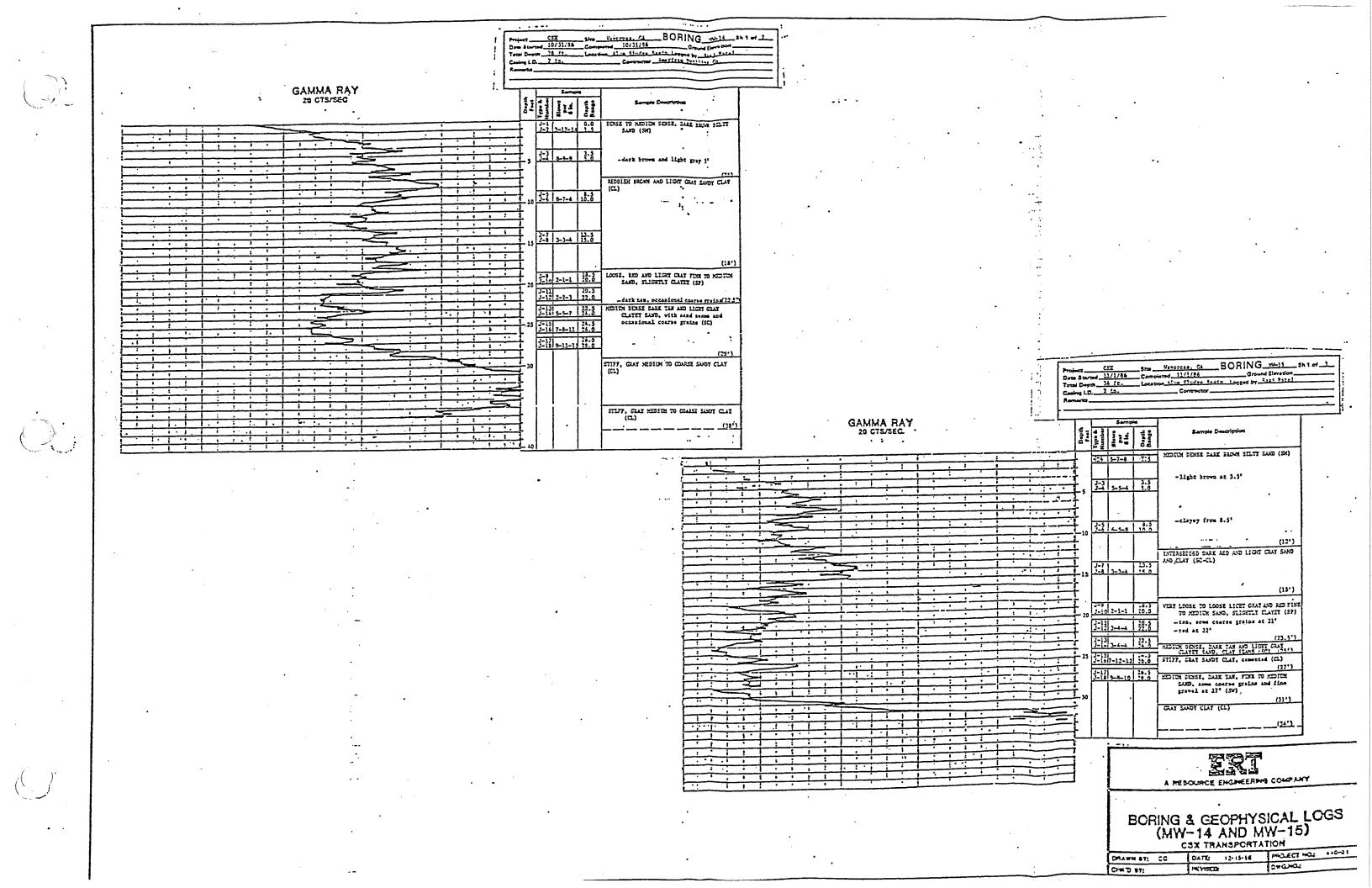
Project Real	oard Syst	em _Site	Waycro	ss, Geor	gia BOR	NG M	7 –9	Sh lot	1 .
Data Started	7-30-86	_Com	pleted	7-30	-86	Ground F	lavatio		
Total Depth_	32.01	_Loca	tion		Logge	d by S.	& M.E.	Inc.	
Casing I.D				Contractor	American	Drilling	Co.	•	
Remarks	Monitoring	well	install	ed in the	exploratory	boring a	fter c	ompletion	
				• • • • • • • • • • • • • • • • • • • •	•				

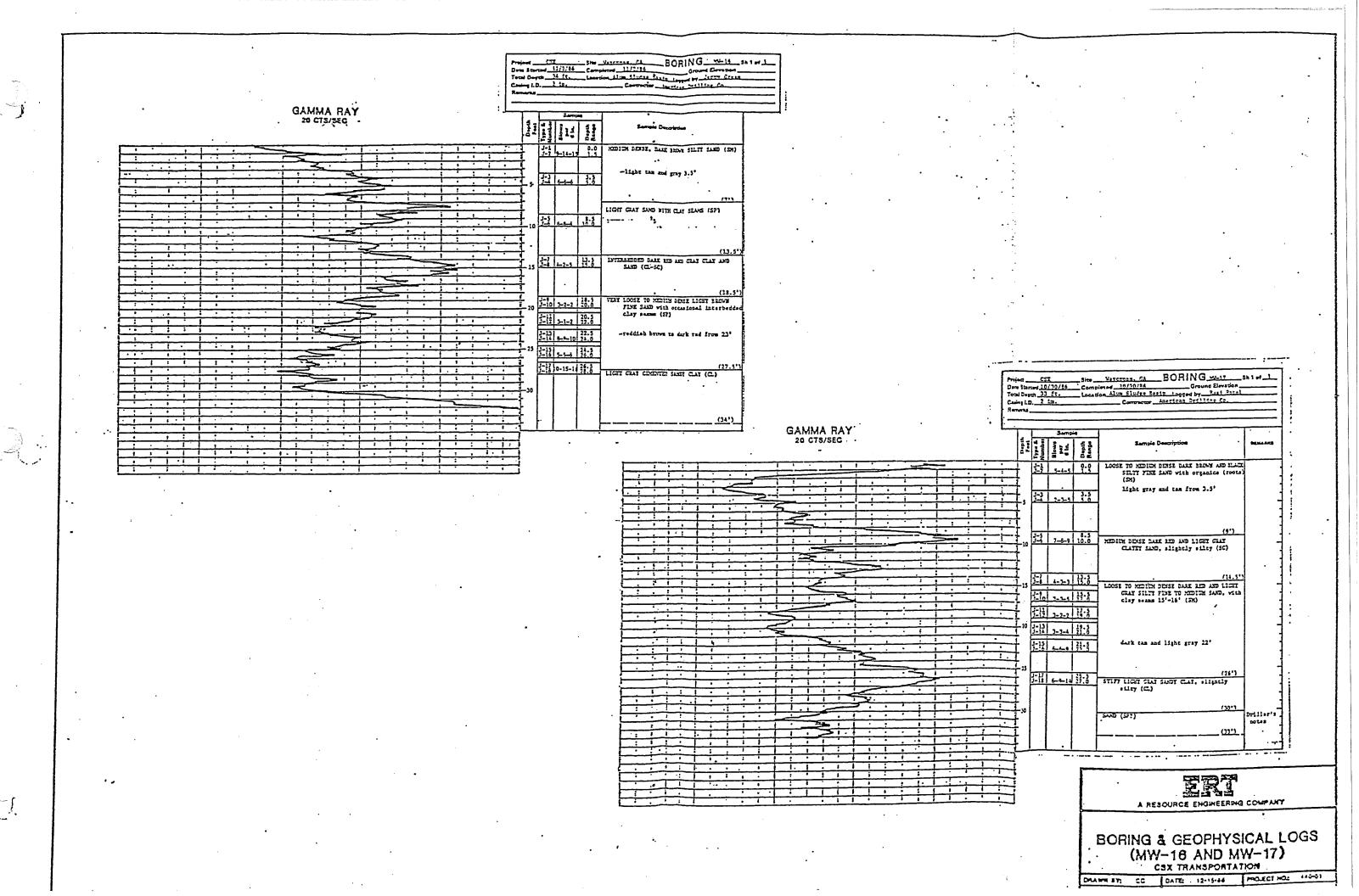
1	7.	Sample] 0.		
Elev. Feet	Depth	Type & Number	Blows per 6 in.	Depth Range	Rec.	Graphic	Sample Description	Remark
		J-1 J-2	2-6-8	0.5'			Medium dense tan silty fine sand (SM)	
	- 5 -	J-3 J-4	4-4-4	5.5' 6.5'			(5') Loose gray clayey fine sand (SC)	٠
}	- 10						Loose tan silty medium sand (SM)	•
	- 15	J-5 J-6	3-2-5	14.5' 15.5'				
	- 20							
	25						•	٠.
	30		·	·			Stiff light green silty fine sandy clay (CL)	, . <u>-</u>
† † †						-	(32')	•

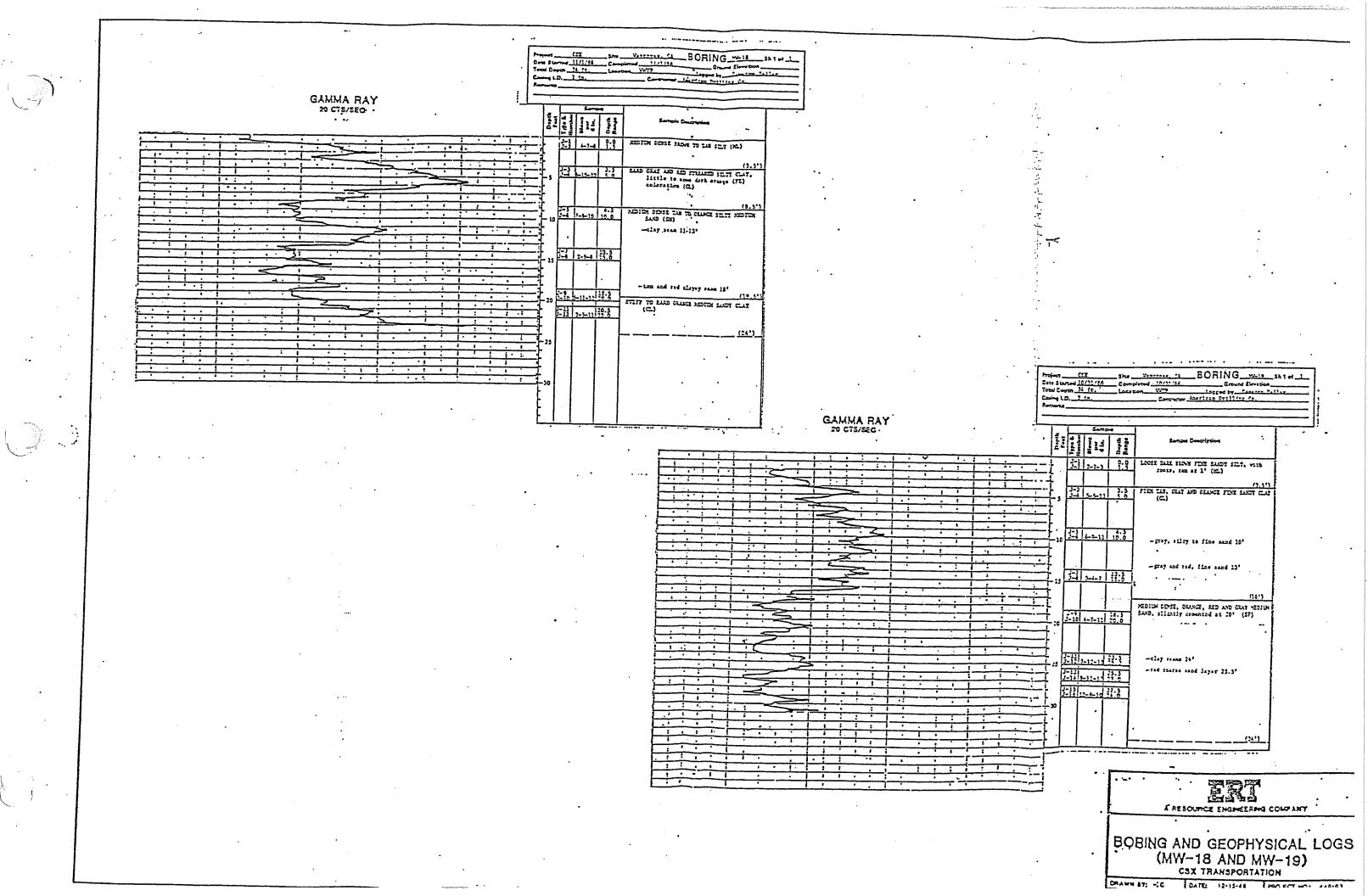


PEYSED

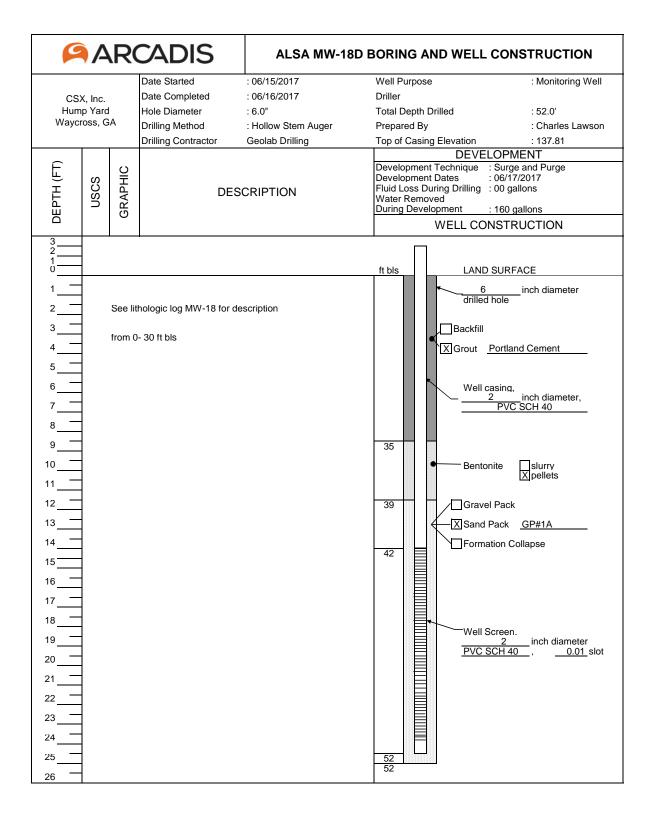






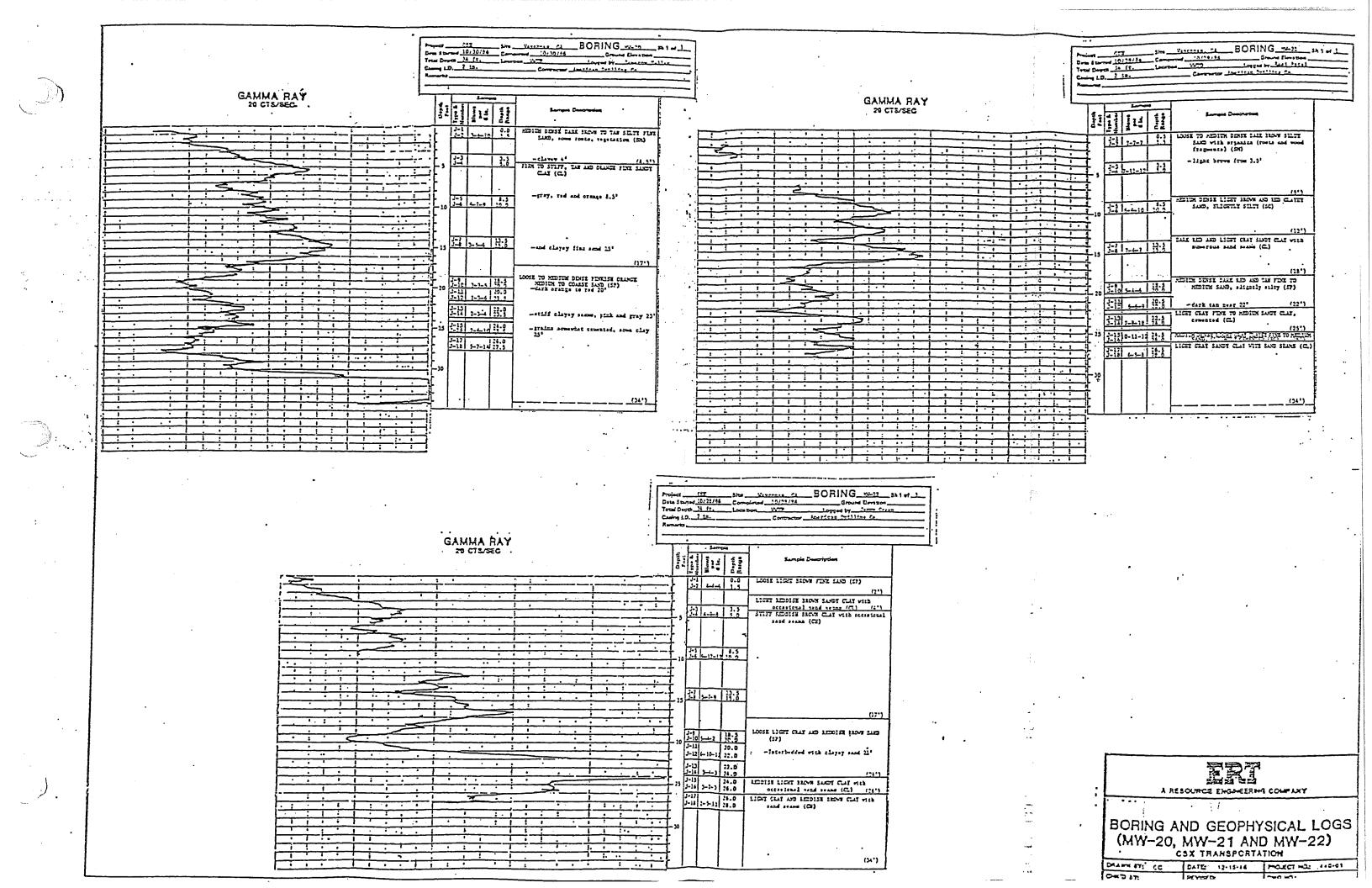




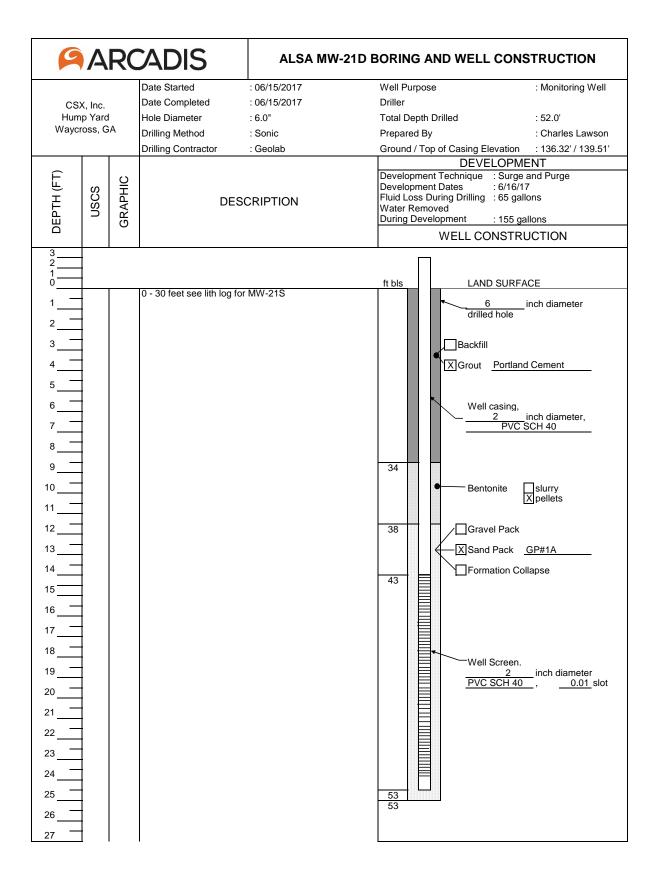




27		
28		
30		
	SM \	Silty Sands 75% Minor amounts of clays density firm tan/orange/gray
32		an an angulary
33		
34		
35	CL /	Clay, minor silt, firm, gray, moist, no visual porosity
36		1
37		
38		
	SM	Silty sand, fine to medium grained 80%, silts 20%
		density firm, tan to orange
41		
42		
43		
44		
45		
	SW	
46		
47		Well sorted sands 100%, fine to coarse grain, density soft, sub-angular, quartz, feldspar, some mica flakes,
48		moderate visual porosity tan to gray. Small clay layer about 1 foot thick from 48 to 49 ft bls. Lost core from
49		50 to 55 bls
50		
51		
52		
53		
54		
55		
56		
57		
SI	M/S C	Silty-clayey sand to silty clay, consistency firm, fine grain sands, bluish to gray
58		gram sarius, biulsii to gray
59		
60		







	_		
28	+		
29	1		
30			
31 32 33	SM		Silty sands, fine to medium grain, density soft, pink, poor visual porosity
34		Ш	
35	-		
36	_ _ _ CL		Sandy-silty Clay, consistency firm, grey, minor amounts
37	- -		of fine grain sands
38	- -		
40	SM		Silty sands, fine to coarse, minor amounts of clay, gray
41			
43	SP		Poorly sorted sands 100%, fine to medium grain, density firm, sub-angular, quartz and feldspar, grey,
44	1		saturated, poor visual porosity
45	1		
46	1		
47	SP		Same as above
48	‡		
50	CL SP		Clay , small clay lens, grey Poorly sorted sands, same as (40-45')

Proi	ect	CSX		Site_W	laycross, GA BORING MW-26 s	h 1 of <u>1</u> -
		3	27-87	Compl	nted 3-27-87 Ground Elevation	
T-4-	I Dane	h 28	ft.		Alum Cludge Rasin Longed by Kaal Patel	
Casi	ng I.D	2	ın.		Contractor American Drilling Company	
Rem	arks_	•				•
		•				
			Sampi	е		i
	oth Bt	& 30r	۶ .	. 41 18	Sample Description	REMARKS
'	Depth Feet	Type & Number	Blows per 6 In.	Depth Range		
		⊬ź J-l		0.01	Dark brown silty sand, with roots. (SM)(1')	
	}	J-1 J-2	2-5-6	1.51		
	-				Light gray and white sandy silt and medium dense silty sand. (SM)	•
	-			· · · · · · · · · · · · · · · · · · ·	(3.3)	
	 	J-3 J-4	3-5-9	3.5' 5.0'	Light gray and tan sandy clay, with sand	
	- 5	J-4	pockets and black stains.	pockets and black stains. (CL)	·	
1					-	
·	Γ				(8.5')	-
		7_5		8.5'		-
1.	L 10	J-5 J-6	3-4-2	_10.0'_	Loose dark gray and tan silty fine to medium sand. (SM)	_
	<u>L</u>					-
1	L				- clay seam 11.5'	-
	-		,		- light gray and tan, silty clay pockets	•
	-	J-7	2 1 0	13.5	from 13.5'	-
	<u> </u> 15	J-8	2-1-2	15.0'	·	_
1	-					_
	t		;		- dark tan from 18.0'	_
	-	J-9		18.5		-
	1	J-10	2-3-2	20.0'		· _
	20] .	
						_
					(23')	<u>.</u>
		7_11		23.51	Stiff light green sandy clay and clay,	
	_ 25	<u>j-12</u>	2-4-7	25.01	with sand pockets. (CL-CH)	·
	L		•			-
	L				(28')	.
	-					_
	}					_
	- 30	1				
1	}					_
	+					_
	†				·	
	!					

Ī		Sample	•		
Depth	Type & Number	Blows per 6 In.	Depth Range	Sample Description	REMARK!
<u> </u> 	J-1 J-2	2-5-6	0.0;	Medium dense light tan and gray silty fine sand, with roots. (SM)	
- - - - -	J-3 J-4	7-11-10	3.5'		·
-					
- 10	,			* (12')	
 	J-5 J-6	2-5-5	12.0'	Dark tan and yellowish red sandy clay, with sand seams. (CL-SC) (15')	
1!	5			Loose light to dark tan and brown fine to medium sand, little coarse sand.	
1_1_1	J-7 J-8	3-6-6	18.5'	(SP)	
- 2	0				
- 2					
			·	Stiff light green clay, with sand pockets	-

mai	1.D.		111.		eted 3-27-87 Ground Elevation on Alum Sludge Basin Logged by Raai Pa Contractor American Drilling Compan	
	# #	29 E	Sample		Sample Description	REMARKS
1		Type &	9 -4-4	0.5. Range	Loose light brown and red silty fine	
<u> </u>		1-2	2-4-4		Sand, with roots. (SM) (3') Dark tan and light gray sandy clay, with	
	- 5	J-3 J-4	10-14-15	3.5° 5.0°	sand pockets. (CL)	
	•					
	- 10 -		•			
	-				Loose dark tan and light brown fine to medium sand. (SP))
	- 15 -			•		·
	_ _ _ 20	J-5 J-6	2-3-2	18.5		
	 - -				·	
	- 2	5		·		
	1_1_1					
	L,	0				

	Sample		REMARKS
Depth Feet Type & Number	Blows por 6 In. Depth	Sample Description	
J-1 J-2	3-5-6 0.0		
- 5		(7')	
-		Light gray and tan clayey sand, with numerous clay pockets. (SC) (8.5')	
J-3	4-7-6 10.0	dank tan and red silty line	
10 3-4			
15			
-			
J-	5 6 2-3-4 20.	5' - loose, little coarse sand at 18.5'	
20	612 3 123		
-			
		(25)	'}
– 25		Light greenish gray sand and clay, cemented, little coarse sand. (SC	-CL)
1			

Proj	ect	CSX	·	Site_W	layeross, GA BORING MW-32 s	h 1 of <u>1</u>
Date	Stan	ted3	3-30-87	Comp	leted 3-31-87 Ground Elevation	
T-4-	I Dan	-h 2	ንጸ f ⊢ .	- Locati	on ODSA Logged by Raai Patel	
Casi	ng I.D	2	in.	· · · · · · · · · · · · · · · · · · ·	Contractor American Drilling Compan	<u>y</u>
Rem	arks_		<u> </u>			
				· · · · · · · · · · · · · · · · · · ·		
	· · ·					
	ے		Samp			
	Depth Feet	Type & Number	Blows per 6 In.	Depth Range	Sample Description	REMARKS
		N V	Blc P	De		
		1.1-1	7-6-4	0.0'	Dark brown and black silty fine sand, with	
	[·	J-2	7-0-4	1.5'	wood pieces, roots, and rock frag-	
					ments. (SM)	<u>.</u>
		J-3		3.5'	(5')	
	_ _{.5}	J-4	1-1-3	5.0'		_
	٠. ا				Light gray and red sandy clay. (CL)	-
	-	İ	ļ ·			
	L				.	_
	-	J-5 J-6	6-8-9	8.5' 10.0'	-	-
	- 10	J-6		10.0	(11')	
	-		· .	,		
,	<u> </u>				Loose light gray and tan silty fine to medium sand. (SM)	-
	ŀ				medium sand. (Sh)	
	 					
	15					
						_
	Γ					-
		1-7		18.5		-
	- 20	J-8	1-2-3	20.01		<u> </u>
	_ 20				·	
	_		·	·		-
	L					
	_					
	- 25					
	-					-
	-			•	(28')	
	-					_
	-					· -
	_ 30					
	-					
	-					
	-					
	- 35					

Date Tota Casi:	i Dept ng I.D.	ed	3-28-87 8 ft. in	_Compl	Naycross, GA BORING NW-34 S eted 3-28-87 Ground Elevation ODSA Logged by Raaj Patel Contractor American Drilling Company	
						
			Sampl			
	Depth Feet	Type & Number	Blows per 6 In.	Depth Range	Sample Description	ZXRAMBR
•	_		4-8-10	0.0' 1.5'	Dark brown silty fine sand, with roots and black stains. (SM)	
	- -				Dark brown and black clayey sand, with sand seams (SC-SP) (3.5')	
	- - 5.	J-3 J-4		3.5' 5.0'	Light to dark gray silty to clayey sand. (SC-SM)	
	- -				(8')	
	<u></u>	J-5 J-6	6-6-7	8.5' 10.0'	Light gray and tan sandy clay, with sand pockets and black stains. (CL)	
	10		•		(13')	
	- - -	J-7 J-8	2-2-3	13.5	Loose light brown and gray silty fine to medium sand. (SM)	
	- 15 -					
	-	J-9 J-10	1-2-3	18.5' 20.0'	- light greenish gray, with clay pockets at 19' (20')	
	20				Light gray clayey sand to sandy clay (SC-CL)	
	-					
	- 25 -					
	-				(28')	
	- 30					
	-					
	. 35					

Proie	ct	CSX		_Site_W	aveross, GA BORING MW-35 SI	7 1 01
Date	Starte	ed3:	-28-87	_Compl	eted 3-28-87 Ground Elevation	
	Dept	7,	Q ++	1 A	on ODSA Logged by Raaj Patel Contractor American Drilling Company	
	ng I.D.		in.		Contractor American Brighting Company	
Rem	arks_					
						
	 1		Sampl			
	ا ۽	- 1			Sample Description	REMARKS
	Depth Feet	Type & Number	Blows per 6 In.	Depth Range	Sample Description	
		J-1		9:9:	Dark brown and black silty sand, with	4
	-	J-2	4-6-7	1.5	roots to 0-0.5' and clay pockets,	
	-				rock fragments (SM)	4
	-				(4')	4
	-				Dark gray and tan sandy clay and clayey	. 4
	– 5				sand, with sand pockets and seams.	4
	-				(CL-SC)	4
1	-				,	
	}				• •]
	}	J-3	4-5-8	8.5' 10.0'	(10')	
	-10	J-4		10.0	Light gray and tan sandy clay, with	
	}				numerous sand seams, pockets and	_
	-		,		partings. (CL)	
	-				. (14')	
	-	J-5		13.5' 15.0'	Loose light gray and brown silty fine to	_
. '	<u> </u> 15	J-6		15.0	medium sand, slightly clayey. (SM)	_
	-	· .				· _
	-			-	1]
	-				and clay]
	}	J-7	1-2-3	18.5'	- light gray clayey sand to sandy clay layer from 19.0'-20.5' (20.5')	4
	_ 20	J-8	+	20.0	14yez 220m 2500	1]
	-				Light gray clayey sand to sandy clay.	
	-				(SC-CL)	
	-				'	
	F .					
	- 25					
	ļ					
	-				(28')	
	Ŀ					1
	<u> </u>					
	- 30					
	1					
						1
ľ	_					1
	L					
1	T 35	. 1	1	1		ــــــــــــــــــــــــــــــــــــــ

Date Total Casir	Starte Depting I.D.	ed3 h3 2	-28-87 2 ft. ! in.	Locatio	Waycross, GA BORING MW-36 Streeted 3-28-87 Ground Elevation Raaj Patel On Contractor American Drilling Company	
			Sampl	8		
	Depth Feet	Type & Number	Blows per 6 In.	Depth Range	Sample Description	REMARKS
	<u> </u>	J-1	6-12-12	0.0'	Dark brown and tan silty fine sand, with roots and Fe stains. (SM)	
	F				- light brown from l'	,
	- 5				- wood chips at 3' (6.5')	
					Dark brown clayey sand and sandy clay. (8.5')	
	_10	J-3 J-4		8.5'	Light gray and brown sandy clay, with sand seams, pockets, and partings. (CL)	
	 - -					
	15				(15')	1
	-				Light gray and tan silty fine sand. (SM)	
		7-5	2-2-5	18.5	(19')	-
	_ 20 _ -	ا الم	2-2-5	20.0	Dark gray and tan clayey sand and sandy clay, with clay pockets and partings. (SC-CL)	
	-			,		
	_ 2	7				
	-					
	- 3	0			(32')	
	-					1
	ļ.,	,_				

HII 11111



BORING LOG AND CONSTRUCTION OF MW- 38

A RES	SOURCE ENGINEERING COMPANY				177		DMA.	TION		
	CSY Transportation	DRILL Date Started	ING A 8-17-	ND 5/ 87		NG INFO			8-1	7-87
Clien! Project	cittle Acid Line Sludge Area	The second Dec	* * * *			U/ Auner	Size		/4 1	nci 51t
Project L	acation Parcross, Georgia	WI	ELL C	ÖWbr	ETION	INFORM	סוו אג 10	I.O fe	et	
Job No.	4-0-07-05 Boring No. Pikese	Scient Die.	-inch 10 inc			ype	Stain	less	Stee	1
Logged	C Teller		nch (ength_	22.0	feet	<u> </u>	
Approve Drilled E	de de la la la la la la la la la la la la la	Casing Dia.							Γ.	
- 1	,	1	ě	17.75	E DEPTH foet)	COUNTS	RECOVERY	¥ =		COMPLETION
	•		Ž	F	20.0	8	2	VALUE	WELL	MPLETION
25	DESCRIPTION		3	2			Ü	5 2	3	
DEPTH IN FEET	•		SAUPLE	SAUPLE	SAMPL	BLOW	× =	3 E	1	ខ្លី "
ΣΞ			<u>"· </u>	S	ñ	-	<u> </u>	<u> </u>	100	1
	SURFACE ELEVATION	end red brick	J-1 J-2	SS	0.5	4-8-7	1	0.0]::]	
- "=	Compact, dark brown to black silty fine sand with coal :		3				T			
! =	fragments. (SM)	(3.0')								
: ·=	Loose, dark to light gray and brown silty fine sand wit	h clav pockets.	J-3	SS	4.0	1-2-2		0.0		
. =	Loose, dark to light g. o (SH-SC)		1-4-			 	7.	1	7.1	1.1
· 5 =	- At 5.0' clay content increases. (SM-SC)	•			1	1	1	1		1.7
1 =	,				١	1	i	·		131
1 =	<u> </u>	(8.5')	3-5	<u> </u>	9.0	 	\dashv	1_^	7.3	63
=	Seft, light to dark gray (mottled orange/gray on fresh	break) silty	3-6	SS	10.0	4-5-4	4	0.0	4:4	
10	Soft, light to dark gray (mottled orange, and clay-clayey silt. (CL-HL)			\		1	1	1	1:1	
1 "-	- At 10.5' firm gray clay with little silt	•	1	1	1	1	1	1		F
1	- Vf 10'2, 11tm 8'sh cra's aren		1		<u> </u>				_題	9 4
:	1	(13.5')	J-7	SS	15.0		_[_	0.0	,	2
	Loose, light tan and gray silty fine sand with gray cla	y pockets. (SM)	J-E	<u></u>	12.0	+	+-	+-		闕
15 -	Loose, light tan and gray silty		1	ì	1		- 1	1		
1 3	<u> </u>	.		1				į.		
1 :	3\	and coarse sand			19.0			-	-1 3	
	At 15.5', becomes a fine to medium sand with occasional	t King commer and	J-9 J-10	SS	20.0		_ _	0.1		
1	At 15.5', becomes a fine to medium same (smoky quartz) interspersed, clay content decreases. (smoky quartz)			\top	T	_	-	-	4.	
20 -	, <u>.</u>	arangai wall-			1	1	-	-		1-138
	From 21.0', coloring becomes laminated cream, rose and	Orange, wexa				1	l_		``	日創
	graded sand, vet. (Uppermost Acuifer)		J-1		24.	2-5-4	T	٥.	o	日副
1	╡	(25.0')	1-1:	4	25.	<u> </u>	\dashv	1	~¦ં	
25 -	desired annularance on fr	esh break) medium			-	1	1	- 1		13
	Compact, light gray and tan (mottled gray/orange on fr sand with occasional coarse sand interbedded with a	firm clay.	1	1	1	1	- 1	-	14	扫描
	sand with occasional coarse sand interpretation. (SC-C Muscovite and biotite fragments are prevalent, (SC-C	:1)	ļ.,	_	29.	. 		-+-		
1	-		J-1 J-1			9-12-	14	<u> 0.</u>	•	
	<u> </u>	•				1	- 1	- 1		
30 -	<u>_</u>	(32.0')							-	<u> </u>
1	Boring was terminated at 32.0° in clay. Total depth of	of MW-38 is 32.0"	- 1	١		-	Į		- 1	
1	Boring was terminated at 32.0 in clay. Inclay. as it is screened in the uppermost aquifer.	•		1		1	- 1	- 1	- 1	1
- 1	as it is screened in the appropriate	•		1	- 1	1	- 1	- 1		- 1
35	-		ŀ			1	- 1	١	.	1
- 1	= .		1			İ	- [1	- 1	- 1
1	4		١	1	1]			- 1	- 1
	3					-	l			·
	Ε			-	-	- 1	1	.		- 1
40	<u>-</u>		- 1	1].	- 1	-	- 1	- 1
- 1	3						1	- 1	- 1	
	. ∃		- 1	- 1	- 1	1	- 1	ļ	ļ	·
1.	;		1		- 1	- 1	- 1	ı,	ļ	
45	4					1	1		- 1	ļ
1	4			-		ı	1	- 1	- 1]
	∃		ļ	-		ı	1		- 1	- 1
1	3		1			1	İ		1	
1	±		l	- 1			İ	ļ		
50	'극			-	- 1	1	1	<i>i</i>	l	
ł	1				ļ	1	- 1	-		
ŀ	‡						1		}	
- 1	7					- 1	1		- 1	
	<u> </u>		- 1		1	1				
- 1	3		- 1			1			ı	
1	4			1		1			- 1	
1	=			-	- 1	l				
- 1	-									
- 1			PORII	IG ME	HOD					

SAUPLER TYPE

SS - DRIVEN SPLIT SPOON CA - CONTINUOUS FLIGHT AUGER
ST - PRESSED SHELBY TUBE RC - ROCK CORE

BORING METHOD
HSA - HOLLOW STEM AUGERS DC - DRIVING CASING
CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING



BORING LOG AND CONSTRUCTION OF MW- 39

Client _	CSX Transportation		LING A			ING INFO	-1-1-	.a. 8∙	-16-87	
Project	Name Skma - Acid - Linc Sludge Area	Date Started	tarv		E	Bil/ Auger	Size	<u>5 37</u>	inch	bit
Project ! Job No.	440-07-03 Boring No. MY-39	•	WELL COMPLETION INFORMATION 2-inch \$ Length 10.0 fee							
Logged	By J. Barringer	Screen Dia	1.010.1	nch	_ 1	Type	Stain	less	Steel	
Approve Drilled E	d ByAmerican Drilling Driller's NameD. Robinson	Casing Dia	2-inch	9		ength_	17.	0 ice	<u> </u>	
DEPTH IN FEET	DESCRIPTION		SAWPLE NO.	SAMPLE TYPE	SAMPLE DEPTH (in feet)	BLOW COUNTS	несочеяч	HNU VALUE (In units)	WELL COMPLETION	REWARKS
_=	SURFACE ELEVATION		"	9	34	9.0	*	I	ပ	
├ ° <u>-</u>	Compact, dark brown to black, silty fine sand with slag f	ragments at	J-1 J-2	SS	1:5	6-8-7		·		1-1
] =		(4.01)			,	<u> </u>				3
=	Loose, light orange to tan silty fine sand with some clay		J-3 J-4	SS	4.0 5.0	2-3-2	ļ			
5 -	Loose, light orange to tan slity line sand with some cas									
1 =		(8.0')	-				<u> </u>			3
10 =	Firm light gray, orange, tan and red sandy clay with silt pockets. (CL-SC)	ty sand	J-5 J-6	SS	10.0	6-9-9	<u> </u>			
1 =			1			1	1			
=	Loose, laminated coloring of rose, tan and orange, fine	· (13.5')	J-7 J-8	55	14.0	4-4-2	\vdash		目	
15	Loose, laminated coloring of rose, tan and bringer, with occasional smoky gray coarse grains and silty clay inches thick, wet. (Uppermost Aquifer) (SW-CL)	y layers, 1 to 3	3-8		13.0					
=	anches and the company of the compan	•								
· =	·	*	3-9	SS	20.0	2-3-4				
20			1000		1		\top			
1 =		(22.5')	1		1	1				
E			┥	1			1			
=	Stiff light purple, gray and orange silty clay with fine (CL-SC)	sand partings.	J-11 J-12	SS	24.0 25.0	1-3-4	1	1		XI .
25 —	(01-30)	.*	1	\vdash	1		1			
=		(27.0')		<u> </u>	↓	 	╄-	↓		
] =	Boring was terminated at 27.0' in clay. Total depth of I	MX-39 is 27.0' as	;		1	İ				
=	I de dé comenad in the unnermost aculier.					1				
30 =		•		1		1	1			
					1		1	1_	1	-
		•				İ	1	1		
1 =						1	1	1	1	
35 —									1	
=				1			1			
=	REMARKS: 1-1 HNu was not working due to rainy weather.				1		1	1		1
=	'			1	1	1				Ι.
40-	1		1	1	1	1		1		
1 :	}			1			ŀ		1	
=									Ì	
1 3		•		Į	1				}	
45 -	<u>'</u>		-			}	1			
1 =	}						1	.	1	
=	\$									1
1 =				1					1	Ι.
50						1				
:			1	1				1		1
1 =	1			1		1 .	1		}	1
=	1		1	1		1				
-			l	1						1
1	‡		-							
1 3	1			1		}		1		1
=	1			1					<u></u>	$oldsymbol{\perp}$
L	1		OBING I	UETHO						

SAUPLER TYPE
SS - DPIVEN SFLIT SPOON CA - CONTINUOUS FLIGHT AUGER
ST - PRESSED SHELBY TUBE RC - ROCK CORE

HSA - HOLLOW STEM AUGERS DC - DRIVING CASING
CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

BORING LOG AND CONSTRUCTION OF MW- 40

Project Job No Logged	DRILLING AND SAMPLING INFORMATION Toject Location Navcross, Georgia ob No. 440-07-03 Boring No. 200-00 Ogged By C. Teller Single Driller's Name D. Robinson Casing Dia. 2-inch 9 Length 10 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia. 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia. 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia. 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia. 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia. 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia. 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia. 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia. 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia. 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia. 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia. 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia. 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia. 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Dia 2-inch 9 Length 19 feet Single By Aperican Drilling Driller's Name D. Robinson Casing Driller's Name D. Robinson Casing Driller's Name D. Robinson Casing Driller's Name D. Robinson Casing Driller's Name D. Robinson Casing Driller's Name D. Robinson Casing Driller's Name D. Robinson Casing Driller's Name D. Robinson Casing Driller's Name D. Robinson Casing Driller's Name D. Robinson Casing Driller's Name D. Robinson Cas										
DEPTH IN FEET	DESCRIPTION SURFACE ELEVATION		SAMPLE NO.	SAUPLE TYPE	SAWPLE DEPTH (In feel)	BLOW COUNTS	* RECOVERY	HNU VALUE	COMPLETION		
-0-	Compact dark brown to black with silty fine sand, some bri (S%) - At 3.0° occasional black staining	ck fragments.	7=7	SS	1.0	2-5-12		5.0 6.0			
5 -	- X 3.0 CHILDREN		3-3	SS	5.0	4-11-11		0.0			
			::/P.			6-10-13	N/R		1-1		
10 -	· · · · · · · · · · · · · · · · · · ·	(13.51)	J-5		14.0	3-6-5		0.0	1-1		
15	Stiff, red, gray and tan, medium sandy clay, no black state	ining. (CL)	1-6	SS	14:8			0.0			
20	Loose red, gray, tan, and rust fine to medium sand with a sand, little silt and little clay pockets (l"). (Sw) (Uppermost Aquifer)	(18.51)	J−7 J−8	SS	28:8	2-2-8		0.0			
		(26.0')	J-9 J-10	ss	24.0 25.0	1-2-2	_	0.0			
25	Soft gray and orange fine to coarse sandy clay. (CL)	(20.0)									
30			3-11	SS	31.0	3-2-2		0.0			
35		(35.0')	-			-		-			
	Boring was terminated at 35.0' in clay. Boring hole was from 35.0' to 32.0'. Total depth of Mk-40 is 32.0' as the uppermost aquifer.	it is screened i	n .								
40	<u>-1</u>										
45											
	REMARKS: 1-1, brick clogged spoon, no sample										

SAMPLEP TYPE
SS - DRIVEN SPLIT SPOON CA - CONTINUOUS FLIGHT AUGER
ST - PRESSED SHELBY TUBE RC - ROCK CORE

BORING METHOD

HSA - HOLLOW STEM AUGERS DC - DRIVING CASING

CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING



BORING LOG AND CONSTRUCTION OF MW- 41

Client CSX Transportation Date Stated 8-17-87 Date Completed 8-17-87 Project Location Waveross, Georgia Method Mud Rotary Bil/ Auger Size 5 3/4 inch bil Job No. 440-07-03 Boring No. MW-41 Logged By C. Teller State						7 bi:				
Approve Drillad F	d By Drilling Driller's Name D. Robinson	Casing Dia2	-inch	6		ength	17.0	1555		=
OEPTH IN FEET	DESCRIPTION		SAMPLE NO.	SAWPLE TYPE	SAWPLE DEPTH (In feet)	BLOW COUNTS	* RECOVERY	HNU VALUE	WELL COMPLETION	newanks
- 0 -	SURFACE ELEVATION	(CH)	3=1	SS	1.0	4-7-6		0.0		
	Compact dark brown fine sandy silt, with coal fragments	s and roots. (Sm)	J-2							
3 -	- Becomes tan to cream fine sandy silt		J-3 J-4	55	5.0	4-8-9	-	0.0		
		(8.0')					<u> </u>	0.0		
10	Loose, tan and gray clayey fine sand with some silt, o clay seams (gray) (SC)	ccasional 1-inch	3-6 3-5	SS	10.0	3-4-3	<u> </u>	0.0		
		:	3-7	-	14.0	2-6-5	-	0.0		
=		(15.0')	<u>J-8</u>	55	14:8	2-0-5	-	-	化三	
15	Loose gray and tan fine to coarse sand with little sil biotite grains. (5%) (Uppermost Aquifer)	t, trace								
	1 '''	± (20.0°)	3-9	SS	19.0	1-2-3		0.0	田	
20-		(20.0)	13-10	 	120.0		-	1	12日	
1 "	Firm, red clay, grav and orange. (CL)	•	l	1					阻	
		(25.5')	3-11 3-12		24.0 25.0	2-2-3		0.0		
25		(27.0')	-		}	1	1			F3
	Firm gray and orange clay. (CH)		┤	+-	+-	-	+-	┿┈	╁┸┚	十
30	Boring was terminated at 27.0°. Total depth of NW-41 screened in the uppermost aquifer.	is 27.0' as it is								
		•								
35 -						,				
40 -										
							1			
45 -										
-		•								
-										
	1									
1	7		CRING	METHO						

SAMPLEP TYPE

SS - DPIVEN SPLIT SPOON CA - CONTINUOUS FLIGHT AUGER

ST - PRESSED SHELEY TUBE RC - ROCK CORE

HSA - HOLLOW STEM AUGERS DC - DRIVING CASINS
CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

BORING LOG AND CONSTRUCTION OF MW- 42

	Client CSX Transportation DRILLING AND SAMPLING INFORMATION Client Date Started 8-15-87 Date Completed 8-15-87										
Client	coma - Acid Lime Sludge Area	Date Started MethodMud_Rot	atv		Bi	I/ Auger	Size	5 3	4 inch bi	E	
Project L	ocation kaveross, deorga		ELL C	OMPL	ETION	INFORM	LATIC	۱N			
		Screen Dia2 Slot Size0.01	-inch O inch	· v	T	una S	tain.	less :	Stee!	_	
Approve	d By C. Teller American Drilling Driller's Name D: Robinson	Casing Dia2	-inch	Ø	_ L	ength_1	2.0	feet		_	
Drilled B	y American Disserts Dinier's Name			1	E	89			7		
	•		6	TYPE	E =	COUNTS	RECOVERY	HNU VALUE (in units)	WELL	2	
≖ 5	DESCRIPTION				E DEPT	S	Š	YAL Sall	WELL DMPLETIO	Š	
DEPTH IN FEET	pesonii rion		SAWPLE	SAUPLE	3 5	. ≥	Ä	2 5	* P	į	
2 2			3	3	SAMPL	BLOW	*	Ξ -	ខ		
	SURFACE ELEVATION	23) (.5.) (3-1 3-2	SS	1:3	2-4-4		0.0		_	
L° ∃	Loose, dark brown silty fine sand with flecks of coal (J-2		1.5		-	-			
1 =	Light vellow and tan silty fine sand.	(3.0')	1 1	- 1				1			
1 3	Compact, cream to tan silty clay-clayey silt. (CL-ML)	,	3-3	SS	4.0	6-2-11		0.0			
1 3	Compact, cream to tan silly tany trong 4.7 to 5.0°.	•	3-4		5.0		 	-			
5	- Very stiff, gray clay layer from 4.7 to 5.0°.		1				l	l			
=			li					1	2 23		
1 3		(8.5*)	J-5		9.0		 	-			
=	Loose to compact orange, tan and rose fine sandy clay w	ith occasional	3-6	S 5	0.0	5-6-5	<u> </u>	0.0			
10 -	coarse sand. (CL-SC)						1				
=			1 1		1		1	l			
=		d and alse.					↓	<u> </u>			
=	 At 13.0' are alternating layers of fine to medium sar Sand layers are 1.0" thick and clay layers are 2.5 	thick. (15.0°)	J=7 J=8	SS	15.0	2-3-4	1	0.0			
15 =			13		77.5			T	1853		
" =	Loose, rose fine to medium sand. (Sk)		1 1		1	1	1	1			
=	(Uppermost Aquifer)		1 1			1		i			
1 =	- At 18.0' becomes a red, cream and orange medium to co	parse sand with	J-9		12:0	1-2-3		0.0			
] =			1-10	\$5	20.0		+-	+	113		
20-	wuscovite and blottle fragients 19.8' to 20.0'		1					1			
1 =		(23.0')				1		1	10000		
=	Stiff light purple, gray and orange clay with fine same		3-11		24.0	 	╫	0.0	-		
=	Stiff light purple, gray and orange clay alth time 23.5' to 24.0' is cemented medium sand and clay laye	r. (CL-CH)	1-12	55	24.0 25.0	2-2-3	╀	0.0	-120001		
25	23.3 10 24.0 25 00			1	1	1	1				
]		1		1	1	1				
:	4		J-13	1	29.0	2-5-5	1	0.0	7.		
	3		J-14	SS	30.0	2-3-3	-		4		
30		(31.0')	(I		İ	1	1	1			
30 =	loose, tan medium to coarse sand to 31.8', sandy clay	(32.0')	٦			ļ	4-	-	2,650,250,53	_	
	(SW-SC) Boring was terminated at 32.0'. Boring hole was fille	d with sand from									
1 :	Boring was terminated at 32.0. Boring moze as 1 32.0' to 22.0'. Total depth of MW-42 is 22.0' as it	is screened in	1	'		1	-	ļ	1 1		
:	the uppermost aquifer.		1		1	1	-	1	1 1		
35 -				1	1		1	-			
i :	<u> </u>		1	1	İ	1					
- :	i		l l	1		1	1		1 1		
	3		1				ł	1			
40_	3		1		1	1		-	1 1		
	d		1					1			
- 1	╡				1	1					
	3		1			1					
45_	3		- [ł		- 1	1			
Ì	Ⅎ.				-	1	1				
	=			1	1		1		1 1		
	∃		-				1			ĺ	
1	3		ı	1	1			1		i	
50_	Ⅎ							}		l	
- 1	i			1		1		- 1			
1	4							-1]	i	
l	3							1		l	
	<u> </u>							-		i	
	±		İ			1		-		ł	
l	4					1		1		l	
1	Ε Ε					1				İ	
	<u> </u>			ᆚ						_	
L.		E	ORING	METH	00						

SAMPLER TYPE

SS - DRIVEN SPLIT SPOON CA - CONTINUOUS FLIGHT AUGER

ST - PRESSED SHELEY TUBE RC - ROCK CORE

ه, م

HSA - HOLLOW STEM AUGERS DC - DRIVING CASING CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

BORING LOG AND CONSTRUCTION OF MW- 44

Client	CSX Transportation DRILLING AND SAMPLING INFORMATION Project Name SWM - Pollution Ponds Date Started 8-14-87 Date Completed 8-14-87 Method Mud Rotary Bit/ Auger Size 5 3/4 xncn bit											
Project N	ocation Waycross, Georgia	Mathod Muc Ro	ELL C	OMPL	ETION	IV Auger S	ATIO	N				
Joh No	240-07-03 Boring No. NR-44	Screen Dia. Slot Size 0.0	2-inc	h 9		ength ypeS	tain	less	Steel			
	d By	Casing Dia.	2-1nc	h Ø	_ i	ength	18.	0 fee		<u> </u>		
N FEET	DESCRIPTION		SAMPLE NO.	SAMPLE TYPE	SAMPLE DEPTH (In feet)	BLOW COUNTS	* RECOVERY	HNU VALUE	WELL COMPLETION	REWARKS		
1	SURFACE ELEVATION		1-1			9-14-16		0.0	য়ে ত	<u> </u>		
「『耳	Dense dark brown and black silty fine sand, with small	gravel (55)	3-1	S5	1.0	9-14-10	-	0.0				
	- From 3.0' to 8.0', light gray and dark tan		J-3 J-4	SS	4.0	3-11-16		0.0				
5=		*,.				·						
		(8.0')								1		
	Compact dark gray and brown clayey fine sand. (SC)	•	J-5 J-6	ss	10.0	5-5-6		0.0				
10 =												
	the fire to medium to	(13.5') and with clay	J-7 J-8	SS	14.0 15.0	2-3-3-	-	0.0				
15 =	Loose dark brown and light gray silty fine to medium approachets and clay partings. (SW) (Uppermost Aquifer)		J-0	33	15.0							
								<u> </u>		À		
		≴	J-9 J-10	55	19.0 20.0	2-1-2	-	0.0		9		
20 =		•										
	- From 23.5° to 25.0° medium to coarse sand, light gra	y, wet. (SW)	J-1 J-1	SS	24.0			0.0				
25 =	(26.0')				26.5	Ī	-	0.0	一目			
	Firm to stiff light gray-green clay with sand pockets.	(CH)	3=1	55	26.5 27.5	1-2-3	+	10.0				
		(31.0')			<u> </u>		_	<u> </u>				
30 =	Stiff greenish-gray clay with abundant muscovite. (CH)				31.0 32.0		╀-	0.0		4-		
35	Boring was terminated at 32.0°. Total depth of Hw-44 screened in the uppermost aquifer.	is 31.5! as it is										
		•										
40						· ·						
"=	·								1			
45_												
	·											
50												
	3											
				_لــٰ					<u></u>	上		
			DAIDO	WETHE	20							

SAMPLER TYPE

SS . DRIVEN SPLIT SPOON GA - CONTINUOUS FLIGHT AUGER
ST . PRESSED SHELBY TUBE RC - ROCK CORE

HSA - HOLLOW STEM AUGERS DC - DRIVING CASING CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

BORING LOG AND CONSTRUCTION OF MW- 45

,,,,,,						/Y - 43				
Client _	CSX Transportation	DRILL	ING A	ND S	AMPLI	NG INFO	RMA'	TION	-14-87	
	Name SWMA - Pollution Ponds Location Waveross, Georgia	Date Started	tarv	_	В	il/ Auger S	Size		/4 inch	ь <u>т</u>
Project l	Location #241035, 0601722 440-07-03 Boring No. #6-45	144	E11 C	OMPL	ETION	i inform	ATIC	N O fee	•	
	Du Cameron Teller	Screen Dia. 2 in Stot Size 0.010	inch		— т	ength ypeSt	sinl	ess S	teel	_
Approve Orilled E	d By <u>Jennifer Barringer</u> by <u>American Drilling Driller's Name D. Robinson</u>	Casing Dia. 2-	inch Ø		<u> </u>	ength	2 (e	et		
Jimeo E					=	50			2	
			Š	17.86	E OEPTH leeti	BLOW COUNTS	песочен	HNU VALUE	WELL	×
7. ET	DESCRIPTION	•	7	w	O E	8	ě	3 5	WELL	REMARKS
DEPTH IN FEET			SAMPLE	SAMPLE	SAMPLE (In f	<u> </u>	E	3 5	* 8	Ē
~ =	SURFACE ELEVATION	:	60	5	\$	3	*	_	٥	
<u> </u>	Compact dark brown, fine sandy silt, with some gravel fr	gements. (SM)	J-1 J-2	SS	0.5	8-12-14		0.0	3 2	
- =	Compact dark brown, line sandy silt, with some graves	, 100	J-2	-	***					
1 =		(4.0')								
1 =		(4,0)	J-3 J-4	SS	4.0	7-16-16		0.0		
3-	Firm to stiff gray to tan fine sandy clay. (CL)							,		
_ =										
=			1 1	- 1			•			
=	- from 9.0' grades to soft silty clay	• • • •	J-5 J-6	55	9.0	2-2-4		0.0		
10 -			1-0		10.0					
1 =							ŀ			
] =		(13.51)				Į	L	<u></u>	國國	
=			3-7	SS	14.0	1-2-3		0.0		
15 -	loose tan silt and fine sand (SM)	••	J-8	33	13.0	-	-	-		•
" =						1		1		
1 =	· ·					l	l			
		^{‡.,} (19.0')	J-9		19.0	1-1-2	╁	0.0		
20 -	Loose light gray silty fine to coarse sand, clay layer	from	1-10	SS	20.0		 -	-		
""	19.0' to 19.5' (Uppermost aquifer) (S%)									
	•			,		1				
		•	3-11		24.0	2-2-1	1	0.0		
25 -	1		J-12	SS	25.0	2-2-1	-	1	₩ = 3	
"		(26.0')	-			i		1		
:	Very-stiff light green silty clay to clay (CL-CH)		1			<u> </u>				
1 3	Ve., 3021. 12g gran sand, 1		J-13 J-14	55	28.5 29.5	2-2-4		0.0		
===================================	1		3-14		2.2					
30 -		•	1			İ				
	· ·	(33.5')	J-15 J-16	SS	32.5 33.5	3-3-5		0.0		
1 3			J-16	33	33.5	-	╁	10.0	100.700.000	_
35 —	Boring was terminated at 33.5'. Boring hole was filled 33.5' to 32.0'. Total depth of MW-45 is 32.0' as it the uppermost aquifer.	with sand from is screened in								
:	<u></u>		1					1		
	•			1	1	1		1	:	
40 -	4			1						
	3		1	1			١.	1		l
	‡		1	l			-		}	1
]					
45 -	3		1	1	i	}			1	l
				l	1				1	Ì
i				1	l	1			1	ĺ
				١.	ŀ	1				l
1			l			ŀ				
50 -				1	ŀ					ŀ
	4	•	1					1	<u> </u>	
	=				1			1		
	3		1							
-	3		1	1	1					
	-			1					İ	
	3			j						
	7		1	1		1	1	j		.

SAMPLER TYPE
SS - DRIVEN SPLIT SPOON CA - CONTINUOUS FLIGHT AUGER
ST - PRESSED SHELBY TUBE RC - ROCK CORE

BORING METHOD

HSA - HOLLOW STEM AUGERS DC - DRIVING CASING

CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

٠٠.,٠



BORING LOG AND CONSTRUCTION OF MW- 46

	DRILLING AND SAMPLING INFORMATION Pale Started 10-24-87 Date Started 10-24-87											
'lienl inject f	lame Deep Monther Wet Indallation Program - ASA	Date Started <u>//</u> Method <u>//?ud/</u> 6		87	Da Bii.	ta Compl / Auger Si	eled ze -	<u> 10-</u> 53/4	24-8 Inch	<u>ح</u> ــــــــــــــــــــــــــــــــــــ		
inject L ob 110.	ocation No. Mill 46	W	ELLC		TION	INFÖRMA ngih	HOIT					
ogged i	T. Azerlager	Screen Dia 2. Siot Size o.	010-10	<i>e</i>	Ty	ماک _ pe	in less	_24-64		=		
liprov e uilled B	1 By R. Batel y American Drilling Co. Driller's Name C. Tombinson.	Casing Dia2.	inch	<u> </u>	Le	ngth4	7.0	feet		_		
DEPTH IN FEET	DESCRIPTION		SAMPLE NO.	SAMPLE TYPE	DEPTH RANGE (in feel)	BLOW COUNTS		HNU VALUE	COMPLETION	REMARKS		
<u></u>	SURFACE ELEVATION	•	포·! 포·2	ss (7.0-	3-5-7	-	.0!				
=	Compact dark brown sandy silt, with roots (5H)		T-2		~- -		\neg	-				
Ξ	- Dor't den and brown Silty fine sond from 110"	(3.0')	11					'				
=	Pense death for and gray clayey sand with numerous (se) C'ay Portets and Anthres	,	7.3	55	3.5- 5.0	5-9-21		0.0	֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	1 -		
5	- At mornia Seved scams from 4.0°	: . (සං)										
١ :	Louse to compact clark gray and tan Silty fine sand (SM)		J- 5 J- 6	55	8.5- 10.0	12-12-10		0.0	9 11			
10 -	233. 2 4/		1		,,,,,			[
					·					Cast		
1	- Loose donk ten and red from 13.5'	•	J- 7 J- 8	55	13.5	4-5-7	1	0.0				
.5 -	(Isppermest ogustur)	•	-							1		
:		, t.	.	1	1			, þ				
		*	J-9	 	18.5-	 			41 1.			
	- Granes into fine to course Sound, with clay Lominac for	m 19.0 "	3-10	35	20.0	1-1-3		0.0		-		
20 -	<u> </u>		1.						41 1	4		
			1	1	1			1	JI h			
.	- compel to dense dank tan and red from 23.0'		7-11	55	23.5	3.4-6		0.0				
25 -	3		J-12	+	25.6	,	1			11 -		
	∄								ill l			
	<u> </u>	•		↓	 	 	┼—		AI I	ı İd		
1			_ 5-1	3 55	30.0		,	0.0	MI	III .		
₹9.			· [7		1		, lil 1			
	<u> </u>	(33.0')	, I				1					
	- I will care constituted a	•		-	33.5	+	+-		HI I	33.5		
35	Wery state dark gray clay with some comented (CH	ر. د	7-14 1-16 1-16	55	35.0	2-8-10	' 	0.0		81 ·		
155	fine to medium Sand				1		1					
	3	(38.5	_ ا د					 				
-	- We do not all disconnected.		2-1		38.5		اد	0.0				
40	- Very close green-gray clay and dense exmented (SP-c)		<u> </u>		7							
	mclim to couse sand.	•	1	.	-					42.0		
	3		-		43.5	 	+-	+	1115			
		•	MR	55	45.0	15-16-1	4 0%	0.0	1115			
45		•		1	1	1		1	IFE:			
		• _										
		(48.5	3-1	4	48.4	5 6 5	,	1	1115			
50	- Compact light brown silty fine to medium Sand, with		3.2	55	50.	5-3-1	-	0.0	1113			
= 0	- numerous clay partings	CSMJ		1.	1.			1	11115	H		
1][]			
	- Numerous clay scams from 53.5' to 59.0'		J. 7	1 55	53.	5 5-7-6	T	0.0	1115	11		
55	4		12.5	3	33.	-	1	1	1版			
1	•		1	1.					<u> </u> }}	1		
-			L				4-		103			
	- Don't greenish gray mealing to course granted same s	1 '- 63'	2.3		58· 60.	0 10-18-2	5	0.0	11:	111_		

SAMPLER TYPE
SS - DRIVEN SPLIT SPOON CA - CONTINUOUS FLIGHT AUGER
SI - PRESSED SHELBY TUBE RC - ROCK CORE

HSA - HOLLOW STEM AUGERS DC - DRIVING CASHIG CFA - CONTINUOUS FLIGHT AUGERS NO - MUD DRILLING



BORING LOG AND CONSTRUCTION OF MW- 46

	· · · · · · · · · · · · · · · · · · ·				71 M	W- 46				
'lient	CSX Transportation					ING INFO	AMR	TION		
Tujoct l	Jame Deep Monitor Well Installation Program - ASR	Date Started	2-20-	27		Dale Com				2.7
tojeci L Juli IIo.	ocation blayeras Grazia 440-09-08 Boring No. Mw-46	MethodMus_A				BII/ Augei N INFORK			e inch	
ugged	By J. Barringer	Screen Dia2	. 0 12	ch do	t	engih	20	feat		
/pprove	1 By _R. Pates		2.010			Type			tre!	
Tilled B	y American Drilling Co. Driller's Name C. Tamlinson.	Casing Dia.	,	<u> </u>	<u> </u>	engih	47	444		
DEPTH IN FEET	DESCRIPTION SUNFACE ELEVATION		SAMPLE'NO.	SAMPLE TYPE	DEPTH RANGE (In feet)	BLOW COUNTS	* RECOVERY	HNU VALUE	WELL	REMARKS
			├—		<u> </u>				1922	-
=	Dark greenish gray silly medium to coanse sound (SM) (Continued)					1				
=		· (63.6)	<u>.</u>		ŀ					62.0
Ξ	Shiff, dank grainish gray sandy clay, with humerous Co		J-25		43.5	<u> </u>				
65 =	blue clay seams	رـــ	3.26	55	65.0	24-27-41		0.0	1818	
=	J ** " J	•		Į į	ŀ	1				١, ١
=		· . (48.6'			1	I	1			67.0
=	Very donce light greenish gray and light brown meature to can		L	<u> </u>	40 -		 	<u> </u>	:::::	1
7, =	A - A - A - A - A - A - A - A - A - A -	(5W) (70.0	J-27 J-28	55	70.0	21-30-28	1.	0.0		1
70 -			1	Γ -	Γ -	Τ	ΤΞ	Γ	<u> </u>	Ι.
=	Notes: . Boring terminated at 70.0'					1	1		1	
=	· Total depth of MW-46 is 67.0° as It 13	•	1		1			1	1	
] =		•	1	1	l		1	1	1	
=	sneamed in the lower permeable zone (42-82')	•	1				1	1	1	-
l =	•		١.			ł	1		l	l
=		/ *·		i	1					i i
=	•		ł	ļ		1				1
_			1.	l	1	1			İ	-
=			1	ļ		1	1			1
=						1.		1		
1 =	·		1:	l	1			1	1	1
1 =			1:	1	1	1	1	1	1	
1 =				1	1		1	1	1	
1 =	/			1	1		1	1	1	ł
1 =	'		1		1		1	1	1	l
=						1		1		1
=						1		1	1	1
=						1		1	ŀ	
=		***	1.		1	1		1		
=		•		1	1			1	1	
1 =		•		1				ı	1	.
=				1			1		1	1
=		•	1	1	1		1	1	1	
1 =	·		1	1		1	1.	1		1
-			1		1		1	1	1	.
=	1		1	1				1	1	
1 =]		1	1	1		1	1	1 .	
1	1				1	1 .	1	ļ		1
1 :	1	•			1		1	1	1	
=	1	•		1	Ì			1	1	'
=]				1			1		
:				1	1	1		1	1	1
	· ·				1					1
-					1	1	1			.
				1.	1	1		1	1	1
1				1	1.	1			1	1
:			1.		1	1	1	1	1	
1 :				1	1	1	1	1		
1 7					1			1	1	1
1 :			1		1			1	1	
	:				1		1	1	I	Ì
1 .	• [ı	1	1	1	1	1	ŀ	1

SAMPLER TYPE
SS - DRIVEN SPLIT SPOOT CA - CONTINUOUS FLIGHT AUGER
ST - PRESSED SHELBY TUBE RC - ROCK CORE

BORING METHOD

HSA - HOLLOW STEM AUGERS DC - DRIVING CASHIG

CFA - CONTINUOUS FLIGHT AUGERS MG - MUD DRILLING

ı

ERT

A RESOURCE ENGINEERING COMPANY

BORING LOG AND CONSTRUCTION OF MW- 47

'lient	CSX Transportation		DRILLI	NG ·A	ND S		G INFO					
Tonect !	lame Deep Menther blett Trabilition Agence - ODSA D	ale Started				Da	te Comp / Auger S	leted Ize	53/	25.	87	_
lub Ho.,	440 -09 -03 Boring No. MW-47		WE	LL C	OMPLI	FIOIT	INFORMA	TIOI	1			_
LILLIOVA	t By R. Paick	creen Dia. Iot Size		210 In	ط.	_ Ty	pe	teini	وسيون	44		_
hilled B	y American Drilling Co. Driller's Name C. Tomlinson C	asing Dia.	2,	0_/nc	<u>6</u>	<u> </u>	ngth	42.0	fee.			=
DEPTH IN FEET	- DESCRIPTION			SAMPLE NO.	SAMPLE TYPE	DEPTH RANGE (In foot)	BLOW COUNTS	* RECOVERY	HNU VALUE	WELL	SAM AND O	HEMAIN
- =	Compact, deat brown and block silly fire send, with grown fill	(sm)		J- Z	55	1.5	11-12-11		0.0			_
5	black stains (HNU reading also units)	: .		J-3	55	3.5	6-4-4		100.0			•
E	Elightly from, dark ten and brown sandy clay, (CL)		1	J-4 J-5	35	8.5	4-4-10		٥٠٥			- 1
10 <u> </u>	with momenous fine sample partings		1			10.0					11.	
15	- dark ten and grey from 15.0'	•		J-6	25	13. S 15. O	8-27-20		2.0		ď	83/m
=			(0.71									
	Louse, dank gray sitty fine sand (SM)	3,5				10.5					1.1	
	(upperment aquitor)	•	ĺ	丁- 7 ゴ・8	55	18.5	4-5-5		0.0			
20 -	·		21.0')	7.0		21.0		_			ľ.U.	,
:	Shift, dark gray sandy clay to claying sand, (cc-5c)			7.10	55	21.0	4-7-8	-	0.0	.[]]	M.	.11.3
1] _ with matter cod banker			3-11	55	23.5	2-5-7	 	0.0		Ш	
25 -	If fine to coarse sample 23.5"	t:	26.0)	3-12	133	25.0		-	10.0	111		-
1 :	Frm to shift, dank granish gray clay . (CL)			İ	ĺ		Ì					
1 3	with numerous sandy partings and poeters			<u> </u>	<u> </u>		<u> </u>	<u> </u>	ļ	. "	41	
	, , , , , , , , , , , , , , , , , , ,		·	J-14	55	30.0	2-2-4		0.0			
30 -	<u> </u>		٠						1			
							Ì					
				J- 15	55	33.5	3-4-4	\top	0.0		18	
35 -	- Sand Irns ad 35.0'		•	3-16	137	35.0	3-4-4	┼─	10.0	KF.		•
				1	ł					:L	_!:	% 7· c
			<u>(38.6)</u>			<u> </u>		ļ	 			•
	Compost, what gray and light brown clayey sand (SC)			~/R	55	38.5	10-12-12	0%] :[:		
40 -									1			
1	-		(43.0')]		l	1					
	- Compact to dense, dank gray and light brown fine .			J-17 J-18	+	43.5	12 14 16	T	1	1		
45 -	to medium to cooks sand, wet (SW)	•		J-18	55	45.0	13-14-19	+-	0.0	4		
	(Lower Permentic Zone)			İ				1				l
]						1	1		<u>L</u> _			İ
1	- -	•		J-19	55	48.5 50.0	7-17-25	;	0.0] ;		ĺ
50 -	∄ :			1	1.	1		1	1	711		
	<u>.</u>		/ma .41	J							判	52.0
	From the state of the state of the state of		<u>(53.6°)</u>	J-21	-	53.5		+-	+-	-111		
55 -	From to shift, dark greenish gray clay, with numerous	L-Sc)		J-22		55.0	10-4-4	+-	0.0	식태		İ
-3	fore to medium Clayer Sand from '54.5'		4 m= - 10	J- 23	55	55.0 56.5	4-5-6	_	1.0	111		
	•		(57.0	1			1				-:-	57.6
.	Very Shill, dark greensh Groy Sandy clay with numerous (c) Sand pockets and packets	,	leads	J. 25 J. 21	55	58.5	8-8-10	1	3.0			

SAMPLER TYPE

25 - DRIVEH SPLIT SPOON GA - CONTINUOUS FLIGHT AUGER

21 - PRESSED SHELBY TUBE RC - ROCK CORE

BORING METHOD .

HSA - HOLLOW STEM AUGERS DC - DRIVING CASHIG

CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

Notes: . Boring terminated at 60.0 feet

. Tetal depth of MW- 67 14 57.0 " no it is screened in the laws America Tono 127.0' er 1'

7.0

BORING LOG AND CONSTRUCTION

^	n E .	SOUNCE ENGINEERING COMPANY					V = 40				
Clier	11	CSX Transportation	Data Started 3-	17_88		D.	NG INFO	olete	تد-د ه	7-88	
A		Name Off-site Investigation: ASB	Mathed Mid Det			Ri	I/ Auger	Siza		Ti's in	
inh	610	2130-005-002 Boring No	Screen Dia. 2 1			- 1 1	anaih 16) fr			
		By R. Patel d By C. Teller Dilling Dilling Collecte Name G. Degroot	Siot Size 0.010 Casing Dia. 2 1	ــــــــــــــــــــــــــــــــــــــ		T	ype _304 ength_15	<u>sta</u>	inles		1
Drill	ed E	y American Drilling Driller's Name G. Degroot	Casing Dia.	'	=			_	$\overline{}$		
DEPTH	IN FEET	DESCRIPTION SURFACE ELEVATION		SAMPLE NO.	SAMPLE TYPE	DEPTH RANGE (In feet)	BLOW COUNTS	* RECOVERY	HNU VALUE	WELL	REMAHKS
_	۰-	Loose dark brown sandy silt, with roots (SM)		J1 J2	SS	7.0	3-2-4		0.0	\prod	
1.	=	Loose dark brown series and a series								i	
	<u>=</u>	114 harman stance files to medium sand	(3.01)			3.5		 			1 1
5	Ξ	Dense dark tan and light gray clayey fine to medium sand roots to 4 ft (SC)	,	14	SS	3.5 5.0	11-26-40	 	0.0		
	Ξ						1	1		! <u> </u>	
	=	· ·						<u> </u>	<u> </u>	111	
	Ξ			16 16	SS	10.0	2-12-14	1	0.0		
10	-		•							111	1.
	-		•				1	-	1	b t	すじ
	=		(13,5')			117 5	 	+	+		<u> </u>
		Hedium dense dark tan, light gray and red silty fine to occasional coarse grains and gravel at 15 ft (SH)	medium sand,	J7 J8	SS	13:8	7-5-5	╄	0.0	1:11	
1	• -	-16.5' medium to coarse		320	SS	18:3	8-8-12	╀	0.0		
		-10.0' clayey, with numerous clay partings to 18 ft	/ (18.0')	312	SS	17:0	3-2-5	1	0.0		
ı		Medium dense dark tan, light gray, and red medium to coa	rse sand,	113	二	1		 	=	4: [s]	
2	o -	silty with some fine sand to 19.0 ft (SP)	•	314	SS.	28:3	5-8-13		0.0	- ::F:	
		-21.0' some gravel	•	J15 J16	SS	21.0	4-14-20	,	0.0		
		-22.5' clay pockets and partings		317			Ţ	\mp	+=	7:12	
1.		-23.0' dark red and light brown, some fine gravel to 25		J18	55	27:5	9-10-12		0.0	1:15	
2	5 -		•	J19 J20	SS	25.0 26.5	5-7-10		0.0		
1		7-26.5' some fine to medium gravel	(28,0)	121	ss	33:3	14-14-1	1	0.0	7:12	: -,
		Medium dense dark yellow clayer fine to coarse sond, son	ne gravel (SC)(291	U22				=	_	Ⅎℍ	
3	0 -	Very stiff light green and tan silty clay, numerous sand	l partings and .	324	SS	29.0 30.5	10-14-	14	0.0	4:1	
		Pockers (CD)		125	SS	32.5	10-15-	2 d	0.0	7	
				4	-	1		\top		7-	띡~
	•	Boring terminated at 33.0 ft		1.		1.			1	1	
3	5 -	∃		1					1		
		∃							1	1	
- 1		4				1		1			
l	٠.	∃			1	.	1			1	-
	-	3		-		-	1			1.	
		3					ł	1	-	1	-
		3		1.							
		<u> </u>		-							1
		3							-		
		\exists							Ì	1	į
		4						- 1	ļ.		- 1
		<u> </u>			١.	1					
- 1		=				-					1
		3		1		1		1			
$-\cdot$		4		1					1		
		3								1	
		4				1	1 .		1		Ì
- 1		=				1	-				
1		· 크	*	i	١	-	1	l	1	1	1

SAMPLER TYPE

SS - DRIVEN SPLIT SPOON CA - CONTINUOUS FLIGHT AUGER

ST - PRESSED SHELBY TUBE RC - ROCK CORE

HSA - HOLLOW STEM AUGERS DC - DRIVING CASING CFA - CONTINUOUS FLIGHT AUGERS HO - MUD DRILLING



A RESOURCE ENGINEERING COMPANY

BORING LOG AND CONSTRUCTION OF MW- 49

	CSX Transportation		LING AND S	AMPL	ING IN	FORMAT	ION		
Client <u> </u>	Isma Solid Vaste Phase III	Date Started	6-17-88 Rotary	ç	ale Co otal D	omplete: epth	<u> </u>	6-17-FE Inches	
Deninet I	ocalion Wayeross, GA 2130-001-003 Boring No. MW-49	Method <u>Kud</u> V	VELL COMPL	ETION	INFO	RMATIO	N		
Job No. Logged i		Screen Dia	2 inches	\	engih ,		10 f	ect	
Approve	d By	Stot Size	0.010 inches	<u></u>]	ype _ ength		13 [eet	
Drilled B	y American - Tim Lohner	Casing Dia	1				7		=
OEPTH IN FEET	DESCRIPTION		SAMPLE NO.	SAMPLE TYPE	DEPTH RANGE (IN FEET)	BLOW COUNTS	HNY VALUE	WELL COMPLETION	ЯЕМАЯКЗ
]]	SURFACE ELEVATION							21 10	
l ° d	Medium dense gray fine sandy silt, little clay. (ML)	,			·				
=			J-1	55	3:8	2-3-3	7.0		
, =	•	•							. 1
		(8.5')							
=	Stiff gray fine sandy clay. (CL)		J-2	SS	8.5	4-5-5	25.0		
10 7	•								
3		(13.51)			133.5		-		
15 =	Loose tan and orange bedded silty fine sand. (SH)	· .*.	J-3	55	13.5 15.0	2-1-2	0.0		
, 1									
• =			3-4	55	18.5	2-1-2	-		
20 =	- 20' Light gray and pink bedded				20.0	<u> </u>			
Ξ		(23.0')							
. =			႕	<u> </u>					
1 =	Stiff gray and yellow sandy clay, occasional sand parti	ings. (CL)	J-5	55	23.5 25.0	4-5-7]()(١.
25									
=	,	(28.0*)							j
) <u>=</u>				1					}
30 =	BORING TERMINATED AT 28.0 FEET BACKGROUND HNu = 0.0 UNITS						1	1	•
=	מונגיוט אווע - פיט טויגגט								
=									
] =									
35 —]								.
	1						1.	1	
=				1					
						1		1	
40 -	1			1				1	'
1 =	3	•					1		
	‡				1				
1 3	3								.
45 -									'
1 3					1				
1 3	1			İ					
	4								.
50 -	3					.	1		
:	1						1		
1 3	₫.								
:	‡								1.
55 -				1					
1.	<u> </u>					1			
1	•			1		1			
1 :	₫					1 _			丄

SAMPLER TYPE
SS - DRIVEN SPLIT SPOON GA - CONTINUOUS FLIGHT AUGER
ST - PRESSED SHELBY TUBE AC - ROCK CORE

HSA - HOLLOW STEM AUGERS DC - DRIVING CASING CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

ERT

A RESOURCE ENGINEERING COMPANY

BORING LOG AND CONSTRUCTION OF MW- 50

Client _	CSX Transportation	Data Starled	LING AND 57 6-16-88	AMPLI	NG IN	AMRO	d NOIT	6-16-88	
Project !	ocation Waveross, GA	Method Hud R	ntary	T	otal D	epih	6	inches	
Job No.	21302001-003 Boring No	Screen Dia.	VELL COMPLI 2 inches	_ L	ength,		10 fe	et	
Logged	d By	Slot Size	0.010 inches 2 inches		ype _ ength		55 12.5	[eet	
Drilled B	y <u>American - Tim Lohner</u>	Casing Dia.				==	=		\equiv
DEPTH IN FEET	DESCRIPTION		SAMPLE NO.	SAWLE TYPĘ	DEPTH RANGE (IN FEET)	BLOW COUNTS	HNU VALLIE (IN UNITS)	WELL COMPLE TION	REMARKS
┡╺┥	SURFACE ELEVATION		 					51 5	$\vdash \vdash \vdash$
	Stiff gray, red, and yellow silty clay, some fine to med	ium sand. (CL)	! . !						
i =		•			3.5		-		
1 . 3			J-1	\$5	5.0	3-6-9			
7日								Charles of	
=		(8.5')			1				
=	Dense light gray and pink streaked sandy silt, little to		J-2	55	8.5	6-8-9		倒长	1
10	Dense vient Brul and brut acreaved samel aver trees							判問	1
=	•	(12.0*)	4 1		1				
=	Loose brown and tan fine to medium sand, some clay pocke	ts. (SP)			13.5		 		
∃	•	.	J-3	55	15.0		 		-
15						1			
1 =									
] =	- 18.5' Light gray and pink bedded, little to some silt.		J-4	\$5	18.5	2-2-2	0.0		
20		•			20.0		1	183	'
=		(23.0')						FH	
Ξ			J-5	\$5	23.5	3-3-4	1	18 I	
25 _	Stiff yellow bedded sandy clay. (CL)				12.0		T	<u> </u>	.
"=									
=		(28.0')	4					للل	-
=		·							
30 =	BORING TERMINATED AT 28.0 FEET BACKGROUND HNu = 0.0 UNITS								
=									
=									
35 -									
- =									
] =									
=								-	1.
40 -					1				
	1	•						1	
					1				
45_									
7 =	·								1
=	·								
=	1				1	1			
50				'	1				
=	·								
=	3								
=								1	1
=	<u> </u>								
1. 3									
	3								
1 4				<u> </u>	ــــــــــــــــــــــــــــــــــــــ				

SAMPLER TYPÉ

35 - DRIVEN SPLIT SPOON GA - CONTINUOUS FLIGHT AUGER
ST - PRESSED SHELBY TUDE RG - ROCK CORE

BONING METHOD

HSA - HOLLOW STEM AUGERS DC - DRIVING CASING

CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING

ERT

A RESOURCE ENGINEERING COMPANY

BORING LOG AND CONSTRUCTION OF MW- 51

oni CSX Transportation	Date Started	LING AND S. 6-16-88	Da	NG INF ste Co stal Di	mpiete	 ٥	16-88 Inches
inet Location Waycross, Georgia	11-15-4	WELL COMPL	ETION	INFO	OITAME		
2130-001-003 Boring No. 199-51	Screen Dia	2 inches	Le	ngth.	11	lect	
gged By Cameron Teller	Slot Size	0.010 inches		pe			
proved By	Casing Dia	2 inches	L	ngth .	3 /	cet	
lled ByAmerican - 118 Connet		T	Т		8		_
		Š	SAMPLE TYPE	DEPTH RANGE LIN FEET)	BLOW COUNTS	HN VALUE	COMPLETION ASMARKS
		ایتا	5 1	2 22	8	\$ \(\bar{\pi} \)	WELL DIAPLE TIO
DESCRIPTION		SAMPLE	#	ΞZ	≥	₹z	3 3
DESCRIPTION] \$ [3	₩ =	2	ž=	8 "
OZ		1	"				
SURFACE ELEVATION		-					1 131
Hedium dense tan and yellow fine sandy silt. (ML)		1		- 1		[3	
		1					4 1:4
						 	
7 .		J-1	55	3.8	6-10-7	0.1	31 131
	***	-					
5 그		1			1	1 1	81 P.M
1				ŀ	1	1	3 13
=			 	8.5			
		J-2	SS	10.0	17-14-1	2 0.1	
- total accepted some clay.		 	 		 	1	
10 - 10° Tan, yellow, and pink streaked, some clay.		1	1	1	1	1 1	
∄ .		1	1	1	1	1	3 3
3	(13.5)) [1	<u></u>		4	前間
			55	13.5		0.1	周周
Stiff light gray clay, with occasional silty sand parti	ngs. Red Streaks	J-3	1 33	15.5	4	+	
15 at partings. (CII)		1	1	1	1		
=	(17.0	<u>') </u>	1		1		[% -1-1
The second secon	livele to some		1	1	1		% [-]
Loose light gray with pink streaks fine to medium sand,	, little to some		-	18.	2-3-3	0.1	
⊒ silt. (SN) ·		,3-4	5.5	20.0	2-3-3	- '''	
20 🗖			1 .	1	1		
<u> </u>		1	1	1	1	1	NE3: I
Ⅎ '	•					┦—	ME4 : 1
7			7	23.	٠	١.,	
4		J-5	SS	25.	3-4-5	0.1	1% (-1%)
25 = - 25' Little clay in pockets			·				
25 - 25' Little clay in pockets		l	ļ	1	1	1	
		ł	1	1	1	1	$\mathbb{F} \cap A$
≐							1111
i	•	J-6	SS	28. 30.	8 3-2-7	7 0.1	
30 = - 30' Light gray and yellow, little clay throughout.	Little coarse			1	-		7/1 *
30 - 30' Light gray and yellov, little clay through		1		.1	1	l.	نللا
sand grains.		L			-		
7		J-7	ss	33.		6 O.1	
7	(34.0	27	"	34.	5		_]
Stiff gray, yellow, and deep red clay, little fine sa	ind grains. (CII)	/		1			1
35 Still gray, yellow, and deep red clay, still		/	1	1	1	- 1	1
⇒ \		/			1		
┧ \	, /	1	1	1	ı	1	1
∃ \	(34.5')		1	1	1	1	1
<u> </u>		l		1	.	- 1	1
BORING TERMINATED AT 34.5 FEET		1	1	1	١.	1	
BACKGROUND HNG - 0.1 UNITS			ı	١	1	Ì	1
⊐		1	1	ı	1	1	1
∃			1	1	1	l	
. ∃			ı	1	1	1	}
· ¬			1	1	- 1	1	1
45 —	•	1	ı	1	١	1	
= = -			ı		- 1	ŀ	1
i		l	1	1	- 1	ı	
: 크		1	1	-	1	ĺ	1
7		ĺ	1		-	- 1	1
i <u>.,</u> 7		ì	1 -	·		1	1
50 —			- 1	- 1	1	- 1	1
1 ±		1	l		[ı	
1 1		1	ı	1	1	1	1
			- 1		- 1	- 1	1
1			i		1	1	1
I ., _ I]	- 1	ı	I		
│ ⁵⁵ 국		1	1	-	1	l	
1. 🕽			1	- 1	- 1	1	
Ι ∃ .		1	ı		1	- 1	1
		į.	- 1	1	1	l	1
	-		1_				

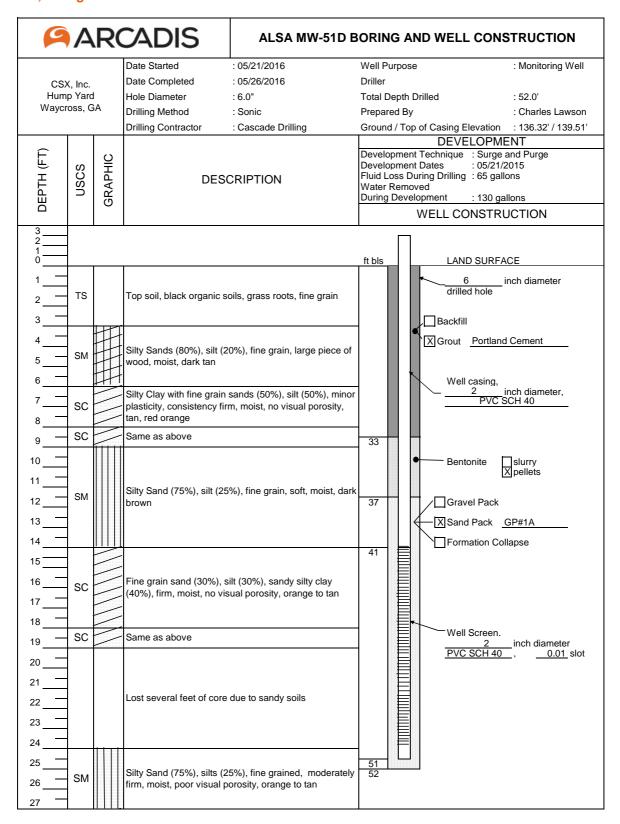
SS - DRIVEN SPLIT SPOON CA - CONTINUOUS FLIGHT AUGER ST - PRESSED SHELBY TUBE RG - ROCK CORE

BORING METHOD

HSA - HOLLOW STEM AUGERS DC - DRIVING CASING
CFA - CONTINUOUS FLIGHT AUGERS MD - MUD DRILLING



ALSA Well Construction Logs - June 2016 CSX Transportation, Inc. Waycross, Georgia





ALSA Well Construction Logs - June 2016 CSX Transportation, Inc. Waycross, Georgia

	CL	 Clay, small lens, consistency firm, moist, gray	
28	SM	Silty sands, fine to medium grain, density soft, saturated, moderate visual porosity, orange to tan	
36	SM	Silty Sand (80%), silt (20%), with some clays, stiff/firm, moist, gray to orange	
37 <u> </u>	СН	Fat Clay, high plasticity, firm, moist, no visual porosity, gray	
39	СН	Same as above	
40 — 41 — 42 — 43 — 45 — 46 — 47 — 48 — 49 — 50	SP	Silty Sand (80%), silt (20%), fine grained, soft, quartz feldspar, sub-angular, saturated, moderate visual porosity, yellow to orange	

SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-52

Client : CSX TRANSPORTATION INC.
Project Name : PHASE IV - ACID LIME SLUDGE AREA Project Nome: PRASE IV — ACID LIME SLUDGE ARE Project Location: WAYCROSS, GEORGA
Job Number: 2130—001—004 Boring No: MW-52
Logged By: CAMERON TELLER
Approved By: RAAJ PATEL
DINING BY: AUFEICAN OPHING

DRILLING AND SAMPLING INFORMATION

Date Completed: 1-31-89 Total Depth: 58 tt Date Storted: 1-25-89 Method : MUD ROTARY

WELL COMPLETION INFORMATION Length: 15 ft

Screen Dia : 2 inch SS CONTINUOUS Type: 0.010 inch Stot Size :

Length: 38 ft Cosing Dia: 2 inch Drilled By : AMERICAN DRILING - TIM LOHNER DESCRIPTION 孝 SURFACE ELEVATION: Compact light tan silty fine sand (SM). 5-0 NA J-1|SS|NA 5 0 Dense orange and tan silty fine to medium sond and stiff clay U-2|55|NA 10 -(SC-CL). Loose light gray and tan silt (ML). 2.5 0 SSINA 15 - Very stiff dark orange fine sandy clay (CL). Loose pink, prange, and yellow silty fine to medium sand (SM), little clay in 1/2 inch seams. Ø NA J-4|SS|NA 20 -Very stiff tan, gray, and orange fine to medium sandy clay (CL). NA U-555 NA 25 gray with little orange in seams, little fine sand in -- 28.5' NA 12.75 J-6SS NA 1/4 inch zones and partings. 30 some medium to coarse sand in 6 inch sandy zones, NA 4.0 - 33.5' AN 22 T-U consistency varies with depth. 35 7 NA J-8SS|NA Compact gray silty fine to medium sand (SM); at the top of this 40 stratum is a 1" black layer with pyrite coarse gravel. -- 43.5' very dense, little fine sand, little silt. Ŗ NA NA J-9SS NA 27 45 -- 48.5' compact, some clay in 6" clayey zones NA NA. -1¢SS NA ή grain size of sand decreases to fine 50 sand at bottom of sample. ₹. NA NA U-1|SS|NA Hard blue-gray medium to coarse sandy clay (CL). Boring terminated at 58 ft.

SAMPLER TYPE

SS - DRIVEN SPLIT SPOON ST - PRESSED SHELBY TUBE RC - ROOK CORE CT - CONTINUOUS TUBE

BORING METHOD - HOLLOW STEM AUGER CFA - CONTINUOUS FLIGHT AUGERS



SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-53

Client: CSX TRANSPORTATION INC.
Project Nome: PHASE IV - ACID LIME SLUDGE AREA
Project Location: WAYCROSS, GEORGA
Job Number: 2130-001-004 Boring No: MW-53
Logged By: CAMERON TELLER
Approved By: RAAJ PATEL
Drilled By: AMERICAN DRILING - TIM LOHNER

DRILLING AND SAMPLING INFORMATION

Date Completed: 1-27-89
Total Depth: 30.5 ft 1-27-89 Date Started:

Nethod: MUD ROTARY

WELL COMPLETION INFORMATION

Screen Dia: 2 inch

Slot Size: 0.010 Inch

Type: 55 CONTINUOUS

Length: 15.5 ft Casing Dia: 2 inch

	BY: AMERICAN DRIENTS - IIM EDITATIN	,					0: 1			$\overline{}$
DEPTH IN FEET	DESCRIPTION .	SAMPLE NO.	SAMPLE	RECOVERY (FEET)	BLOW COUNT	HNU READING	ENETRONE TEI Reacinio	GRAPHIC LOC	CCAPLETION	WATER LEVEL
	SURFACE ELEVATION :	10		<u> </u>		-	<u>a</u> _		X 10	+
	Loose black and brown fine to coarse sand fill (SW).		SS	NI A	<u></u>	0	NA			
5 -	Loose tan silty fine sand (SM).	<u>J-1</u>	<u> </u>	MA	-,,, -	<u> </u>	11/			X -
10	Dense gray, orange, and red clayey fine sand (SC) to fine sandy clay (CL).	J-2	55	NA	11-24-22	0	3.25			X -
					5					
15	Dense light ton to light pink fine to medium sand (SP), some silt.	<u> </u>	SS	NA	11-16	0	NA			-
20-	18.5° compact	J-4	SS	NA	12-10-5	0	NA			-
	23.5' tan and orange, little hard clay in 1/4" seams.			<u> </u>	7					
25	== 25,5 tall and orange, inthe field day in 17 . Testino.	<u>1 – 5</u>	33	NA	7-7-	NA	NA			-
30-	Very stiff gray and yellow clay (CH), little silt, little fine to medium sond.	J−6	SS	NA	7-9-12	NA	3.5			-
	Boring terminated at 30.5 ft.									
35 -										-
40-										-
			,							
45										
50-									·	-
55 -										
	SAMPLER TYPE			BOR	ING N	ETHO	D.,	_	REVING (<u></u>

RC - ROCK CORE CT - CONTINUOUS TUBE SS - DRIVEN SPUT SPOON ST - PRESSED SHELBY TUBE

HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUGERS



SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-54

Ciient: CSX TRANSPORTATION INC.
Project Nome: PHASE IV — ACID LIME SLUDGE AREA.
Project Location: WAYCROSS, GEORGIA
Job Number: 2130-001-004 Boring No: NW-54
Logged By: CAMERON TELLER
Approved By: RAAJ PATEL
Drilled By: AMERICAN DRILING — TIM LOHNER

DRILLING AND SAMPLING INFORMATION

Dote Started: 1-25-89

Method: MUD ROTARY

WELL COMPLETION INFORMATION

Screen Dia: 2 inch

Slot Size: 0.010 inch

Casing Dia: 2 inch

Length: 10 ft

Type: SS CONTINUOUS

Length: 17 ft

Drilled	By : AMERICAN DRILING - TIM LOHNER Casing Dia : 2 Inch)		Le	ngth	; ;	/ 11			
· DEPTH IN FEET	DESCRIPTION SURFACE ELEVATION:	SAMPLE NO.	SAMPLE	RECOVERY (FEET)	BLOW COUNT	HNU READING	PENETROMETER READING	GRAPHIC	COMPLETION	WATER LEVEL
	Loose dark brown to black sandy silt and fine gravel fill (SM—GP). Moderate petroleum odor.		55	NA	2-2-3	0.2	NA			
5	•				82					1 1 1 X 1 X 1 X 1 X 1 X 1 X 1 X 1 X 1 X
10	Dense brown silty line sand (SM). Slight petroleum odor.	<u>J−2</u>	SS	NA	6	0.2	NA			ארא ארא
15	Dense white fine sand (SP), trace black grains. Slight odor. Trace soft white clay in 1/2 inch seams.	J—;	SS	NA	11-20-16	0.2	NA			-
20	18.5' loose, silty, some medium sand, trace clay, no odor.	J- 4	SS	NA	8-4-3	0.0	NА			-
25	23.5' orange, clayey, fine to medium sand grains. Stiff light gray silty clay (CL), trace fine sandy seams.	1-:	SS	NA	19-51	NA	NA			
		J	SS	NA	1	NA	1.75			
30	Boring terminated at 32 ft.								<u> </u>	
35										
40										-
45-										-
50										
111111										
55 -							•		·	
=		<u> </u>		<u>L</u>	NG I					

SAMPLER TYPE

RC - ROCK CORE CT - CONTINUOUS TUBE SS - DRIVEN SPLIT SPOON ST - PRESSED SHELBY TUBE

BORING METHOD HSA - HOLLOW STEM AUGER CFA - CONTINUOUS FLIGHT AUGERS

SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-55

Client: CSX TRANSPORTATION INC.
Project Name: PHASE IV — ACID LIME SLUDGE AREA
Project Location: WAYCROSS, GEORGIA
Job Number: 2130-001-004 Boring No: MW-55
Logged By: CAMERON TELLER
Approved By: RAAJ PATEL
Drilled By: AMERICAN DRILING — TIM LOHNER

DRILLING AND SAMPLING INFORMATION

Date Started: 1-25-89
Method: MUD ROTARY
WELL COMPLETION INFORMATION
Screen Dia: 2 inch
Slot Size: 0.010 inch
Length: 10 ft
Length: 17 ft

pproved by	AMERICAN DRILING - TIM LOHNER	Casing Dia :			: 17 11	
	DESCRIPTION		PLE NO.	WPLE COVERY FEET) BLOW	READING TROWETER EADING	1::5

DEPTH IN FEET	DESCRIPTION	SAMPLE N	SAMPLE TYPE	PEET)	SS SS		TROME	LS HE	COMPLETI	
8 2	SURFACE ELEVATION :	SAN	ß.	REC	-0	롶		3 	77	4
	Compact brown and orange fine sandy silt (SM).							掤		
	· · · · · ·	J-1	SS	NA	-10-11	0.8	NA		图像	
5 =	·				7					
	8.5' little cloy.	1-7	55	NA		0	NA			
10-) <u>-</u> 2	33	110	1	Ť				1
					<u> </u>			Ш	Ξ	
15	Loose gray, orange, and red layered silty fine sand (SM), little soft clay in 1/2 inch seams.	<u> -:</u>	SS	NA	3-2-	0	NA			4
					_					
	— 18.5' very loose, light gray with only little red, no clay seams but trace clay throughout.	J	SS	NA	1	0	NA			4
20										
	Loose light gray and orange silty fine to medium sand and stiff		55	NA	7	NA	1.3			
25 –	light gray and orange silty clay (SC-CL).					$\overline{\mathbf{I}}$				
	(51)	+	8 55	NA	나 나	NA	2.5			
30	Very stiff light gray clay (CH).	F			+					
	Boring terminated at 32 ft.	7								
35 -	Boring terminated at 32 rd									-
40 -										
45										
50 -										
55 -			.							
									-	
<u> </u>	SAUPLER TYPE			80	RING	METH	OD			

SS — DRIVEN SPLIT SPOON F ST — PRESSED SHELBY TUBE (RC - ROCK CORE CT - CONTINUOUS TUBE

HSA - HOLLOW STEM AUGER CFA - CONTINUOUS FLIGHT AUGERS

BORING METHOD
UGER
CHT AUGERS

DC - DRIVING CASING
WD - NUD DRILLING



SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-56

Client: CSX TRANSPORTATION INC.
Project Norme: PHASE IV — ACID LIME SLUDGE AREA
Project Location: WAYCROSS, GEORGIA
Job Number: 2130-001-004 Boring No: MW-56
Logged By: CAMERON TELLER
Approved By: RAAJ PATEL
Drilled By: AMERICAN DRILING — TIM LOHNER

DRILLING AND SAMPLING INFORMATION Dale Started: 1-24-89
Method: MUD ROTARY
WELL COMPLETION INFORMATION
Screen Dia: 2 inch
Slot Size: 0.010 inch
Cosing Dia: 2 inch
Length: 10 ft
Length: 17 ft

Di Hico	BY: AMERICAN DIVING - IIII CONTEN				- 7		62° 1		
069TH IN FEET	DESCRIPTION SURFACE ELEVATION:	SANPLE NO.	SAMPLE	RECOVERY (FEET)	COUNT	HNu READING	PENETRONE TES		COMPLETION WATER
-	Loose brown fine sandy silt (SM).								
5 -		J∸1	55	NA	8-5-5	0	NA		
	The condition of the co				. م				
10	Stilf gray slity clay (CL), some fine sand seams.	<u>J-2</u>	55	NA	4-3-	0	1.25		
	£	J-3	SS	NA	-2-2	0	1.5		
15	Loose light gray silly fine sand (SM).				- 64				
20-	18.5' light gray and red.	J-4	SS	NA	10-	0	NA		
							4.25	Щ	
25 -	Compact light gray and orange streaked clay and medium to coarse sand (CL—SC).		22	NA	-1-	NA	1.23		
	Very stiff gray with orange patches silty clay (CL), little to some	J-(SS	ΝA	7-1	NA	3.25		
30 -	medium sand scams.							/	
35 -	Boring terminated at 32 ft.								
40 -									
45 -	·								
50									
55 -									
				P02	NC 1	AE THO			

SAMPLER TYPE SS - DRIVEN SPUT SPOON

RC - ROCK CORE CT - CONTINUOUS TUBE

BORING METHOD HSA - HOLLOW STEM AUGER CFA - CONTINUOUS FLIGHT AUGERS



SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-58

Client: CSX TRANSPORTATION INC.
Project Name: PHASE IV — ACID LIME SLUDGE AREA
Project Location: WAYCROSS, GEORGIA
Job Number: 2130-001-004 Boring No: MW-58
Logged By: CAMERON TELLER
Approved By: RAAJ PATEL
Drilled By: AMERICAN DRILLING — KEVIN DEGROOT

DRILLING AND SAMPLING INFORMATION Date Storted: 6/1/89
Method: MUD RORARY
WELL COMPLETION INFORMATION
Screen Dia: 2 inch
Slot Size: 0.010 inch
Cosing Dia: 2 inch
Length: 20.5 ft
Length: 20.5 ft

Drilled	By : AMERICAN DRILLING - KEVIN DEGROOT	Cosing Dia :	Z inc	n		Le	ngth	i 4	20.5			
DEPTH IN FEET	DESCRIPTION SURFACE ELEVATION :			SAMPLE NO.	SAMPLE	RECOVERY. (FEET)	BLOW COUNT	HNu READING	PENETROMETER REACING	GRAPHIC	CCMPLETION	WATER LEVEL
. :	Grovel, bollast fill material						٠,					
5 -	Loose dork brown to block fine sond, little silt, slight petroleum odor (SP).			J- '	SS	NA	4-5-	0	NA			-
10 -	Compact light gray fine sandy silt, trace clay (SM)).)-:2	55	NA	3-7-10	0	NΛ			-
15 —	Firm light gray silty clay (CL). Loose white silt (ML).	ŧ.		<u> </u>	SS	NA	1-4-5	0	NA			
13					SS	N/A	5-3	0	NA.			
20 -	· ·				33	INC						-
25	23.5' orange and pink streaks with some co	oarse grains		J-5	SS	NA	4-5-5	0	NA			-
30 -	—— coarse sand, same fine to medium sand, o layer near 28.5' Firm light tan and yellow silty clay, little fine sand		loy.	J-6	SS	NA	0-6-4	0	NA	77		-
		()-		J-:	ss	NA	++	0	NA			
35 -	Boring terminated at 35.5 ft.	W										
40 -												
45												1
50												
55] 								-
									,			
	CAUDI ED TYPE					BOR	ING M	FTHO	D.			

SAMPLER TYPE SS - DRIVEN SPLIT SPOON ST - PRESSED SHELBY TUBE

RC - ROCK CORE CT - CONTINUOUS TUBE

BORING METHOD HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUGERS

SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-59

Client: CSX TRANSPORTATION INC.
Project Name: PHASE IV — ACID LIME SLUDGE AREA
Project Location: WAYCROSS, GEORGIA
Job Number: 2130-001-004 Boring No: MW-59
Logged By: CAMERON TELLER
Approved By: RAAJ PATEL
Drilled By: AMERICAN DRILLING — KEVIN DEGROOT

DRILLING AND SAMPLING INFORMATION

Date Started: 6/1/89 Date Completed: 6/2/89
Nethod: MUD RORARY Total Depth: 35.5 ft
WELL COMPLETION INFORMATION
Screen Dia: 2 inch Length: 10 ft
Slot Size: 0.010 inch Type: SS CONTINUOUS
Casing Dia: 2 inch Length: 20.5 ft

DESCRIPTION SURFACE ELEVATION: Very loose dark brown silt, sand and gravel fill. Loose light gray silt, little clay (ML). Loose light gray silt, little clay (ML). Loose light gray and pink fine to medium sandy clay (CL). Loose, white, yellow and pink laminated silt (ML-SM) Target white, yellow and pink laminated silt (ML-SM) Loose, white, fine to medium sandy some silt (SP). J-6 SS NA + 0 NA J-6 SS NA + 0 NA Silff light gray and orange, some clay, occasional clay seams 1/2" thick. Silff light gray and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 tt.	Drilled	By : AMERICAN DRILLING - KEVIN DEGROOT Cosing Dio : 2	inch				ngth		.0.0	<u>'`</u>		
10 Loose light gray silt, little clay (ML).	DEPTH IN FEET	SURFACE ELEVATION :			SAMPLE	RECOVERY (FEET)	BLOW	HNU READING	PENETROMETER READYNG	GRAPHIC LOG	COMPLETION	WATER LEVEL
Loose light gray sitt, little clay (ML). J-2 SS NA + 0 NA + 0 NA + 10	3	Very loose dork brown silt, sand and gravel fill.									₹	}
Loose light gray sitt, little clay (ML). J-2 SS NA + 0 NA + 0 NA + 10	=		ļ				_			Ш	X K	
Loose light gray sitt, little clay (ML). J-2 SS NA + 0 NA + 0 NA + 10	1		Ì	J-1	SS	NΑ	-1-	0	NA			<u> </u>
Loose, white, fine to medium sand, some silt (SP). Loose, white, fine to medium sand, some silt (SP). Loose, white, fine to medium sand, some clay, occasional clay seams 1/2" thick. Stiff light gray and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 ft. Boring terminated of 35.5 ft.	5 -						,,					k K
Loose, white, fine to medium sand, some silt (SP). Loose, white, fine to medium sand, some silt (SP). Loose, white, fine to medium sand, some clay, occasional clay seams 1/2" thick. Stiff light gray and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 ft. Boring terminated of 35.5 ft.	=									#	A K	K E
Loose, white, fine to medium sand, some silt (SP). Loose, white, fine to medium sand, some silt (SP). Loose, white, fine to medium sand, some clay, occasional clay seams 1/2" thick. Stiff light gray and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 ft. Boring terminated of 35.5 ft.	1 =	Loose light gray silt, little clay (ML).		J-2	55	NA	-2-	0	NA			A - K
Loose, white, fine to medium sand, some silt (SP). Loose, white, fine to medium sand, some silt (SP). Loose, white, fine to medium sand, some clay, occasional clay seams 1/2" thick. Stiff light gray and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 ft. Boring terminated of 35.5 ft.	10 - 그						-					<u>}</u>
Loose, white, fine to medium sand, some silt (SP). Loose, white, fine to medium sand, some silt (SP). Loose, white, fine to medium sand, some clay, occasional clay seams 1/2" thick. Stiff light gray and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 ft. Boring terminated of 35.5 ft.	=				<u> </u>			, 	<u>L</u>			K
Loose, white, fine to medium sand, some silt (SP). Loose, white, fine to medium sand, some silt (SP). Loose, white, fine to medium sand, some clay, occasional clay seams 1/2" thick. Stiff light gray and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 ft. Boring terminated of 35.5 ft.		Firm light gray and pink fine to medium sandy clay (CL).	•	J-3	SS	NA	-5-	0	NA			Ž .
Loose, white, fine to medium sand, some silt (SP). J-5 SS NA + 0 NA 28.5' light groy and orange, some clay, occasional clay seams 1/2" thick. Stiff light groy and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 ft. Boring terminated at 35.5 ft.	15 -	*. *.				l	''					$\frac{4}{8}$
Loose, white, fine to medium sand, some silt (SP). J-5 SS NA + 0 NA 28.5' light groy and orange, some clay, occasional clay seams 1/2" thick. Stiff light groy and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 ft. Boring terminated at 35.5 ft.							جبا		<u> </u>			
Loose, white, fine to medium sand, some silt (SP). J-5 SS NA + 0 NA 28.5' light groy and orange, some clay, occasional clay seams 1/2" thick. Stiff light groy and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 ft. Boring terminated at 35.5 ft.	[,,]	2" orange fine to med sand seam at 20.		J- 4	SS	NA	14	0	AM] -
28.5' light gray and orange, some clay, occasional clay seams 1/2" thick. Stiff light gray and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 ft. Boring terminated at 35.5 ft.	20 =											
28.5' light gray and orange, some clay, occasional clay seams 1/2" thick. Stiff light gray and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 ft.		Loose, write, fine to these to the			<u> </u>	<u> </u>	4	_	<u> </u>		: <u> </u> :	
28.5' light gray and orange, some clay, occasional clay seams 1/2" thick. Stiff light gray and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 ft. 40-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	25.	•		J-:	SS	NA	13	0	NA	-	: <u> </u> []:	
Stiff light gray and yellow fine to medium sandy clay (CL).	- =										}: <u> </u> =3:	
Stiff light gray and yellow fine to medium sandy clay (CL).				_		<u> </u>	17	-	 	-	: <u> </u> :	
Stiff light gray and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 ft. Stiff light gray and yellow fine to medium sandy clay (CL). Boring terminated at 35.5 ft. Boring terminated at 35.5 ft. Boring terminated at 35.5 ft.	30 =	28.5' light gray and orange, some clay, occasional clay seams 1/2" thick.		<u> </u> !	22	N.A	13	U	NA			.] .
35 Boring terminated at 35.5 ft. 40 50 50 50 50 50 50 50 50 50 50 50 50 50												
35 Boring terminated at 35.5 ft. 40 50 50 50 50 50 50 50 50 50 50 50 50 50		(6)					 -	-	I NA		.	
80 Fing terminated at 35.5 ft.	35 -	Stiff light gray and yellow fine to medium sandy clay (CL).		υ <u>–</u> ,	122	INA	누	U.	NA	{//	<u> </u>	∄ .
45 - 1		Boring terminated at 35.5 ft.										
45 - 1									.			
45 - 1	40 -				l							.
50						·		İ				
50		•								•		
55 — BORING METHOD	45 -											•
55 — BORING METHOD												
55 — BORING METHOD	1 =											
BORING METHOD	50					İ						•
BORING METHOD		• •										
BORING METHOD	=											
SAMPLER TYPE BORING METHOD	55 -											.
SAMPLER TYPE BORING METHOD	3	·						'				
SAMPLER TYPE BORING METHOD	=											
	=	SAUPI FR TYPF			<u>L</u>			IETHO)D_	<u></u>	<u></u>	

SAMPLER TYPE

SS - DRIVEN SPLIT SPOON
ST - PRESSED SHELBY TUBE RC - ROCK CORE CT - CONTINUOUS TUBE

HSA - HOLLOW STEM AUGER CFA - CONTINUOUS FLIGHT AUGERS

SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-61

Client: CSX TRANSPORTATION, INC.
Project Name: GROUND WATER ASSESMENT — SHOP AREA
Project Location: WAYCROSS.GA
Job Number: 2130—016—004 Boring No: NW—61
Logged By: DAVE CORNUE
Approved By: RAAJ PATEL
Drilled By: AMERICAN DRILLING, TAMPA, FL — KEVIN DEGROOT

Date Started: 3-16-90 Date Completed: 3-17-90
Method: HOLLOW STEM AUGERTOID Depth: 30,5 FT
WELL COMPLETION INFORMATION
Screen Dia: 2" Length: 10 FT
Slot Size: .010" Type: 55
Casing Dia: 2" Longth: 15 C FT

DESCRIPTION SURFACE ELEVATION: SURFACE ELEVATION: FILL Interloyered white coliche gravel and dark brown down and the state of the st	DINIEG	Dy . MAERICAL DILECTO, TARRITY TO	-						-	
SILTY SAND(SM) = f.g., loese, medium gray to tan, saturated. J-3 SS NA = 0.0	93 700	DESCRIPTION	YPLE NO.	SAMPLE TYPE	COVERY (FEET)	BLOW COUNT	(Ndd)	JAAPHIC 100	WELL	MATER LEVEL
FILL Interloyered white coliche gravel and dark brown down grows silt stopy silt 3,5 - 9.0 clayey silt(ML), loase, dark brown, saturated. 10 - CLAYEY SILT(ML) - Firm to stiff, medium to light brown, moist 1-5 SS NA = 0.0 SILTY SAND(SM) - f.g., loase, medium gray to tan, saturated. 20 - CLAYEY SILT(ML) - Medium stiff, light gray, clay laminations approximately 1/8 lN, moist 1-1 SS NA = 0.0 25 - CLAYEY SILT(ML) - Medium stiff, light gray, clay laminations approximately 1/8 lN, moist 1-1 SS NA = 0.0 25 - CLAY(CH) - Stiff, light gray with real motiting, moist 1-5 SS NA = 0.0 35 - SILTY SAND(SM) - f.g., loase, medium gray to tan, saturated. 26 - CLAYEY SILT(ML) - Medium stiff, light gray, clay laminations 1-5 SS NA = 0.0 36 - SILTY SAND(SM) - f.g., loase, medium gray to tan, saturated. 27 - SS NA = 0.0 38 - SILTY SAND(SM) - f.g., loase, medium gray to tan, saturated. 39 - SS NA = 0.0 30 - SILTY SAND(SM) - f.g., loase, medium gray to tan, saturated. 3-1 SS NA = 0.0 3-1 SS NA = 0.0 3-1 SS NA = 0.0 3-1 SS NA = 0.0 3-1 SS NA = 0.0 3-1 SS NA = 0.0 3-1 SS NA = 0.0 3-1 SS NA = 0.0	A =	SURFACE ELEVATION:		٠,	8	-,,-			1 8	$\vdash \vdash$
3.5 ~ 9.0 clayey silt(ML), loose, dark brown, saturated. J-3 SS NA 3 0.0 CLAYEY SILT(ML) — Firm to atiff, medium to light brown, moist J-5 SS NA 0.0 SILTY SAND(SM) — I.g., loose, medium gray to ton, saturated, CLAYEY SILT(ML) — Medium atiff, light gray, clay lominations approximately 1/8 lN, moist — 25.0 silty sand, orange, moist CLAY(CH) — Stilf, light gray with red mettling, maist J-11 SS NA 0.0 J-12 SS NA 0.0 DOBNIG MCH00.		FILL Interlayered white coliche gravel and dark brown	J-1	55	NA	12	0.0	田田	双弦	
CLAYEY SILT(ML) — Firm to stiff, medium to light brown, moist J-7 SS NA = 0.0 SILTY SAND(SM) — L.g., loase, medium gray to tan, saturated. CLAYEY SILT(ML) — Medium stiff, light gray, clay laminations approximately 1/8 IN, moist — 25.0 silty sand, grange, moist J-1 SS NA = 0.0 LLAY(CH) — Stiff, light gray with red mottling, moist J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0 DOBNIG METHOD.		cloyoy silt 3,5 — 9.0 cloyey sill(ML), loose, dark brown, salurated.		CC	1114	- <u>-</u> -			XX	
CLAYEY SILT(ML) — Firm to attift, medium to light brown, moist J-5 SS NA = 0.0 SILTY SAND(SM) — f.g., loase, medium gray to tan, saturated, CLAYEY SILT(ML) — Medium attiff, light gray, clay laminations approximately 1/8 IN, moist J-11 SS NA = 0.0 CLAY(CH) — Stiff, light gray with red mottling, moist J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0			1-2	22	NA	-	0.0		XX XX	1 4
SILTY SAND(SM) — f.g., loose, medium gray to ton, saturated. 20 — CLAYEY SILT(ML) — Medium stiff, light gray, clay laminations approximately 1/8 lN, moist 25 — 25.0 silty sand, orange, moist CLAY(CH) — Stiff, light gray with red mottling, moist 30 — J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0	5 -								以以	
SILTY SAND(SM) — f.g., loose, medium gray to ton, saturated. 20 — CLAYEY SILT(ML) — Medium stiff, light gray, clay laminations approximately 1/8 lN, moist 25 — 25.0 silty sand, orange, moist CLAY(CH) — Stiff, light gray with red mottling, moist 30 — J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0									X KE	
SILTY SAND(SM) — f.g., loose, medium gray to ton, saturated. 20 — CLAYEY SILT(ML) — Medium stiff, light gray, clay laminations approximately 1/8 lN, moist 25 — 25.0 silty sand, orange, moist CLAY(CH) — Stiff, light gray with red mottling, moist 30 — J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0		CLANEY SHITCH) - Firm to still medium to light brown, moist	1-5	55	NA	崇	0.0	717		
SILTY SAND(SM) - f.g., loase, medium gray to tan, saturated. 20 - CLAYEY SILT(ML) - Medium stiff, light gray, clay laminations approximately 1/8 IN, moist 25 25.0 silty aand, orange, moist 30 - CLAY(CH) - Stiff, light gray with red mottling, moist 30 - J-13 SS NA = 0.0	10 -	CENTER SICI(ME) - Firm to Star, modern to agree brown	3-3	33	100	ᆖ	-			
SILTY SAND(SM) - f.g., loase, medium gray to tan, saturated. 20 - CLAYEY SILT(ML) - Medium stiff, light gray, clay laminations approximately 1/8 IN, moist 25 25.0 silty aand, orange, moist 30 - CLAY(CH) - Stiff, light gray with red mottling, moist 30 - J-13 SS NA = 0.0] =	·				l				ď
SILTY SAND(SM) - f.g., loase, medium gray to tan, saturated. 20 - CLAYEY SILT(ML) - Medium stiff, light gray, clay laminations approximately 1/8 IN, moist 25 25.0 silty aand, orange, moist 30 - CLAY(CH) - Stiff, light gray with red mottling, moist 30 - J-13 SS NA = 0.0	=		 	55	NI A	=	00			
20 — CLAYEY SILT(ML) — Medium stiff, light gray, clay laminations approximately 1/8 IN, moist - 25.0 silty sand, arange, moist CLAY(CH) — Stiff, light gray with red mottling, moist J-13 SS NA = 0.0 J-13 SS NA = 0.0 BORNE NETHOD	15 -	SHITY SAND(SN) - to loose medium gray to tan, saturated.	<u>'-</u> /	33	124	=	0.0			
approximately 1/8 IN, moist - 25.0 silty sand, orange, moist CLAY(CH) - Still, light gray with red mottling, moist J-13 SS NA ≥ 0.0 J-13 SS NA ≥ 0.0 J-13 SS NA ≥ 0.0	=	SILIT SAMO(SM) - My, 10030, Modelin 9.0) to tolly established								
approximately 1/8 IN, moist - 25.0 silty sand, orange, moist CLAY(CH) - Still, light gray with red mottling, moist J-13 SS NA ≥ 0.0 J-13 SS NA ≥ 0.0 J-13 SS NA ≥ 0.0	=	CLAYEY SH T(ML) — Medium stiff light gray, clay laminations	1_0	50	NΔ	25	0.0			-
25 — 25.0 silly sand, orange, moist CLAY(CH) — Still, light groy with red mottling, moist J-13 SS NA = 0.0 J-13 SS NA = 0.0 DOING METHOD.	20 -	approximately 1/8 IN, moist			 	12				
CLAY(CH) — Stiff, light gray with red mottling, moist J-13 SS NA \$\frac{1}{2}\$ 0.0 40 - 1										1
CLAY(CH) — Stiff, light gray with red mottling, moist J-13 SS NA \$\frac{1}{2}\$ 0.0 40 - 1	:		1	20	NA	152	00			<u> </u>
30 J-13 SS NA \$\frac{1}{2}\$ 0.0 40 J-13 SS NA \$\frac{1}{2}\$ 0.0 BOINNG METHOD	25 -	- 25.0 silly sand, orange, moist	严	33	117	╀⋍	10.0			1
35 — 40 — 45 — 50 — 55 — 55 — 50 — 50 — 5		CENTION - Drug ulder Area man ten mercena								
35 — 40 — 45 — 50 — 55 — 55 — 50 — 50 — 5			J-1:	155	NA	125	0.0			<u>:</u>] -
40 - 45 - 50 - 55 - 55 - 55 - 50 - 60 60 60 60 60 60 60	30 -		 	-		+-	+-	1 [
40 - 45 - 50 - 55 - 55 - 55 - 50 - 60 60 60 60 60 60 60	:					'				
40 - 45 - 50 - 55 - 55 - 55 - 50 - 60 60 60 60 60 60 60										-
45 — 50 — 55 — 55 — 50 — 60 — 60 — 60 — 6	35 -	·								
45 — 50 — 55 — 55 — 50 — 60 — 60 — 60 — 6										
45 — 50 — 55 — 55 — 50 — 60 — 60 — 60 — 6		· ·							l	-
55 - BORNG METHOD	40 -								'	
55 - BORNG METHOD									ļ	
55 - BORNG METHOD										.
55 - BORNG METHOD	45 -									
55 - BORNG METHOD										
55 - BORNG METHOD		·	1						ļ	_
55 - BORNG METHOD	50 -									
BOISING METHOD										
BOISING METHOD										
BOISING METHOD	55 -	i i								'
BORING METHOD				1						
BOWNG METHOD										
CLUMED TYPE		CAMBIED TYPE		ــــــــــــــــــــــــــــــــــــــ	BOI	ו אני	HETHO	<u>D</u>		

SAMPLER TYPE RC - ROCK CORE CT - CONTINUOUS TUBE SS - DRIVEN SPUT SPOON ST - PRESSED SHELDY TUBE

HSA - HOLLOW STEM AUGER CFA - CONTINUOUS FLIGHT AUCERS

SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-62

Cilent: CSX TRANSPORTATION, INC.
Project Name: GROUND WATER ASSESMENT — SHOP AREA
Project Location: WAYCROSS.GA
Job Number: 2130-016-004 Boring No: MW-62
Logged By: SHAWN EUBANKS
Approved By: RAAJ PATEL
APPROVED BY: AMERICAN DRILLING, TAMPA, FL — KEVIN DEGRO

DRILLING AND SAMPLING INFORMATION Date Started: 3-17-90 Date Completed: 3-17-90
Method: HOLLOW STEM AUGERTOLAI Depth: 34 FT
WELL COMPLETION INFORMATION
Screen Dia: 2° Longth: 10 FT
Slot Size: .010° Type: SS
Casing Dia: 2° Longth: 18.5 FT

DESCRIPTION SURFACE ELEVATION: FILL 0.0-4.0 Interloyered sitty sand and coliche gravel 4.0-8.0 If the send, loose, tan to black, slight oder, moist SANDY CLAY(CL) - Compact, dark gray, moist - 9.2 color changes to tan and orange SILTY CLAY(CL) - Soit, gray, medium platicity, moist - 14.5 occasional fine sand seams SILTY CLAY(CL) - Sitty gray, medium platicity, moist - 14.5 occasional fine sand seams SILTY CLAY(CL) - Sitty compact, tan and pronge, seme clay J-1 SS NA - 0.0 J-2 SS NA - 0.0 J-3 SS NA - 0.0 J-4 SS NA - 0.0 J-5 SS NA - 0.0 J-7 SS NA - 0.0 J-9 SS NA - 0.0 J-9 SS NA - 0.0 J-1 SS NA - 0.0	Approv	ed By : RAAJ PATEL By : AMERICAN DRILLING, TAMPA, FL — KEVIN DEGROOT Casing Dia : 2"			Lo	nglh	: 1	8.5	FT		
SURFACE ELEVATION: FILL 0.0-4.0 Interloyered sity sand and caliche gravel 4.0-8.0 Iline sand,loose, tan to black, slight odar, moist SANDY CLAY(CL) — Compact, dark gray, moist — 9.2 color changes to tan and orange SILTY CLAY(CL) — Soft, gray, medium plasticity, moist — 14.5 occasional fine sand secons , J-7 SS NA = 0.0 J-9 SS NA = 0.0 J-9 SS NA = 0.0 J-9 SS NA = 0.0 J-9 SS NA = 0.0 SAND(SP) — med.g., loose, cream, saturated J-11 SS NA = 0.0 J-11 SS NA = 0.0 J-12 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0 SILTY CLAY(CL) — Compact, tan and orange, seme day J-13 SS NA = 0.0 SILTY CLAY(CL) — Compact, tan, moist J-13 SS NA = 0.0		DESCRIPTION	JAPLE NO.	SAMPLE	RECOVERY (FEET)	BLOW COUNT	OVN (PPU)		GRAPHIC LOC	WELL COMPLETION	WATER
SANDY CLAY(CL) — Compact, dark gray, moist - 9.2 color changes to lan and orange SILTY CLAY(CL) — Soft, gray, medium plasticity, moist - 14.5 occasional fine and assume SAND(SP) — med.g., loose, cream, saturated SAND(SP) — med.g., loose, cream, saturated CLAYEY SAND(SC) — Slightly compact, tan and orange, same clay SILTY CLAY(CL) — Campact, tan, moist 35 NA © 0.0	~ <u>~</u>	SURFACE ELEVATION :				11		- ,	ᄪ	N	ZI T
SANDY CLAY(CL) — Compact, dark gray, moist — 9.2 color changes to tan and orange SILTY CLAY(CL) — Soft, gray, medium plasticity, moist — 14.5 occasional fine aand seams J-7 SS NA = 0.0 J-9 SS NA = 0.0 J-9 SS NA = 0.0 J-9 SS NA = 0.0 CLAYEY SAND(SC) — Slightly compact, tan and arange, some clay SILTY CLAY(CL) — Compact, tan, moist J-13 SS NA = 0.0 SILTY CLAY(CL) — Compact, tan, moist	=	FILL 0.0-4.0 Interloyered sity sand and callette graves	3-1	22	MA	1.7			井	X) E	Ŕ
SANDY CLAY(CL) — Compact, dark gray, moist — 9.2 color changes to tan and orange SILTY CLAY(CL) — Soft, gray, medium plasticity, moist — 14.5 occasional fine aand seams J-7 SS NA = 0.0 J-9 SS NA = 0.0 J-9 SS NA = 0.0 SAND(SP) — med.g., loose, cream, saturated J-11 SS NA = 0.0 CLAYEY SAND(SC) — Slightly compact, tan and orange, some clay J-13 SS NA = 0.0 SILTY CLAY(CL) — Compact, tan, moist J-13 SS NA = 0.0	3	11.1.1 - 4.00							H	KX E	X)
SANDY CLAY(CL) — Compact, dark gray, moist — 9.2 color changes to tan and erange SILTY CLAY(CL) — Soit, gray, medium plasticity, moist — 14.5 occasional fine sond seams J-7 SS NA = 0.0 J-9 SS NA = 0.0 J-9 SS NA = 0.0 SAND(SP) — med.g., loose, cream, saturated J-11 SS NA = 0.0 CLAYEY SAND(SC) — Slightly compact, tan and arange, some clay SILTY CLAY(CL) — Compact, tan, moist J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0	3	4.0-8.0 line sand,loose, tan to black, slight oder,	J-3	55	NA	7,1,	0.0		H	KX B	X) ·
SILTY CLAY(CL) - Soft, gray, medium plasticity, moist J-7 SS NA = 0.0	5 극	moist	-			12	-		H		X)
SILTY CLAY(CL) - Soft, gray, medium plasticity, moist J-7 SS NA = 0.0	= =								阴	K) [X
SILTY CLAY(CL) — Soft, gray, medium plasticity, moist — 14.5 occasional fine sand scams , J-7 SS NA = 0.0 J-9 SS NA = 0.0 J-9 SS NA = 0.0 SAND(SP) — med.g., loose, cream, saturated J-11 SS NA = 0.0 CLAYEY SAND(SC) — Slightly compact, tan and arange, some clay SILTY CLAY(CL) — Compact, tan, maist J-15 SS NA = 0.0 SILTY CLAY(CL) — Compact, tan, maist		SANDY CLAY(CL) — Compact, dark gray, moist	-		-	12	00				X
SILTY CLAY(CL) — Soft, gray, medium plasticity, molet — 14.5 occasional fine sand seams , J-7 SS NA = 0.0 J-9 SS NA = 0.0 J-9 SS NA = 0.0 SAND(SP) — med.g., loose, cream, solurated J-11 SS NA = 0.0 CLAYEY SAND(SC) — Slightly compact, tan and arange, some clay J-13 SS NA = 0.0 SILTY CLAY(CL) — Campact, tan, maist J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0 J-13 SS NA = 0.0	10 =	- 9.2 color changes to tan and orange	J-5	22	NA	<u>.c.</u>	0.0			囚	\Diamond
14.5 Secasion in the Solid Secasion in the	,	•							1/	X	\otimes
14.5 Secasion in the Solid Secasion in the	111	Soft gray medium plasticity, molet	1	<u>_</u>		<u>.</u>				図	(X
SAND(SP) — med.g., loose, cream, saturated 25 — SAND(SP) — med.g., loose, cream, saturated 30 — CLAYEY SAND(SC) — Slightly compact, tan and arange, some clay SILTY CLAY(CL) — Compact, tan, maist 40 — 45 — 45 — 45 — 45 — 45 — 45 — 46 — 46	=	- 14.5 occasional fine sand seams	J-7	SS	NA	13	0.0	ļ.		X	$\langle \Sigma \rangle$
SAND(SP) — med.g., loose, cream, saturated J-11 SS NA \$\frac{1}{2}\$ 0.0 CLAYEY SAND(SC) — Slightly compact, tan and arange, some clay SILTY CLAY(CL) — Campact, tan, maist J-15 SS NA \$\frac{1}{2}\$ 0.0 40— 45—	15 -	•									
SAND(SP) — med.g., loose, cream, saturated J-11 SS NA \$\frac{1}{2}\$ 0.0 CLAYEY SAND(SC) — Slightly compact, tan and arange, some clay SILTY CLAY(CL) — Campact, tan, maist J-15 SS NA \$\frac{1}{2}\$ 0.0 40— 45—						47				[]]	
SAND(SP) — med.g., loose, cream, saturated 30 — CLAYEY SAND(SC) — Slightly compact, tan and orange, some clay SILTY CLAY(CL) — Compact, tan, maist 40 — 45 — 45 — 45 — 45 — 45 — 45 — 45 —	=		1-9	SS	NA	17	0.0			∤∷l≡3	
30 CLAYEY SAND(SC) — Slightly compact, tan and arange, some clay J-13 SS NA \$\frac{1}{2}\$ 0.0 SILTY CLAY(CL) — Campact, tan, maist 40— 45—	20 -									1:15	
30 CLAYEY SAND(SC) — Slightly compact, tan and arange, some clay J-13 SS NA \$\frac{1}{2}\$ 0.0 SILTY CLAY(CL) — Campact, tan, maist 40— 45—	:			İ						4:IE:	
30 CLAYEY SAND(SC) — Slightly compact, tan and arange, some clay J-13 SS NA \$\frac{1}{2}\$ 0.0 SILTY CLAY(CL) — Campact, tan, maist 40— 45—	:	and the laces cream salurated	J-1	SS	NA	1.67	0.0			1:1=	
SILTY CLAY(CL) — Compact, tan, maist J-15 SS NA 5 0.0 40— 45— 45— 45— 45— 45— 46— 47— 48— 48— 48— 48— 48— 48— 48— 48— 48— 48	25 -	SAND(SP) - med.g., 1865e, crediti, 2013-010	-	-	╫	 ```	┼─	1		1: i=:	1:1
SILTY CLAY(CL) — Compact, tan, maist J-15 SS NA 5 0.0 40— 45— 45— 45— 45— 45— 46— 47— 48— 48— 48— 48— 48— 48— 48— 48— 48— 48		·		1						ΗŒ	
SILTY CLAY(CL) — Compact, tan, maist J-15 SS NA 5 0.0 40— 45— 45— 45— 45— 45— 46— 47— 48— 48— 48— 48— 48— 48— 48— 48— 48— 48		cut it is a continuous some clay		155	NA	1 5	0.0	1	\mathbb{Z}	3: [
35- 40- 45- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1-	30-	CLAYEY SAND(SC) - Slightly compact, tall till brongstone		100	NI A	15	00	-1		祖	
40-11-11-11-11-11-11-11-11-11-11-11-11-11		SILTY CLAY(CL) - Compoct, ton, moist	<u> </u>	355	NA	1	10.0	1) :: -	
40-11-11-11-11-11-11-11-11-11-11-11-11-11			-						1	怈	إننا
40-11-11-11-11-11-11-11-11-11-11-11-11-11	75										
45-11						Ì					1
45-111111										1.	
45-111111											
	40-		1					1			1
	1							ì			
	ĺ										- 1
50-	45-									1	
50-	1										
50=	i	=		.						1	ĺ
	50-	3									-
	130-	<u> </u>									
	1	3								1	- }
		3									1
55-	55 -	4									
		∄								1	
						丄		\perp			
SAMPLER TYPE HEA - HOLLOW STEM AUGER DC - DRIVING CASH		CAMBLET TYPE					HED	100	DC -	DRIVI	IG CA

SAMPLER TYPE RC - ROCK CORE CT - CONTINUOUS TUBE SS - DRIVEN SPUT SPOON ST - PRESSED SHELDY TUBE

HSA - HOLLOW STEM AUGER CFA - CONTINUOUS FLICHT AUGERS

SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-63

Client: CSX TRANSPORTATION, INC.
Project Name: GROUND WATER ASSESMENT - SHOP AREA
Project Location: WAYCROSS.GA
Job Number: 2130-016-003 Boring No: MW-63
Logged By: DAVE CORNUE
Approved By: RAAJ PATEL
Drilled By: AMERICAN DRILLING, TAMPA, FL - KEVIN DEGROOT

DRILLING AND SAMPLING INFORMATION

Date Started: 3-18-90 Date Completed: 3-18-90
Method: HOLLOW STEM AUGERTOLD Depth: 35.5 FT

WELL COMPLETION INFORMATION
Screen Dia: 2" Length: 10 FT
Slot Size: .010" Type: SS
Cosing Dia: 2" Length: 20.0 FT

Drilled	By : AMERICAN DRILLING, TAMPA, FL - KEVIN DEGROOT COSING DIG : 2	, ,			_			Z	
DG'H N rect	DESCRIPTION	SAMPLE NO.	7 7 7 7	RECOVERY (FEET)	COCNT	(Mad)	GRAPHIC 100	WELL COMPLETION	KATER LEVEL
- Z	SURFACE ELEVATION:			=	=	00		NM	
	FILL Fine to medium grained sand(SP), brown, contains			NA	ž	0.0	H		1
7	cinder, moist	J-2	SS	NA	×	0.0	丗	双弦	
E							11111	KX KX	
E	SILT(ML) — Loose, light brown, clayey near bottom, moist	J-3	55	NΔ	Ξ	0.0			-
5 =	to saturated	3-3	33	INA		\ <u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>		KA KA	
5 ‡	·							KAIKA	. !
=		1 1					1441		
7					-5 -	$\vdash \vdash \vdash$	144		
3		- J-5	SS	NA	5,	0.0	7	764 FSI	
10-	SANDY CLAY(CL) - Very stiff, dark red, damp.	-	_		4			位 区	1
=	3/4/01 00 11/4-7	1 1						139 KX	i
=		1					· //	α	ł
=			7	NIA	22,	0.0		XX XX	-
15-	t and also laminations	- J-/	22	NA	71	0.0			l
13-	CLAYEY SILT(ML) — White, orange and red, clay laminations						1111		1
=	approximately 1-2mm thick, saturated.	1			i	1			ĺ
=	· · · · · · · · · · · · · · · · · · ·						, July	" 	
Ξ	SILTY CLAY(CL) —Firm, orange to red,saturated	J-9	SS	NA	1.	0.0		⊅∷I– !∷	
20-		-			٦.		: :	:: =1::	1
=	SILTY SAND(SM) — 1.g., white, moist to saturated	-			1		: :	11:1:1:1:	1
=		1		l	l			:: <u>=</u>]::	1
=			CC	NA	1	0.0		거: [=] ::	
25	Interbedded silty clay(CL) and sandy silt(MS)—	J-11	33	INA	12	10.0		1::1=1::	1
	- clay is firm to stiff,			1				∄:Ε∃ ::	
:	l allty eand is 10068.	1	i	l	1			7: E3::	1
	half are hill to vellow in color	-	-		ज	-	i fer	TI: 15:1::	1.
	CHTY CANDICAL) - med n. loose, bull to orange, some	J-13	SS	NA	9	0.0		::F7::	:
30 –	sandy clay seams, saturated	L-15	22	NA	밥	0.0		JI:: ::	:l
:		-12-15	33	1117	<u>o</u>		//	7:: ::	:
1 :	CLAYEY SAND(SC) — med.g., very stiff, buff to yellow,	β−17	SS	NA	ed a	0.0		4::I I::	:
:							1 1/	7:1 l::	:
35 -	SILTY CLAY (CL) - Stiff, white to buff, moist	ᅴ	1		l	İ			1
00		- 1			Į .		1 1	1	1
:		- 1		1	1	1		1	1
		ŀ	1	1	l	1	1 1	.	1
:	· ·	1	l			1	ll		1
40 -					1	Į	1 1	1	1
		ļ		1		i	1 1	1	
		1	1	1	1	1	1 1		
							1		1
45 -		- 1	1				1 1		1
75	:	- 1	1	1	ı			1	1
	-				1				
	3		1	1	1	l		1	
	<u>.</u>		1			1		1	
50 ~	<u> </u>		1	1	1			-	1
	i				1	1			
Į.	‡		1	1	1			1	
1	1			1			1		
	1				1			1	
55 -	3	1							
l	‡				I	1	1	1	1
1	4					1		1	1
1	5			150	0010	METHO	10		
	SAMPLER TYPE	1110W				WIC III	<u></u>	DRIVING	CIG

SAMPLER TYPE_ RC - ROOK CORE CT - CONTINUOUS TUBE SS - DRIVEN SPUT SPOON ST - PRESSED SHELBY TUBE

HSA - HOLLOW STEM AUGER
OFA - CONTINUOUS FLIGHT AUCERS

SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-64

Client: CSX TRANSPORTATION, INC.
Project Name: GROUND WATER ASSESMENT - SHOP AREA
Project Location: WAYCROSS, GA
Job Number: 2130-016-003 Boring No: MW-54
Logged By: SHAWN EUBANKS
Approved By: RAAJ PATEL
Prilled By: AMERICAN DRILLING, TAMPA, FL - KEVIN DEGROOT

DRILLING AND SAMPLING INFORMATION

Date Started: 3-18-90 Date Campleted: 3-18
Method: HOLLOW STEM AUGERTOID Depth: 35.5 FT
WELL COMPLETION INFORMATION
Screen Dia: 2" Langth: 10 FT
Slot Size: .010" Type: 55
Cosing Dia: 2" Length: 20 FT

Drilled	By: AMERICAN DRILLING, TAMPA, FL - KEVIN DEGROOT Cooling Dia : 2				119			7	
DEPTH IN FEET	DESCRIPTION SURFACE ELEVATION:	SANPLE NO.	SAMPLE	RECOVERY (FEET)	BLOW	Mood)	GRAPHIC	NOIL TON	WATER
	FILL 0.0-1.0 Sandy gravel(GP) — loose, black, dry 1.0-4.5 Sand(SP) f.g. — med.g., loose, tan, moist	J-1	55	NA		0.0			
5 -	CLAYEY SAND(SC) — 1.g., slightly compact, tan and gray, saturated		SS			0.0			
10-	SANDY CLAY(CL) — Compact, reddish tan with some black stain, slight oder in stained areas, moist — 10.5 color changes to white, more silty	J-4	SS	NA	5,15	0.0		XXX	X -
15-	CLAYEY SILT(ML) — Slightly compact, white with occasional red streaks, saturated	J-6	ss	NA	21,2,3	0.0	\$ 8 8 8 6 1		
:		J-8	SS	NA	2,4,5	0.0		<u> </u>	<u>]</u> ii .
20 -	SAND(SP) - f.g med.g.,loose, white, some clay present, saturated						0000 0000 0000 0000 0000 0000 0000 0000 0000		
25 –	- 24.9 compact sandy clay lansa	J-10	SS	NA	157.	0.0	0000 0000 0000 0000 0000 0000 0000 0000		•
30 -	 29.0 grades to med. g — coarse g. 30.0 interbedded sandy clay and gravelly sand 	J-1	SS 1.5	NA	15.	0.0	72		
35-	CLAYEY SAND(SC) — med.g. — coarse g., slightly compact, — 32.5 Firm, compact,grains comented	J-11	SS	NA	1,5,5,5	0.0		1	
40-									
45 -									
50 -									
55 -								•	
				BO	RING	METHO	ID.		

SAMPLER TYPE SS - DRIVEN SPLIT SPOON ST - PRESSED SHELDY TUBE

RC - ROCK CORE CT - CONTINUOUS TUBE

HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUCERS



SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-66

Client: CSX TRANSPORTATION, INC
Project Name: PHASE 2 - SHOP AREA
Project Location: WAYCROSS, GA
Job Number: 2130-016-007 Boring No: MW-66
Logged By: SHAWN EUBANKS
Approved By: RAAJ PATEL
Drilled By: AMERICAN DRILLING, TAMPA FL - GENE WADE

DRILLING AND SAMPLING INFORMATION

Date Started: 6-26-90 Date Completed: 6-26-90
Method: HOLLOW STEM AUGERTOTAL Depth: 35.5 FT
WELL COMPLETION INFORMATION
Screen Dia: 2.0 IN Length: 10.0 FT
Slot Size: 0.01 IN Type: STAINLESS STEEL

Length: 20.5 FT Casing Dia: 2.0 IN z

LE DIO	N FEET	DESCRIPTION	SAMPLE NO.	SAMPLE	ECOVERY (FEET)	COUNT COUNT	DNH Mdd		GRAPHIC LOG	NOILETAKOO METT	WATER LEVEL
	~	SURFACE ELEVATION:	ъ́		~		<u> </u>				
Γ	1	FILL Sandy silt, loose, black and dark reddish brown, some metal slag material, dry	J-1	SS		2	0.0				
	3	4.9° Clayey, tan and black, slight hydrocarbon odor	J-3	SS		ដ	0.0				
5				-			╁				F R
	╡					ŀ			田		
	Ė	(9.5')	J-5	SS		E CKH	0.0	1			
10	١≓٠	SANDY CLAY(CL) Compact, white, orange, red, and yellow mix,	 -			-	\vdash	1			† É
Ì	=	some metal encountered in top six inches, moist		ł					//		1 1
	3		J-7	ss		2	0.0	1			
1:	5	15.0' color is mainly white	F		-	1	╁╌	1			F
	. ‡			ł						X	4
	=	(19.5")				<u> </u>	<u> </u>				
2	∘∄	SAND WITH A TRACE OF CLAY(SW) Fine to medium grained,	J-9	SS		123	0.0		:::::		1
	=	very slightly compact, white with some orange and rose mottling in top six inches,									
	3	saturated						1			
2	5-∄	23.5' Medium to coarse grained (25.5')	J-1	SS		1,4mil	0.0				
	=	SANDY CLAY(CL) Compact, stiff, gray, orange, and pink, moist]			
	3	(70 al)				_		1		:: = :	1 1
3	ᅙ	SAND(SP) Coarse grained, loose, gray and tan, saturated	J-1:	SS		3	0.0]	//] -
ł	‡		J-14	SS		นนาน	0.0]			1
	=	- 32.8' Sandy clay lense				F2		1			1 1
3	5-]		J-16	SS	•	≨	0.0			غللنا	4
	3	SANDY CLAY(CL) Compact, buff with red, and purple,moist(36.0')						1			1 1
	∄				İ		ļ				1 1
4	Ec										
	=			Ì							
	3										
4	Ē,										
	1										
	∄										
50	Ę,										
٦	' \exists										
	3										
	3		٠,							•	
55	计										7
	3										
1	=										
<u> </u>		SAMPLER TYPE				NG M	E THO				
		DIEN COLT SOON RC - ROCK CORF HSA - HOLLO	W 51	FU A					- DF	MANG C	ASING

SS - DRIVEN SPLIT SPOON ST - PRESSED SHELBY TUBE

RC - ROCK CORE CT - CONTINUOUS TUBE

HSA - HOLLOW STEM AUGER CFA - CONTINUOUS FLIGHT AUGERS



SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-68

Client: CSX TRANSPORTATION, INC.
Project Name: SHOP AREA
Project Location: WAYCROSS, GA
Job Number: 2130-016-011 Boring No: NW-58
Logged By: SHAWN EUBANKS
Approved By: SHAWN EUBANKS

Approved By : RAAJ PATEL

DRILLING AND SAMPLING INFORMATION

Date Started: 6-25-91

Method: HSA

WELL COMPLETION INFORMATION

Screen Dia: 2.0 IN

Slot Size: 0.01 IN

Casing Dia: 2.0 IN

Date Completed: 6-25-91

Total Depth: 28.0 FT

Total Depth: 10.0 FT

Type: STAINLESS STEEL

Length: 15.0 FT

Drilled	By : AMERICAN DRILLERS, GENE WADE	Casing Dia :	2.0 IN			Le	ngui	-	15,0 F1		
DEPTH IN FECT	DESCRIPTION SURFACE ELEVATION:			SAMPLE NO.	SAMPLE	RECOVERY (FEET)	BLOW	NAO	GRAPHIC	MEL NOTE IN NO	WATER LEVEL
	Alternating layers of silty clay(cl) and clayey silt clay is brown to gray, silt is white to light gray	:(ml), compo , moist	ct.	J1	ss	2	. 3,4,5,5	2	1 1 1 0 1 0 1 1	XXXXX	
2 -	•								111		
4 -	SITLY CLAY(CL) — compact, stiff, dark gray, sar		4.0'	J - 2	SS	2	4,8,8,11	4			
	oxide stain, moist		, ,							A	
6		t.	5 6'								
8 -	CLAYEY SAND(SC) fine to medium grained win colive gray and tan, moist		8.0 ' -	1_7	SS	2	2,3,4,5	0.9			
10 -				J.	3	2	2,3	0.5			-
12 -	Alternating layers of sand and clay, clay is 2 to		170,								
14	sand is 1 to 2 inches, tan, m	noist		J — 4	SS	2	0,2,3,2	0.9			-
16 -											_
			18.0								
18 -	SAND(SP) medium grained — loose ocasional clo gray, saturated	y parting.		J-5	SS	2	0,1,2,2	0.3		4::: :::::::::::::::::::::::::::::::::	
20 -											-
				J — 6	SS	2	1,2,2,0	0			_
22 -			23.0'	J-7	55	2	0,3,5,5	0			
	ON INCOME.					BOR	NG M	ETHO	<u></u>	<u> </u>	1:1
	SAMPLER TYPE			1W C1							CASING

SAMPLER TYPE
SS - DRIVEN SPLIT SPOON
ST - PRESSED SHELBY TUBE

RC - ROCK CORE CT - CONTINUOUS TUBE '

HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUGERS

DC - MUD DRILLING



SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-68

Client: CSX TRANSPORTATION, INC.
Project Name: SHOP AREA
Project Location: WAYCROSS, GA
Job Number: 2130-016-011 Boring No:
Logged By: SHAWN EUBANKS
Approved By: RAAJ PATEL
Drilled By: AMERICAN DRILLERS, GENE WADE

DRILLING AND SAMPLING INFORMATION

Date Started: 6-25-91 Date Completed: 6-25-91
Method: HSA Total Depth: 25.0 FT

WELL COMPLETION INFORMATION
Screen Dia: 2.0 IN Langth: 10.0 FT
Slot Size: 0.01 IN Type: STAIMESS STEEL
Casing Dia: 2.0 IN Length: 15.0 FT

Drilled	By : AMERICAN DRILLERS, GENE WADE	Casing Dia :	2.U IN				nyai	•	15.0			-
DEPTH N FEET	DESCRIPTION SURFACE ELEVATION :			SAMPLE ND.	SAMPLE TYPE	RECOVERY (FEET)	BLOW	N/O		GRAPHIC LOG	NOILE JUNOO	WATER LEVEL
	SANDY CLAY(CL) — stiff, light green, some med. pockets, moist	grained sa	nd 26.0 *	J - 8	SS	2	5,5,5,7	0				
26	SAND(SP) coarse grained — loose, light gray, sa		27.8'	J - 9	SS	2	9,10,11,16	0				
28 -	CLAY(CL/CH) — stiff, dark gray moist BORING TERMINATED AT 28.0 FT		28.0'									
30	·	<i>\$</i> .							,			-
32												-
34	·											-
36 -												_
38												-
40											,	-
42 -								-				-
44												-
46												-
	SAMPLER TYPE		- H0110				NG H	ETHO	0,		RVING C	

SAMPLER TYPE

SS - DRIVEN SPUT SPOON ST - PRESSED SHELBY TUBE RC - ROCK CORE CT - CONTINUOUS TUBE HSA - HOLLOW STEM AUGER
OFA - CONTINUOUS FLIGHT AUGERS

SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-69

Client: CSX TRANSPORTATION, INC.
Project Name: SHOP AREA
Project Location: WAYCROSS, GA
Job Number: 2130-016-011 Boring No: MW-69
Logged By: SHAWN EUBANKS
Approved By: RAAJ PATEL
Drilled By: AMERICAN DRILLERS, GENE WADE

DRILLING AND SAMPLING INFORMATION

Date Started: 6-26-91
Method: HSA
WELL COMPLETION INFORMATION
Screen Dia: 2.0 IN
Slot Size: .0.01 IN
Casing Dia: 2.0 IN
Length: 10.0 FT
Length: 15.0 FT
Length: 15.0 FT

Drilled	By : AMERICAN DRILLERS, GENE WAVE COSING DIG . 2.0	· ·				-		T =	
DEPTH IN FEET	DESCRIPTION SURFACE ELEVATION:	SAMPLE ND.	SAMPLE	RECOVERY (FEET)	BLOW	E DAG	GRAPHIC	WELL	WATER LEVEL
=	SILTY CLAY(CL) — medium stiffness, gray, iron oxide stain, moist		SS	2	4,5,7,9	0		图	
		J-1	33	2	4,5,	١			
2 -	·								
111		-							
4 =	4.5'	一			2			A	7
1111	SANDY CLAY(CL) — stiff, gray and tan, moist	Ų−2	SS	2	6,10,11,7	0.3			K
6 -								图	7
	÷.								
8 –	8.0' SILTY SAND(SM) — slightly compact, occasional clay parting.	-						XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	\$ -
	very moist to saturated	-	\vdash		 	$\left \cdot \right $			
10 -		j -:	SS	2	3,4,3,3	0		EX X	-
		-	-	-	-				
12 -	13.0'								-
	CLAYEY SAND(SC) — light gray, saturated	-							
14 —	CLATE! SAND(SC) - light groy, Satisfact	-	_	_	_				-
	— 14.5' clay lense 2" thick	J	#SS	2	2332	0			
16 —			_	_	<u> </u>				-
" =									
	18.0' medium sand with less clay, tan								-
18 –	and orange			L	<u> </u>				
	·	J,_,	SS	2	11,32	0			-
20 -		-	133		Ë				
		•			5,				
22 -		U- 1	SS	2	4,4,5	0			
		7-	ss	2	5,7	0			
	CAMPLER TYPE				RING N	VE LHOI)/·/)	<u> </u>	

SAMPLER TYPE

SS - DRIVEN SPLIT SPOON ST - PRESSED SHELBY TUBE RC - ROCK CORE CT - CONTINUOUS TUBE HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUGERS

BORNG METHOD
UGER DC - DRIVING CASING MD - MUD DRILLING

SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-69

Client: CSX TRANSPORTATION, INC.
Project Name: SHOP AREA
Project Location: WAYCROSS, GA
Job Number: 2130-016-011 Boring No: NW-69
Logged By: SHAWN EUBANKS
Approved By: RAAJ PATEL
Drilled By: AMERICAN DRILLERS, GENE WADE

DRILLING AND SAMPLING INFORMATION

Date Started: 6-26-91
Nethod: HSA
WELL COMPLETION INFORMATION
Screen Dia: 2.0 IN
Slot Size: 0.01 IN
Casing Dia: 2.0 IN
Length: 15.0 FT
Length: 15.0 FT

Drilled	By : AMERICAN DRILLERS, GENE WADE Cosing D	la : 2.0 IN	l		Le	ingth	:	15.0 FT	
N FEET	DESCRIPTION SURFACE ELEVATION:		SAMPLE NO.	SAMPLE	RECOVERY (FEET)	LNNOS MOTE	7 4/0	GRAPHIC LOG	WELL COMPLETION
- 3		24.5'	J-7	SS	2	10,12	0	1/	
7	SANDY CLAY(CL) WITH SILT - stiff, grayish green, moist	26.0							
26 -	CLAY(CL/CH) — stiff, olive gray, moist	27.0	J - 8	55	2	1,5,4,7	0		
8.	SILTY SAND(SW) fine to medium grained, tan, some clay moist	partings, 28.5'	J-9	SS	2	5,9,8,17	0		
~ <u>}</u>	CLAY(CL/CH) — stiff, olive gray, maist	29.0'				55			,
بسياسس	t.								
2-1							·		
4									
6 7 11									
annluur.									
ուսիսու									
ساسس									
in I	·								
ساسس									
#				- 1					1

SAMPLER TYPE

SS - DRIVEN SPLIT SPOON SI - PRESSED SHELBY TUBE

RC - ROCK CORE CT - CONTINUOUS TUBE

HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUGERS



SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-70

Client: CSX TRANSPORTATION, INC.
Project Name: SHOP AREA
Project Location: WAYCROSS, GA
Job Number: 2130-016-011 Boring No:
Logged By: SHAWN EUBANKS
Approved By: RAAJ PATEL
Drilled By: AMERICAN DRILLERS, GENE WADE

DRILLING AND SAMPLING INFORMATION Date Started: 6-26-91 Date Completed: 6-27-91

Method: HSA Total Depth: 25.0 FT

WELL COMPLETION INFORMATION

Screen Dia: 2.0 IN Length: 10.0 FT

Slot Size: 0.01 IN Type: STAINLESS STEEL

Casing Dia: 2.0 IN Length: 15.0 FT

DESCRIPTION SURFACE ELEVATION: SILTY CLAY(CL) — dark brown and tan, roots in top two inches, — 1.8' pocket of silty sand — 1.8' pocket of silty sand — 1.8' pocket of silty sand — 1.8' pocket of silty sand — 1.8' pocket of silty sand — 1.8' pocket of silty sand — 2.5	Drilled	By : AMERICAN DRILLERS, GENE WADE COSING DIG : 2.0 In	•			nig (i)					_
SILTY CLAY(CL)	DEPTH IN FEET	DESCRIPTION SURFACE ELEVATION:	SAMPLE NO.	SAMPLE	RECOVERY (FEET)	BLOW	NAO		GRAPHIC LOG	COMPLETION	
12 — 17.0' clay layer 1" thick, sand is medium grained		SILTY CLAY(CL) — dark brown and tan, roots in top two inches,									
12 — 17.0' clay layer 1" thick, sand is medium grained	3		J-1	ss	2	7.	0				1
12 — 17.0' clay layer 1" thick, sand is medium grained	‡	- 1.8' pocket of silty sand	L						//	Ž K	1 -
12 — 17.0' clay layer 1" thick, sand is medium grained	2 - 글	•						. }		X X	4
12 — 17.0' clay layer 1" thick, sand is medium grained	= =										1
12 — 17.0' clay layer 1" thick, sand is medium grained	. 3	•								SI K	
12 — 17.0' clay layer 1" thick, sand is medium grained	4 =	CLAYEY SAND(SC) WITH SILT — dark tan and light gray, moist				8,		Ì		X K	K
12 — 17.0' clay layer 1" thick, sand is medium grained	= =		µ -2	SS	2	5.	3.0			X X	Š
12 — 17.0' clay layer 1" thick, sand is medium grained	, =						<u> </u>				- 🖟
12 — 17.0' clay layer 1" thick, sand is medium grained	9 1	\$.								X K	
12 — 17.0' clay layer 1" thick, sand is medium grained	=									***************************************	É
12 — 17.0' clay layer 1" thick, sand is medium grained	8 -									₹	3 -
12 — 17.0' clay layer 1" thick, sand is medium grained		9.0'								対は	K
12 — 17.0' clay layer 1" thick, sand is medium grained		SILTY FINE SAND(SP) WITH SOME CLAY - dark brown.				_				3 13	K
12— 14— 16— ——————————————————————————————	10		J-3	ss	2	13.3	0			XI E	
18— - 17.0' clay layer 1" thick, sand is medium grained - 20.5' clay layer 2" thick, sand is well saturated 23.0' - 20.5' clay layer 2" thick, sand is well saturated	`` =										
18— - 17.0' clay layer 1" thick, sand is medium grained - 20.5' clay layer 2" thick, sand is well saturated 23.0' - 20.5' clay layer 2" thick, sand is well saturated		-									
18— - 17.0' clay layer 1" thick, sand is medium grained - 20.5' clay layer 2" thick, sand is well saturated 23.0' - 20.5' day layer 2" thick, sand is well saturated	12 -										:
18 - 17.0' clay layer 1" thick, sand is medium grained - 17.0' clay layer 1" thick, sand is medium grained - 20.5' clay layer 2" thick, sand is well saturated 22 - 23.0' BORNG METHOD										Ш	
18 - 17.0' clay layer 1" thick, sand is medium grained - 17.0' clay layer 1" thick, sand is medium grained - 20.5' clay layer 2" thick, sand is well saturated 22 - 23.0' BORNG METHOD										:# 3 :	
18 - 17.0' clay layer 1" thick, sand is medium grained - 17.0' clay layer 1" thick, sand is medium grained - 20.5' clay layer 2" thick, sand is well saturated 22 - 23.0' BORNG METHOD	14 -		-	+	-	-	\vdash			訓詁	1
18— - 17.0' clay layer 1" thick, sand is medium grained - 20.5' clay layer 2" thick, sand is well saturated 23.0' - 20.5' saturated - 23.0' BORNG METHOD			1-4	25	1,	ਤ	ا م ا				
- 17.0' clay layer 1" thick, sand is medium grained - 20.5' clay layer 2" thick, sand is well saturated 23.0' BORING METHOD					_	=					1
- 17.0' clay layer 1" thick, sand is medium grained - 20.5' clay layer 2" thick, sand is well saturated 23.0' BORING METHOD	16 -			├	1	-	$\vdash \vdash$:::::::::::::::::::::::::::::::::::::::	:
grained 20 20.5' clay layer 2" thick, sand is well saturated 22 23.0' 23.0'		- 17.0° clav laver 1° thick, sand is medium								::151	1
20 — — 20.5' clay layer 2" thick, sand is well saturated — — 5 SS 2 3 0.3 — — — — — — — — — — — — — — — — — — —		grained									∄ .
saturated 23.0' BORING METHOD	18 –									::[=]:	1
saturated 23.0' BORING METHOD			_		<u> </u>	<u> </u>				iiEli	
saturated 23.0' BORING METHOD]		1			m					
saturated 23.0' BORING METHOD	20 -	- 20.5° clay laver 2° thick,sand is well	μ <u>-</u> :	SS	2	1,2,2	0.3				
23.0' BORING METHOD		saturated				<u> </u>					
23.0' BORING METHOD											
BORING METHOD	22 -					1					
BORING METHOD		23.0'	_						媩	E	
BORING METHOD											
SAMPLER TIPE		SAMPLER TYPE			BOF	ANG P	AETHO!	<u> </u>			

SS - DRIVEN SPLIT SPOON SI - PRESSED SHELBY TUBE

RC - ROCK CORE CT - CONTINUOUS TUBE

HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUGERS

SUBSURFACE EXPLORATION

LITHOLOGIC LOG OF MW-70

Client: CSX TRANSPORTATION, INC.
Project Name: SHOP AREA
Project Location: WAYCROSS, GA
Job Number: 2130-016-011 Boring No: NW-70
Logged By: SHAWN EUBANKS
Approved By: RAAJ PATEL
AMERICAN DRILLERS, GENE WADE

DRILLING AND SAMPLING INFORMATION

Date Started: 6-26-91 Date Completed: 6-27-91
Nethod: HSA Total Depth: 25.0 FT
WELL COMPLETION INFORMATION
Screen Dia: 2.0 IN Length: 10.0 FT
Slot Size: 0.01 IN Type: STAINLESS STEEL
Casing Dia: 2.0 IN Length: 15.0 FT

Drilled	By: AMERICAN DRILLERS, GENE WADE	Casing Di	a : 2.0 IN	l	<u> </u>	Long	th:	15.0 F1	[-
DEPTH N FEET	DESCRIPTION SURFACE ELEVATION:			SAMPLE NO.	TYPE	(FEET)	COUNT	GRAPHIC	LOG WELL COMPLETION	WATER
	SANDY CLAY(CL) — slightly stiff, greenish gray, i	moist			\neg	十				Γ
=				J-6	ss	2 3	0			
	25.0' more silty, sand lense25.8' clayey sand	G(25.7				-	-			
26	• •		•	H	-		, _		/#I #I	
]				ול-נו	ss	2	0			
			27,8'	$\int \int \int \int \int \int \int \int \int \int \int \int \int \int \int \int \int \int \int $		_ :	4	16	211	
28	CLAY(CL/CH) WITH SOME SAND - stiff, gray, mo	lst		}	_	十		2		
] =	BORING TERMINATED AT 28.0 FT						1		. .	
30 –										
]						l			.	
]							1.			
32 –					ı					
1 3										
]										
34 –	• •					ı				
]					ļ					
36 -							·			1
] =		•						1 1		
							-			
38	·									
							- }			
40										
42										
44				.						
46									*	
~]		•								
=										
▎∄						\bot				_
	SAMPLER TYPE			AW CT		-OHONO	HT3M C	<u> </u>	- DRIVING C	

SS - DRIVEN SPLIT SPOON ST - PRESSED SHELBY TUBE

SAMPLER TYPE RC - ROCK CORE CT - CONTINUOUS TUBE

HSA - HOLLOW STEM AUGER
CFA - CONTINUOUS FLIGHT AUGERS

6	7	enviro		scie	ntists		engineers	W	, Augusta, GA;	BORING & WELL CONSTRUCTION LOG			
	9		-						, Augusta, OA, neham, MA	Date(s): 10/11/95 - 10/11/95 Well ID: MW-71			
Clien	t/Proj	ect Number:	CSXT\	560-	58					Surface Elevation: 137.00' Datum: Mean Sea Level			
Proje	ect Na	me & Locat	ion: CS	XT W	gycros	ss, G	eorgia	•		Total Borehole Depth: 28.00' Well Completion Depth: 28.00'			
Logg	ed By:	: G. Bonn			Ą	prov	ed By: C.	Matta	ir	Depth to Water: 8.16' Borehole Dia.: 8.25in			
Cont	ractor/	Driller: Gulf	Atlantic	:-0cc	ala					Conductor Casing: type: dia: .00in fm: .00' to: .00'			
Drillin	ng Met	thod & Rig:	Hollow	Stem	Aug	er, M	inistar			type: dia: .00in fm: .00' to: .00' Solid Pipe			
Well	Locati	on: ODSA								type: Stainless dia: 2.00in fm:7' to: 13.00'			
Purp	ose: We	ell .								Screens: type: Wire-wrap size: .020in dia: 2.00in fm: 13.00' to: 23.00'			
Sam	pler Ty	pe: Split Sp	oon Sa	mpler	, 2"	diam	eter, 2' le	nglh	,	Annular Fill:			
	r Leve arks:	Developed I 1.5 gpm. 2 15 gallons.	by purg 25 gallo	ing w	/ 2"	cent	rifugal pur	mp at	type: Grout fm: .00' to: 8.50' type: Bentonite fm: 8.50' to: 11.00' type: Sand Filter fm: 11.00' to: 28.00' type: fm: to: type: fm: to:				
3		>				世	60	ā		Material Description Well Construction			
Elevation (ft)	Depth (ft)	Sample ID/ Interval		Moisture	Recovery	Blow Count	Graphic Log	S Code		Frace = 0-10% Little = 10-20% MP. EL. 137.67			
Elevo	Dept	Sam	Vapor	Mois	Reco	Blow	Grap	nscs		Some = 20 -30% And = 35-50% 0 - dry, M + moist, S - saturated			
-								SC	0-4.0' VF-F sand	nith 2014 sifty clay. Gray, brown, homogeneous, soft.			
- 130		4-6		М	/	19 36 41 49		SC/CL	5.0-6.0' VF-F son very dense.	d with 40% sitly clay. Lt. brown, yellow, gray, molliled, homogeneous,			
	-	9-1.1		М		5 6 8 10		SC	10.0-11.0' VF-F s homogeneous, semi	nd with a trace of M sand and 30% silly clay. Lavender, dense.			
- 120	-	14-16		S		3568			14.0-16.0° VF-C so becomes coarser at	nd with 20% sitly clay. Lt. gray, lovender, coarsely interloyered bedding,			
	20-	19–21		S		3 4 9 12			19.3-21.0° VF-C so with a few dark gr				
- 110	-	24–26 26–28		s		471014 3787			homogeneous, becom	d with 40% sitly clay. Gray, brown, becomes green at 25.6°, es coarsely interlayered with increasing clay at 25.6°, semi-dense. with 30% VF-F sand. Green, homogeneous, soft,			
bw_t	mp.dwg		Stro	tificot	ion Li	nes S Ac	Show the A tual Transit	oproxi	mate Boundar re Generally G	Belween Soil Types Page 1 of 1			

•		enviror Locust	Valley.	scie	ntists Ann	Arbor			, Augusta, GA; neham, MA	BORING & WELL CONSTRUCTION LOG Date(s): 10/11/95 - 10/11/95 Well ID: MW-72
Client	/Proid	ect Number:				r L;	irenton, No	J; 510	nenam, MA	Surface Elevation: 137.00' Datum: Mean Sea Level
		me & Locati				ee r	lenroin			Total Borehole Depth: 28.00' Well Completion Depth: 28.00'
<u>-</u>			Uli. US	A1 110	.		ed By: C.	Malla	Depth to Water: 6.73' Borehole Dia.: 8.25in	
		G. Bonn	Allasti	. 0		pprov	еа ву: С.	Matta		
		Driller: Gulf					-ii C 0		Conductor Casing: type: dia: .00in fm: .00' to: .00'	
		hod & Rig:	LIOHOM	Stem	Aug	ег, г	diing r-z			Solid Pipe
										type: Stainless dia: 2.00in fm:8' to: 13.00' Screens:
Purpo		pe: Split spo			n* .		-las 01 las			type: Wire-wrap size: .020in dia: 2.00in fm: 13.00' to: 23.00'
<u>:</u>	Level	Measured (Developed b at 2.0 gpm. 15 gallons.	Date &	Time	e): (1 ith a	2" (3/95) centrifugal	pump	Annular Fill: type: Grout fm: .00' to: 8.00' type: Bentonite fm: 8.00' to: 10.00' type: Sand Filter fm: 10.00' to: 28.00' type: fm: to: type: fm: to:	
Elevation (ft)	Depth (ft)	Sample ID/ Interval	Vapor	Moisture	Recovery	Blow Count	Graphic Log	USCS Code	!	Material Description Frace = 0-10% Little = 10-20% Frace = 20 -30% And = 35-50% Frace - dry, M - moist, S - saturated Well Construction MP. EL. 137.80
- 130	5-	4–6		М		4 4 4 4		SC/CL	with depth, soft.	with 20% sitty clay. Brown, gray, clay increasing d with 40% sitty clay. Dark brown, homogeneous,
	10-	9-11		S	•	2387		CL SC/CL	inlerlayered and le	nd with 40% silty clay. Brown, gray, coarsely licular bedding, semi-dense, mostly clay at 9.5-10.5'. and with 35% silty clay. Dark gray, brown, coarsely interlayered
120	15-	14-16		S		2664		SC		e, abrupt contact at 15.2°. and with 15% silty clay . cream, weak coarsely interloyered
	20-	19-21	,			323			soft, grades to ma	and with a trace of coarse sand and 25% sitly clay. Lt. gray, lity M-C sand at 20.8°.
110	4	24-26 26-28		S		3566 3664		CL	becomes green al	5.6°, weak coarsely interlayered bedding,soft.
bw_tm;	p.dwg		Strati	ificoti	on Li	nes S Aci	show the A	pproxi	mate Boundary re Generally Gr	Between Soil Types Page 1 of 1

6	enviror		scie	ntists		engineers . Ml: Madi		1, Augusta, GA;	BORING & WELL CONSTRUCTION LOG		
								oneham, MA	Dote(s): 10/11/95 - 10/11/95 Well ID: MW-73		
Client/Proj	ect Number:	CSXT\:	560-	58					Surface Elevation: 135.00' Datum: Mean Sea Level		
Project No	me & Locati	on: CS	XT W	aycro	ss, G	eorgia		•	Total Borehole Depth: 28.00' Well Completion Depth: 28.00'		
Logged By	G. Bonn			A	pprov	ed By: C.	Matte	oir	Depth to Water: 4.27' Borehole Dia.: 8.25in		
Contractor	/Driller: Gulf	Atlantic	-Oc	ala					Conductor Casing:		
Drilling Me	thod & Rig:	Hollow	Sterr	a Aug	er, F	ailing F–2	?		type: dio: .00in fm: .00' to: .00' Solid Pipe		
Well Locati	on: ODSA -	south	of co	anal					type: Stainless dia: 2.00in fm:6' to: 13.00'		
Purpose: W	ell								Screens:		
Sampler Ty	pe: Split spo	on san	npler,	, 2"	diame	eter, 2' le	ngth.	•	type: Wire-wrap size: .020in dia: 2.00in fm: 13.00' to: 23.00'		
Water Leve	l Measured (Date &	Tim	e): (1	10/13	3/95)			Annular Fill: type: Grout fm: .00' to: 9.00'		
Remarks:	Developed b at 4 gpm. gallons.)	type: Bentonite fm: 9.00' to: 11.00' type: Sand Filter fm: 11.00' to: 28.00' type: fm: to: type: fm: to:		
€ _	·/Q	·			<u>_</u>	50	ه ا		Material Description Well Construction		
Elevation (ft) Depth (ft)		ڀ	fure	Recovery	Blow Count	Graphic Log	Code	1	Trace = 0-10% Little = 10-20% MP. EL. 135.62		
Elev Dept	Sample Interval	Vapor	Moisture	Reco	Blow	Grap	nscs		Some = 20 -30% And = 35-50% D - dry, M :- moist, S - saturated		
	4–6 9–11	•	M		2445 4322		CL/SC	soft. 2.0-4.0' Sity clarkorogeneous, set 4.8-6.0' Sity clarkorogeneous, set 9.1-9.4' Same as 9.4-10.8' Sity clarkorogeneous beds of clay and	with 30% VF-F sand. Dark brown with yellow mottling, ni-dense. 4.8-6.0'. by with 40% VF-F sand. Gray, brown, alternating thin		
- 120 15- 120 -	14-16		S		3222		SC	1	as 9.4-10.8". sond with a trace of C sand and 25% silly clay. Gray, ith clay spoiling, biolurboted?, soft.		
- 20-	19-21		s		2722		CL	beige, homogeneou	nd with a trace of VC sand and 10% silty clay. Lt. gray, s, soft. by with 20% VF-C sand. Green-gray, homogeneous,		
	24-26 26-28		S		80157 5555		sc	Lt. green, gray, bro and sand grain size	and with a trace of granular sand and 15% clay and silt. wm, abundant K-feld. granules at 27.6°, clay content increasing decreasing with depth, soft.		
bw_lmp.dwg		Stroti	ficati	on Li	nes S Act	how the / ual Transi	Approx tions /	imate Boundary Tre Generally Gr	Belween Soil Types Page 1 of 1		

eder associates environmental scientists and engineers Locust Valley, NY; Ann Arbor, MI; Madison WI, Augusta, G		ONSTRUCTION LOG		
Jacksonville FL; Tampa, FL; Trenton, NJ; Stoneham, MA	Date(s): 10/11/95 - 10/11/95	Well ID: MW-74		
Client/Project Number: CSXT\560-58	Surface Elevation: 135.00'	urface Elevation: 135.00' Datum: Mean Sea Level		
Project Name & Location: CSXT Waycross, Georgia	Total Borehole Depth: 28.00'	Well Completion Depth: 28.00'		
Logged By: G. Bonn Approved By: C. Mattair	Depth to Water: 4.07'	Borehole Dia.: 8.25in		
Contractor/Driller: Gulf Atlantic-Ocala	Conductor Casing: type: dia: .0	Oin fm: .00' to: .00'		
Drilling Method & Rig: Hollow Stern Auger, Ministor	Solid Pipe	011 1111.100 (0.100		
Well Location: ODSA — south of canal		00in fm:7' to: 13.00'		
Purpose: Well	Screens: type: Wire-wrop size: .020in dia:	2.00in fm: 13.00' to: 23.00'		
Sampler Type: Split Spoon Sampler, 2" diameter, 2' length	Annular Fill:	2.00.00 10.00 10.20.00		
Water Level Measured (Date & Time): (10/13/95) Remarks: Developed by purging with 2" centrifugal pump at 0.75 gpm. 20 gallons purged; clear after 15 gallons.	type: Grout type: Bentonite type: Sand Filter type: type:	fm: .00' to: 9.00' fm: 9.00' to: 11.00' fm: 11.00' to: 28.00' fm: to:		
(ft) (ft)	Material Description	Well Construction		
[a a a a a a a a a a	Troce = 0-10% Little = 10-20%	MP. EL. 135.74		
	Some = $20 - 30\%$ And = $35 - 50\%$ D - dry, M + moist, S - saturated			
- 13C 5-4-6 M 9 10 13 SC/CL 2.0-4.0' Silty semi-dense. 4.5-5.3' VF-I homogeneous, 5.3-6.0' VF-I mollled, coors	sand with 20% silty clay. Gray, homogeneous, soft. clay with 40% VF-F sand. Dark brown, block, homogen sand with 40% silty clay. Yellow, dark gray, brown, mol semi-dense. I sand with a trace of C sand and 40% silty clay. Yello ely interloyered bedding, soft.	lled,		
coarsely interk	-F sand with a trace M sand and 25% silly clay. Gray, greed bedding, soft. -M sand with a trace of C sand and 25% silty clay. Ga			
- 20-19-21 S 3 19.2-21.0' VF-	carsely interloyered bedding, soft. C sand with 15% sitty clay. Lt. gray, cream, homogen laminations, grain size increasing with depth, soft.	eous with		
- 110 25 - 24 - 26 S S S S S S S S S S S S S S S S S S	sand with a trace of granular sand and 15 % sitly clay grain size increasing with depth, solt. C sand with a trace of granular sand and 10% sitly clay eneous, soft.			
bw_tmp.dwg Stratification Lines Show the Approximate Bounda Actual Transitions Are Generally	ry Between Soil Types Gradual	Page 1 of 1		

Locust Valley, N' Jacksonville FL; Client/Project Number: CSXT\560 Project Name & Location: CSXT Logged By: G. Bonn Contractor/Driller: Gulf Atlantic—O Drilling Method & Rig: Hollow Ste Well Location: ODSA Purpose: Well Sampler Type: Split Spoon Sampl Water Level Measured (Date & Ti Remarks: Developed by purging	cientists and engineers Y; Ann Arbor, MI; Madison WI, Augusta, GA; Tampa, FL; Trenton, NJ; Stoneham, MA D-58 Waycross, Georgia Approved By: C. Mattair Ocala em Auger, Failing F-2 ler, 2" diameter, 2' length	Date(s): 10/10/95 - 10/10/95 Surface Elevation: 135.00' Total Borehole Depth: 28.00' Depth to Water: 4.71' Conductor Casing: type: dia: .0 Solid Pipe type: Stainless dia: 2.0 Screens:	ONSTRUCTION LOG Well ID: MW-75 Datum: Mean Sea Level Well Completion Depth: 28.00' Borehole Dia.: 8.25in Din fm: .00' to: .00' 2.00in fm:9' to: 13.00' fm: .00' to: 23.00' fm: 9.00' to: 11.00' fm: 11.00' to: 28.00' fm: to: fm: to:
Elevation (ft) Depth (ft) Sample ID/ Interval Vapor	1 1 1 1 1 "	Material Description Trace = 0-10% Little = 10-20% Some = 20 -30% And = 35-50% O - dry, M - moist, S - saturated	Well Construction MP. EL. 135.86
- 130 5-4-6 - 6-8 - 8-10 - 10- 10-12	SC 2.0-4.0' VF-F so clay content incre 7.1-8.0' VF-F so hornogeneous, ser 8.4-10.0' VF-M sinterlayered bedding	sand with 30% silty clay. Pink, cream, coarsely ng, soft.	, soft.
-120 15-14-16 -16-18 -18-20 - 20-	5	sand with 20% sity clay. Yellow, pink, cream, cooing, soft. and with 10% sity clay. Lt. gray, cream, homogeneous, sand with 10% sity clay. Lt. gray, homogeneous, sand with 10% sity clay. Lt. gray, homogeneous, sand with 10% sity clay. Lt. gray, homogeneous, sand with 10% sity clay. Lt. gray, homogeneous, sand with 10% sity clay. Lt. gray, homogeneous, sand	eous,
-110 25-24-26 S	SW/SC 20.6-22.0' F-gran clay and granular 22.4-24.0' F-gran Lt. gray, coarsest 24.0-26.0' F-gran homogeneous, soft.	nular sand with a trace of pea gravel and 10% sitly at 23.0-23.5°, soft. uular sand with 10% sitly clay. Lt. gray, tan, uular sand with 5% sitly clay. Lt. gray, cream,	
bw_tmp.dwg Stratific	cation Lines Show the Approximate Boundary Actual Transitions Are Generally Gro	Between Soil Types	Page 1 of 1



enviro Locus		and engineers Arbor, MI; Madison WI, FL; Trenton, NJ; Stor		BORING & WELL C	ONSTRUCTION LOG	
Client/Project Number		TE TECHON, NO, OLO	nenam, mr	Surface Elevation: 136.00' Datum: Mean Sea Level		
Project Name & Loca	•	ss, Georgia		Total Borehole Depth: 28.00'	Well Completion Depth: 28.00'	
Logged By: G. Bonn		pproved By: C. Matta	ir	Depth to Water: 4.98'	Borehole Dia.: 8.25in	
Contractor/Driller: Guli		, , , , , , , , , , , , , , , , , , , ,		Conductor Casing:		
Drilling Method & Rig:		er. Failing F-2		type: dia: .0	Oin fm: .00' to: .00'	
Well Location: ODSA				Solid Pipe type: Stoinless dio: 2.	00in fm:8' to: 13.00'	
Purpose: Well				Screens:		
Sampler Type: Split Sp	poon Sampler, 2"	diameter, 2' length	•	type: Wire-wrap size: .020in dia:	2.00in fm: 13.00' to: 23.00'	
		centrifugal pump a	t	Annulor Fill: type: Grout type: Bentonite type: Sand Filter type: type:	fm: .00' to: 9.00' fm: 9.00' to: 11.00' fm: 11.00' to: 28.00' fm: to: fm: to:	
Elevation (ft) Depth (ft) Sample ID/	Vapor Moisture Recovery	Blow Count Graphic Log	. :	Material Description Trace = 0-10% Little = 10-20% Some = 20 -30% And = 35-50% D - dry, M ← moist, S - saturated	Well Construction MP. EL. 136.78	
5-4-6 -130 10-9-11	M S	SC/CL	4.7-6.0' VF-F so mottling, homoge	and with 40% silty clay. Dork brown with gray and y neous, semi-dense. sand with 25% silty clay. Gray, brown, homogeneous	ellow sand with	
15-14-16	S	מפשמ	14.3-16.0° VF-M	lenses, changes to coarsely interlayered bedding at some with a trace C-sand and 30% sitly clay. Brownterlayered bedding, soft.		
20-19-21	S	7450		and with 15% silly clay. Lt. gray, contains a few th nes slightly coarser with depth, soft.	ick cloy	
25-24-26 110 -26-28	s	\$ SW/SC	26.0-27.0° F-VC s	and with 15% silty clay. Lt. gray, homogeneous, soft. sand with a trace of granular sand and 10% silty classes, some K-feld. granules.	y	
bw_tmp.dwg	Stratification Li	nes Show the Approxi Actual Transitions A	mate Boundary ire Generally Gr	Belween Soil Types radual	Page 1 of 1	

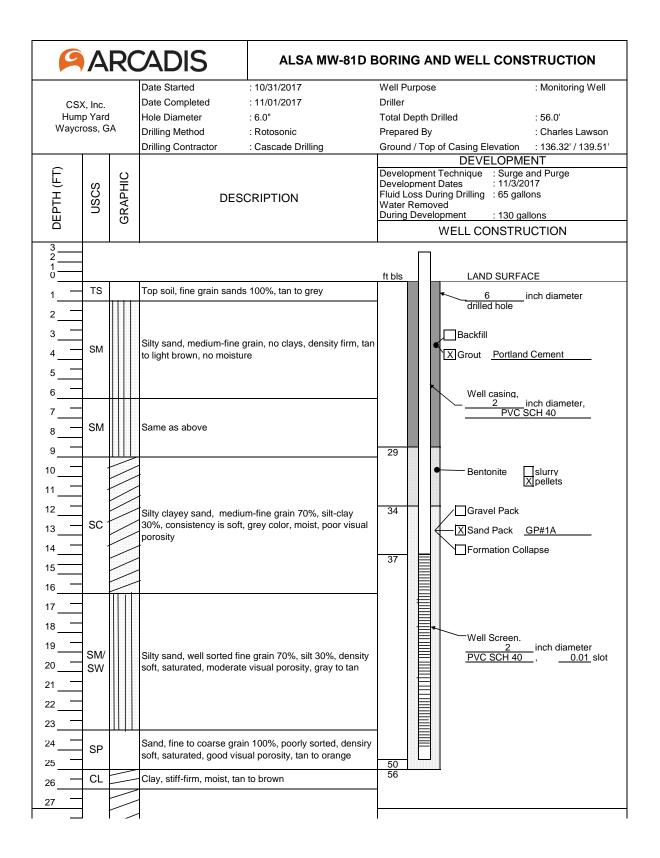
Client	I/Pro	enviro Locus	st Valley sonville	ol sci y, NY; FL; T	entist ; Ann ampo	s an Arbo	d engineers or, MI; Madis ; Trenton, N			STRUCTION LOG ID: MW-77 m: Mean Sea Level	
Proje	ct No	me & Local	lion: CS	SXT V	Vayer	oss,	Georgia			Total Borehole Depth: 28.00' Well	Completion Depth: 28.00'
Logge	ed By	: G. Bonn			1	Appro	oved By: C.	Matte	Depth to Water: 4.18' Borel	nole Dia.: 8.25in	
Contr	ractor	/Driller: Gulf	Atlanti	ic-Oc	:ala				Conductor Casing:		
Drillin	ıg Me	thod & Rig:	Hollow	Ster	n Au	ger,	Ministar		type: NA dia: .00in f	m: .00' to: .00'	
Well	Locat	ion: ODSA							Solid Pipe type: Stoinless dia: 2.00in fi	m:7' to: 13.00'	
Purpo	ose: W	/ell							Screens:		
Samp	oler T	ype: Split Sp	oon Sc	mple	r, 2"	diar	neter, 2' lei	ngth	,	type: Wire-wrap size: .020in dia: 2.00in	fm: 13.00' to: 23.00'
1		Developed 4 GPM. 60	by purg	ging v	with :	2" ce		ımp o	type: Bentonite fi type: Sand Filter fi type: fi	m: .00' to: 9.00' m: 9.00' to: 11.00' m: 11.00' to: 28.00' m: to: n: to:	
8	.	/0				=	60]	de		Material Description	Well Construction
Elevation (ft)	Depth (ft)	Sample 1 Interval	Vapor	Moisture	Recovery	Blow Count	Graphic Log	S Code		race = 0-10% Little = 10-20%	MP. EL. 136.17
ä		S	Ş	. <u>ĕ</u>	Rec	a	Gra	nscs	i	ome = 20 -30% And = 35-50% - dry, M ← moist, S - saturated	
- 130	5-	4-6		М		4555		SC/CL CL	4.5-5.5' VF-F s	d with 20% silty clay. Gray brown, homogeneous, soft. and with 40% silty clay. brown, gray, homogeneous, tilh clay at 5.5°, soft. y with 20% VF-F sand. LT. gray, mottled, homogeneous	
	10-	9–11		s		5 6 10 4		SC	9.3–11.0' VF–C interloyered bedd	and with 20% silty clay. Gray, well-defined coarsely ng, soft.	
- 120	15-	1416		S		2335		٠.		sand with a trace of coarse sand and 20% silty clay. Playered bedding, soft.	
	20- 1	19-21		S		3477			19.0–21.0° VF–C interlayered beddin	sand with 20% silty clay. Gray, cream, coarsely g, soft.	
- 110	4	24-26 26-28		s s		4 6 9 12 5 7 7 10		H/SC SC	Lt. gray, becomes 26.0-28.0' F-VC	and with a trace of granular sand and 10% silty clay. slightly coarser with depth, soft. and with a trace of granular sand and 20% silty clay. defined coarsely interlayered bedding, soft.	
bw_tm;	p.dwg		Strot	ificati	on Li	nes Ar	Show the Ap	proxii	nate Boundary	Between Soil Types Page 1	of 1

•	>	enviror Locust	Valley,	scier NY;	ntists Ann <i>i</i>	Arbor,			Augusta, GA;	BORING & WELL CONSTRUCTION LOG Date(s): 10/12/95 - 10/12/95 Well ID: MW-79		
01	/0					FL; 1	renton, N.	; Stone	eham, MA	Date(s): 10/12/95 - 10/12/95 Well ID: MW-79 Surface Elevation: 130.00' Datum: Mean Sea Level		
<u> </u>	<u> </u>	ct Number:						,	Surface Elevation: 130.00' Datum: Mean Sed Level Total Borehole Depth: 28.00' Well Completion Depth: 28.00'			
⊢		ne & Locati	on: CS	AI W			ed By: C.	Mattala	Depth to Water: Borehole Dia.: 8.25in			
<u> </u>		G. Bonn Driller: Gulf	Allestie	. 0.	<u> </u>	prove	ed by: C.	Mattail		Conductor Casing:		
						F-	ilian F O			type: dia: .00in fm: .00' to: .00'		
ļ		nod & Rig:			Aug	er, ro	ning r-2			Solid Pipe type: Stainless dia: 2.00in fm: .5' to: 13.00'		
	ose: We	n: ASB, sou	All OI (Junui						type: Stainless dia: 2.00in fm: .5' to: 13.00' Screens:		
<u> </u>		pe: Split spo	202 607	nolar	2" /	diama	der 2º ler	alh		type: Wire-wrap size: .020in dia: 2.00in fm: 13.00' to: 23.00'		
		Measured (igui.		Annular Fill: type: Grout fm: .70' to: 9.00'		
	orks:	Developed to at 3 gpm. gallons.	y purg	ing w	ith a	2" c	entrifugal			type: Bentonite fm: 9.00' to: 11.00' type: Sand Filter fm: 11.00' to: 28.00' type: fm: to: type: fm: to:		
Elevation (ft)	Depth (ft)	Sample ID/ Interval	Vapor	Moisture	Recovery	Blow Count	Grophic Log	USCS Code		Material Description Frace = 0-10% Little = 10-20% Some = 20 -30% And = 35-50% O - dry, M - moist, S - saturated Well Construction MP, EL. 130.91		
-130	5-									amples were taken to describe soil lithologies as s completed with the tower down due to overhead		
- 120	10-											
	15-							·				
- 110	-											
-	25-											
bw_t	mp.dwg		Stra	tifica	ion L	ines Ac	Show the tual Transi	Approxi tions A	mate Boundar re Generally (y Between Soil Types Page 1 of 1 radual		

•		enviror Locust	Valley,	scier NY;	ntists Ann	Arbor,			Augusta, GA;	BORING & WELL CONSTRUCTION I Date(s): 10/12/95 - 10/12/95 Well ID: MW-80	LOG	
011	/Dt				•	rL;	irenton, N	J; Ston	eham, MA	Surface Elevation: 129.50' Datum: Mean Sea Level		
		t Number:										
		e & Locati	ion: CS	XI Wo						Total Borehole Depth: 28.00' Well Completion Depth: 28.00		
		G. Bonn				prov	ed By: C.	Mattair	<u> </u>	Depth to Water: Borehole Dia.: 8.25in		
		riller: Gulf							Conductor Casing: type: dia: .00in fm: .00' to: .00	j•		
	<u> </u>	od & Rig:				er, Fo	ailing F-2		Solid Pipe			
Well	Location	n: ASB, sou	uth of c	canal						type: Stainless dia: 2.00in fm: .5' to: 13.	00'	
Purpo	ose: Well	•								Screens: type: Wire-wrap size: .020in dia: 2.00in fm: 13.00° to: 23.	.00'	
	oler Typ					- 4.			•	Annular Fill:		
Remo	orks: (Measured (Developed to bump at 5 gallons.	y purgi	ing w	ith a	2" (entrifugal	after 2	20	type: Grout fm: .00' to: 9.0 type: Bentonite fm: 9.00' to: 11. type: Sand Filter fm: 11.00' to: 28. type: fm: to: type: fm: to:	.00	
£							ģ	a		Moterial Description Well Construction	n	
Elevation (ft)	(£)	ole ID/		ure	Very	Blow Count	Graphic Log	Code		Trace = 0-10% Little = 10-20% MP. EL. 130		
Elevo	Depth	Sample Interval	Vapor	Moisture	Recovery	Blow	Grapt	nscs		Some = 20 -30% And = 35-50% D - dry, M + moist, S - saturated		
120	5-								powerlines.	s completed with the tower down due to overhead		
10Q												
hw fr	np.dwg		Strat	ifical	ion Li	nes :	Show the /	Approxi	mate Boundan	Between Soil Types Page 1 of 1 radual		

<u> </u>												
		envir		al scie	entist	s and	d engineers or, MI: Madi	son W	/I, Augusta, GA;	BORING & WELL CONSTRUCTION LOG		
		Jacks	sonville	FL; T	ampa	, FL;	Trenton, N	J; Sto	oneham, MA	Date(s): 10/10/95 - 10/10/95 Well ID: MW-81		
Clie	nt/Pro	ject Number	: CSXT\	560-	-58				Surface Elevation: 132.00' Datum: Mean Sea Level			
Pro	ject N	ame & Loca	tion: CS	XT W	aycro	oss, (Georgia		Total Borehole Depth: 28.00' Well Completion Depth: 28.00'			
Log	ged B	y: G. Bonn			1	\ppro	ved By: C.	Matte	Depth to Water: 9.56' Borehole Dia.: 8.25in			
Con	tracto	r/Driller: Gul	f Atlanti	c-0c	ala				Conductor Casing:			
Drill	ling Me	ethod & Rig:	Hollow	Sten	n Aug	ger, l	Failing F—2		type: dio: .00in fm: .00' to: .00' Solid Pipe			
_		tion: ASB, so	outh, of	canal					type: Stainless dia: 2.00in fm:7' to: 13.00'			
	pose: V									Screens: type: Wire-wrop size: .020in dia: 2.00in fm: 13.00' to: 23.00'		
		ype: Split Sp					·	ngth		Annular Fill:		
	er Lev		by purg	ing w	ith o	cen		mp al	type: Grout fm: .00' to: 8.00' type: Bentonite fm: 8.00' to: 10.00' type: Sand Filter fm: 10.00' to: 28.00' type: fm: to:			
18	Γ	T	İ	Π		T.,	6			type: fm: to: Material Description Well Construction		
Elevation (ft)	3	Sample 1D/ Interval		nre	very	Blow Count	Graphic Log	Code		race = 0-10% little = 10-20%		
Eev	Depth	Som	Vapor	Moisture	Recovery	Blo₩	Grapl	USCS		Some = 20 -30% And = 35-50% - dry, M*- moist, S - saturated MP. EL. 132.22		
								SC		and with 20% silly clay. Gray, homogeneous, soft.		
- 130	4	-										
		1										
	5.	4-6		М		17 14 15 15		4	5.0-6.0' VF-F	sand with 40% silly clay. Gray, yellow,		
					\angle	15		SC/CL	homogeneous,			
F		_										
]										
	10-	9-11		S		5 5		SC	9.2-11.0' F-C	sand with 30% silty clay. Yellow, gray, cream,		
						5				ered bedding, sand size and content increasing		
120									with depth, TCE	odor, soft.		
								i				
	15-	14-16		S		322			14.3-16.0' F-W	sand with a trace pea gravel and 20% silty clay.		
				F	7	2				range, coarsely interlayered bedding,		
	-								TCE odor, pea g	ravel lens at 15.0', soft .		
	-			s								
	20-	19-21	į	3		5			19.1-21.0' F-V	sand with 30% silty clay. Lt. gray, homogeneous,		
	1			Ī		6			soft, TCE odor,	emi-dense.		
-110]					ř						
]			s								
	25-	24-26		7		11 19 14				sand with a trace of pea gravel and 15% silty		
	1	26-28		S	-	8				ge, homogeneous, semi-dense.		
]	20-20			$\overline{}$	5			27.0-28.0' Sam	5 OS 24.U-26.U		
		,				ſ	7					
bw_tr	np.dwg		Strati	ficatio	n Lir	nes S	how_the Ap	proxin	nate Boundary	Between Soil Types Page 1 of 1		
	r					Act	ual Transitio	ons A	re Generally Gra	dual ruge i of i		



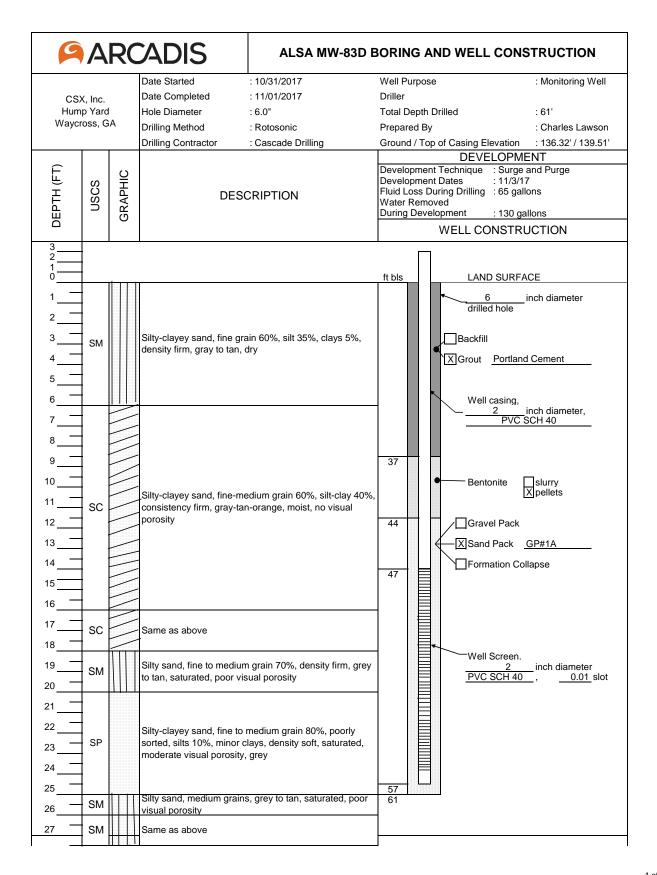


28	
30 CL	Sam as above, stiff clay, green
33 34 35	
36 — SM	Silty sand, fine grain 70%, silt 25%, minor amounts of clays 5%, density soft, saturated, poor visual porosity.
37 SM	Same as above
40 CL	Clay, consistency firm-stiff, dark grey to black
42 — 43 — 44 — 45 —	Sand, well sorted fine to coarse 100%, density soft, all grey, saturated, good visual porosity
46 SC	Silty-clayey sand, fine grain 70%, silt-clays ~30%
47 48 SC 49 50	Same as above
51 52 53 CL	Clay, hard, blue-green, no moisture
55	

6		enviro Locus	t Valley,	scie NY;	ntists Ann	Arbor,			Augusta, GA;		BORING & WELL O		
Jacksonville FL; Tampa, FL; Trenton, NJ; Stoneham, MA Client/Project Number: CSXT\560-58										╁	Date(s): 10/11/95 - 10/11/95 Well ID: MW-82		
			•							+	Surface Elevation: 130.00'	 	m: Mean Sea Level
		ne & Locat	ion: CS	XT W				•		┿	Total Borehole Depth: 27.50'	├	Completion Depth: 27.50*
	<u> </u>	G. Bonn			ــــــــــــــــــــــــــــــــــــــ	pprove	ed By: C.	Mattair	•	╁	Depth to Water:	Borel	nole Dia.: 8.25in
		Oriller: Gulf							·		Conductor Casing: type: dia: .0	Oin f	m: .00' to: .00'
		od & Rig:				er, Fo	iling F-2			١,	Solid Pipe	······································	
		n: ASB, so	uth of (canal						┿	· · · · · · · · · · · · · · · · · · ·	.00in f	m: .5' to: 12.50'
Purpos		· · · · · · · · · · · · · · · · · · ·	•								Screens: type: Wire-wrop size: .020in dig:	2.00in	fm: 12.50° to: 22.50°
Sample			/D_L_ •		A. 1	10/17	/os\		• .	╀,	Annular Fill:		
Remark	rks: (Measured Developed 1 at 3 gpm. gallons.	by purg	ing w	ilh a	2* c	entrifugal	pump 30			type: Grout type: Bentonite type: Sand Filter type: type:	fi fi fi	m: .70' to: 8.50' m: 8.50' to: 10.50' m: 10.50' to: 27.50' m: to: m: to:
Elevation (ft)	Depth (ft)	Sample 10/ Interval	Vapor	Moisture	Recovery	Blow Count	Graphic Log	USCS Code	9	So	Material Description acce = 0-10% Little = 10-20% acce = 20 -30% And = 35-50% - dry, M - moist, S - saturated		Well Construction MP. EL. 130.74
	5-										mples were token to describe soil litholo completed with the tower down due to	_	
100	25-												
bw_tmp	p.dwq		Strat	ificati	ion Li	nes S	how the A	oproxim	nate Boundary e Generally Gr	rod	Between Soil Types dual	Page	1 of 1

Moterfol Description Troce = 0-10% Little = i0-20% Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided And SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided And SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided And SS Some = 20 -30% And = 33-30% D - dry, M = moists, S = solutorided And SS Some = 20 -30% And = 35-30% D - dry, M = moists, S = solutorided And SS Some = 20 -30% And = 35-30% D - dry, M = moists, M = 20	Jacksonville FL; Tampa, FL; 1 Client/Project Number: CSXT\560-58 Project Name & Location: CSXT Waycross, Ge	Mi; Madison Wi, Augusta, GA; irenton, NJ; Stoneham, MA corgia ed By: C. Mattair nistar ter, 2' length –95)	Date(s): 10/09/95 - 10/09/95 Surface Elevation: 130.00' Total Borehole Depth: 28.00' Depth to Water: 8.84' Conductor Casing: type: dia: .00 Solid Pipe type: Stainless dia: 2.0 Screens: type: Wire-wrap size: .020in dia: Annular Fill: type: Grout type: Bentonite type: Sand Filter type:	ONSTRUCTION LOG Well ID: MW-83 Datum: Mean Sea Level Well Completion Depth: 28.00' Borehole Dia.: 8.25in Din fm: .00' to: .00' 2.00in fm: 13.00' to: 23.00' fm: .00' to: 9.00' fm: 9.00' to: 11.00' fm: 11.00' to: 28.00' fm: to:
C2-24 Vi-F sand with 10% silly clay. It. brown, gray, homogeneous, solt.			Frace = 0-10% Little = 10-20% Some = 20 -30% And = 35-50%	MP. EL. 130.65
bw_tmp.dwg Stratilication Lines Show the Approximate Boundary Between Soil Types Page 1 of 1	5-4-6 6-8 8-10 -120 10-12 12-14 15-14-16 16-18 18-20 -110 20-22 22-24 25-24-26 26-28	SC O-2.0' VI-F san soft. 2.0-4.0' VF-F clay increasing w 5.0-6.0 Silty cla clay increasing w 7.1-8.0' Silty cla sand content incit 8.3-10.0' F-C st coarser with less 10.0-12.0' F-VC becomes coarser 12.0-14.0' F-VC clay increasing an 14.0-16.0' F-VC weak coarsely inte 18.0-20.0' F-VC sweak coarsely inte 18.0-20.0' F-VC st coarsely inte 18.0-20.0' F-VC shornogeneous, semi 24.0-26.0' F-VC shornogeneous, semi 26.0-28.0' F-VC scream, orange, hon	sond with 25% silty clay. Yellow, brown, gray, rith depth, soft. by with 45% VF-Fsand. Gray-brown, purple, rith depth, soft. by with 45% VF-C sand. Brown, gray, yellow, reasing and coarser with depth, semi-dense. and with 30% silty clay. Brown, gray, yellow, be clay at 10.0°, soft, nonplastic. sand with 15% silty clay. Lt. brown, pink, oran with less clay with depth, soft. sand with 20% silty clay. Pink, It brown, gray, and grain size decreasing with depth, soft. sand with 45% silty clay. Cream, gray, beige, enlayered bedding, soft. sand with 35% silty clay. Gray, cream, beige, enlayered bedding, soft. sand with 30% silty clay. Cream, beige, riayered bedding, soft. sand with 30% silty clay. Cream, beige, riayered bedding, soft. sand with 30% silty clay. Cream, beige, indense, trace of pea gravel and 30% silty clay. Gream, beige, indense, trace K-feldspar. sand with 20% clay and silt. Cream, beige, indense, trace K-feldspar. and with a trace of pea gravel and 15% silty clay. nogeneous, semi-dense.	doy.





ı			<u>, </u>		
28					
29					
30					
31					
32	CL		Stiff clay, grey, very little fines, consistency hard, very little moisture, good confining unit		
33			, ,		
34					
35					
36					
37					
38	-		Company of the company		
39	CL		Same as above		
40					
41					
42					
43	CVA		Well sorted silty sand, fine to coarse grain, density soft, grey, sub-angular, quartz and feldspar, minor silts, good		
44	SW		visual porosity, saturated		
45					
46					
47					
48					
49					
50	SW		Same as above		
51					
52					
53					
54	SM		Silty sand, fine to medium grain 80%, density firm, grey to light green, saturated, poor visual porosity		
55	sw		Well sorted sands, fine to coarse grain, density soft,		
56	300		light green, saturated, good visual porosity		
57	SW		Same as above		
58					
59	Ci		Clay, consistency is hard, green, minor amounts of		
60	CL		fines, moist, no visual porosity		
61					

P		environ Locust	Volley,	scient NY; A	ists c .nn Ar	bor,	ngineers MI; Madisc	on Wi, A	Augusta, GA;	BORING & WELL C		MW-84
_	_					L; Tr	enton, NJ;	Stonel	ham, MA	Date(s): 10/10/95 - 10/10/95		Mean Sea Level
		t Number:								Surface Elevation: 132.00'		
Projec	t Nam	ne & Locatio	on: CSX	T Way	cross	. Ge	orgia ·			Total Borehole Depth: 28.00'		mpletion Depth: 28.00'
Logge	d By:	G. Bonn			App	rove	d By: C.	Mattair		Depth to Water: 7.14'	Borehole	Dia.: 8.25in
Contr	octor/1	Oriller: Gulf	Atlantic	-Ocal	a					Conductor Casing: type: dia: .0	Oin fm:	.00' to: .00'
Drillin	g Meth	od & Rig:	Hollow :	Stem	Auge	r, Mir	nistar		·· <u></u>	Solid Pipe		
Well I	ocatio	n: ASB								type: Stainless dio: 2.	00in fm:	4' to: 13.00'
Purpo	se: We	11								Screens: type: Wire-wrop size: .020in dia:	2.00in	fm: 13.00' to: 23.00'
Samp	ler Typ	oe: Split Spe	oon San	npler,	2 c	iame	ter, 2' ler	igth	•	Annular Fill:	2,00111	
	ırks:	Measured (Developed to at 5 gpm. gallons.	by purgi	ng us	ing o	2"	centrifuga	l pump		type: Grout type: Bentonite type: Sand Filter type: type:	fm:	
<u></u>				1			ō.	o,		Material Description		Well Construction
Elevation (ft)	(E)	<u></u>		<u>e</u>	ery	Blow Count	Graphic Log	Code		Trace = 0-10% Little = 10-20%		MP. EL. 132.40
evati	Depth	Sample Interval	Vapor	Moisture	Recovery	3low	Sraph	nscs		Some = $20 - 30\%$ And = $35 - 50\%$ D - dry, M - moist, S - saturated		
130	-							SC	0-2.0' VF-F s	and with 20% silty clay. Lt. brown, homogeneous	JS.	
-	5- -	4-6		М	_	2 4 8 10		CL		clay with 30% VF-F sand. Gray, blue, yellow, nacreasing slightly with depth, soft, no odor.	nollied,	
		9-11		S	_	3 4 7 7		SC	Lt. gray, crea	-M sand with a trace of C sand and 20% silty m, It. brown, homogeneous with a trace of	clay.	
_	15-	14-16		s		2 5 6 6			14.5-16.0' VF	ayered bedding, soll, no odor. -M sand with a trace of coarse sand and 20% m, Fine to coarsely interlayered bedding, solt,	silty clay.	
	20-	19–21		s		2 1 1 2			a trace coars 20.1-22.0' Vf	-M sand with 40% silty clay. Lt. Gray, homoge ely interlayered bedding, softC sand with a trace of VC sand and 25% silty		
-11(-24-26		S		3455 2		S₩/SC	24.3-25.6° Sc 25.6-26.0° G	ined coarsely interlayered bedding, soft. ime as 20.1–22.0'. anular sand with 10% silty clay. Cream, pink, c n depth, homogeneous, soft.	loy content	
-		26-28			/	2356			1	-VC sand with a trace of pea gravel and 15% s a little coarsely interlayered bedding, soft."	ily clay.	

Locust Valley, NY;	ntists and engineers Ann Arbor, MI; Madison WI, Augu						
	mpa, FL; Trenton, NJ; Stoneham		Well ID: MW-86				
Client/Project Number: CSXT\560-		Surface Elevation: 135.00'	Datum: Mean Sea Level				
Project Name & Location: CSXT W		Total Borehole Depth: 28.00'	Well Completion Depth: 28.00'				
Logged By: G. Bonn	Approved By: C. Mattair	Depth to Water: 10.49'	Borehole Dia.: 8.25in				
Contractor/Driller: Gulf Atlantic-Oc		Conductor Casing: type: dia: .00	Oin fm: .00' to: .00'				
Drilling Method & Rig: Hollow Sterr	Auger, Failing F—2	Solid Pipe					
Well Location: ASB		type: Stainless dia: 2.0	00in fm:8' to: 13.00'				
Purpose: Well		Screens: type: Wire-wrop size: .020in dia:	2.00in fm: 13.00' to: 23.00'				
Sampler Type: Split Spoon sampler		Annular Fill:	•				
Remarks: Developed by purging w at 4 gpm. 50 gallons gallons.	ith a 2" centrifugal pump	type: Grout type: Bentonite type: Sand Filter type: type:	fm: .00' to: 8.00' fm: 8.00' to: 10.00' fm: 10.00' to: 28.00' fm: to: fm: to:				
(ft) (ft)	ie og	Material Description	Well Construction				
	Recovery Blow Count Graphic Log USCS Code	Trace = 0-10% Little = 10-20%	MP. EL. 135.78				
Elevatia Depth Sample Interva Vapor Moistur		Some = $20 - 30\%$ And = $35 - 50\%$ D - dry, M \(\to \) moist, S - soturated	Some = 20 -30% And = 35-50% D - dry, M - moist, S - soturated				
-130 5- -5-7 M -10-12 S -120 15- -15-17 S	88 4 5 5 9 clay SC/CL 5.9 clay SC 10.9 Yellow 15.9 interior	O' VI-F sand with 20% silty clay. Lt. brown, cream, homogon to the content increasing with depth, semi-dense. 12.0' VF-M sans with a trace of C sand and 20% silty clay, orange, pink, cream, coarsely interlayered bedding, soft.	coarsely				
11C 25- -25-27	5 26.1-2	22.0' Same as 15.9-17.0'. 27.0' VF-VC sand and 20% silty clay. Pink, arange, coarsely rered bedding, soft, slightly coarser than 21.0-22.0'.					
bw_tmp.dwg Stratificati	on Lines Show the Approximate Actual Transitions Are Ger	Boundary Between Soil Types nerally Gradual	Page 1 of 1				

		√ eder	0880	cia	tes					T					
E		environ Locust	mental Valley,	scie	ntists Ann	Arbor,			, Augusto, GA;		BORING & WELL C		FRUCTION LOG		
Jacksonville FL; Tampa, FL; Trenton, NJ; Stoneham, MA Client/Project Number: CSXT\560-58										╫	Oate(s): 10/11/95 - 10/11/95				
	<u> </u>									+	Surface Elevation: 135.00'		: Mean Sea Level		
		ne & Locatio	on: US)	KI W						+-	Total Borehole Depth: 28.00'		ompletion Depth: 28.00'		
		G. Bonn				prov	ed By: C.	Mattai	i r 	┿	Depth to Water: 12.25'	Boreno	le Dia.: 8.25in		
		Oriller: Gulf /					• • •				Conductor Casing: ype: dio: .00)in fm	: .00' to: .00'		
		od & Rig: I	Hollow	Stem	Aug	er, M	inistor				Solid Pipe	٠٥٠ ٢	71 1. 47 001		
Well Loc			-		-					+	ype: Stoinless dio: 2.0 Screens:	Oin fm	:7' to: 13.00'		
Purpose		e: Split Spo	C		- 24	d !n	alar Ollar					2.00in	fm: 13.00' to: 23.00'		
<u>-</u>		Measured ([<u> </u>				igin			Annular Fill:		: .00' to: 9.00'		
Remarks	s:	Developed by ot 2 gpm. 5 gallons.	y purqi	ng w	ith a	2" (centrifugal	pump i0		t	ype: Grout ype: Bentonite ype: Sand Filter ype: ype:	fm	: 9.00' to: 11.00' : 11.00' to: 28.00' : to:		
E						<u>=</u>	g.	<u>v</u>			Material Description		Well Construction		
Elevation (ft)	Depth (ft)	Sample ID/ Interval	<u>.</u>	Moisture	Recovery	Blow Count	Grophic Log	S Code			nce = 0-10% Little = 10-20%		MP. EL. 135.70		
Elevo	Dept	Sam	Vapor	Mois	Reco	Blow	Grop	nscs			Some = 20 -30% And = 35-50% D - dry, M = moist, S - saturated				
- 130	5-	5–7		М		4.8		SC	increasing with	h de	and with 25% silty clay. Cream, yellow, clayepth, soft. nd with 45% silty clay. Mustard, gray, mottl				
- 1	0-	10-12		S	/	4 8 12 20 6 8 10 13		SC/CL SC	clay content in	incred	osing with depth, semi-dense. sand with a little coarse sand and 20% sill am, mottled, coarsely interlayered bedding,				
-120 1	5	15–17		s		4 7 12 16			soft, strong TC	CE s	smell at 12.0°. sand with 35% silty clay. Lt. gray, pink, co	oorsely			
2	0-	20-22		S		2 4 10 9					sand with 25% silty clay. Orange, pink, ad bedding, soft.				
110 25		25-27		S		2347					sand with a little granular sand and 20% silely interkayered bedding, soft.	ly clay.			
bw_tmp.c	.dwg		Strat	ificat	ion Li	nes Ac	Show the A tual Transit	opproxi	mate Boundary Are Generally G	y Grad	Between Soil Types luoi	Page 1	of 1		

'S .													
•	7	enviro Locus	Volley,	scier NY;	ntists Ann	Arbor,			Augusto, GA;		BORING & WELL C		STRUCTION LOG
Jacksonville FL; Tampa, FL; Trenton, NJ; Stoneham, MA Client/Project Number: CSXT\560-58											Surface Elevation: 131.00'		im: Mean Sea Level
	Project Name & Location: CSXT Waycross, Georgia										Total Borehole Depth: 28.00'		Completion Depth: 28.00'
<u> </u>			OII. C3.	V1 MC				Mallala		┞			completion beptil. 28.00
<u> </u>		G. Bonn	41112-			pprov	ed By: C.	Mattair		H	Depth to Water:	Dore	indle Did.: 6.25iff
<u> </u>		Driller: Gulf					F. O				Conductor Casing: type: dia: .00	Oin	fm: .00' to: .00'
<u> </u>		hod & Rig:						·			Solid Pipe		
<u> </u>		on: Locomot	ive Sno	p –	Soutr	1 01	Canai			⊦	type: Stainless dia: 2.0 Screens:	וויייי	fm: .5' to: 13.00'
<u> </u>	ose: We											2.00i	n fm: 13.00' to: 23.00'
<u></u>	<u> </u>	pe: Measured ('Date &	Time	a): (1	0-13	3–96)				Annular Fill:		fm: .70' to: 8.50'
	arks:	Developed b at 3 gpm. gallons.	y purgi	ing wi	ith a	2" c	entrifugal				type: Grout type: Bentonite type: Sand Filter type: type:	; ;	fm: 8.50' to: 10.50' fm: 10.50' to: 28.00' fm: to:
E	·					پ	Ď.	<u>.</u>		۱	Material Description		Well Construction
tion (3	ole ID	L	inre	very	Coun	hic Lo	Cod			race = 0-10% Little = 10-20%		
Elevo	Depti	Sam	Vapo	Moist	Reco	Blow	Grap	SOSN			ome = $20 - 30\%$ And = $35 - 50\%$ — dry, M^4 — moist, S — saturated	MP. EL. 130.59	
- 13C - Graph Rose										mples were taken to describe soil lithologi completed with the tower down due to d			
bw_t	mp.dwg	· · · · · · · · · · · · · · · · · · ·	Strat	ficatio	on Li	nes S Act	how the A ual Transit	oproximions Are	nate Boundary e Generally Gr	ď	Between Soil Types dual	Page	1 of 1



eder associates
environmental scientists and engineers Locust Valley, NY; Ann Arbor, MI; Madison, W Jacksonville FL; Tampa, FL; Trenton, NJ; Stor
Jacksonville FL; Tampa, FL; Trenton, NJ; Stor

environmental scientis Locust Valley, NY; Ann Jacksonville FL; Tampa	its and engineers n Arbor, MI; Madison, WI; Augusta, GA; n, FL; Trenton, NJ; Stoneham, MA	WELL AND BORING LOG				
Location: Waycross, Georgia	Date(s): 03/27/99 - 04/26/99	Site ld: MW-89				
Project Number: CSXT9415589	Project Name: RCRA Part B	Permit No.: N/A Purpose: Monitoring Well, S	hallow			
Logged By: Fred Pirkle	Certified By: C. Mattair	Total Depth: 44.00' Completed Depth: 39.00'				
Contractor: Env. Exploration	Drilling Method: Hollow Stem Auger	Rlank Casina:				
Elevation: 139.65'	Borehole Dia.: 10.00in	type: Stainless dia: 2.00in fm: .0' to: 2-	4.00'			
Remarks: Exploratory boring complete GC data is sum of trichloroethylene, dichloroethylene, and 1,1—dichloroethy	cis-1,2-	Screens: type: Wire—wrap size: .010in dia: 2.00in fm: 24.00' to: 3	4.00'			
Developed by pumping until clear.	you	type: Grout to: 2	0.00' 2.00' 0.00'			
Graphic Log Construction	Material Description		(cc (ppb)			
0 - 2.7	- 4' Moist, brownish yellow (10Yl brownish yellow (10YR 5/8	nd, silt, gravel, fill; a little limerock with upper 1'. R 5/8), fine sand (SP), a 7" interbed of slightly finer B) mottled with dark gray (10YR 4/1) sand occurs at 3'.				
5- 4.5	 5.8' Wet, light gray (10YR 7/2) (SP). 8' Wet, black (7.5YR 2.5/1) g little silt. 	grading into light brownish gray (10YR 6/2), fine sand rading into gray (7.5YR 5/1), very fine sand with a	<5			
10-	fines content increasing w - 13.6' Moist, gray (2.5Y 5/1), ver	y fine sand (SP), only a trace of silt, laminae of light	<5			
15-11-14 -	 16' Moist, light greenish groy 20' Wet, light greenishish groy 	OYR 6/2), very fine sand with < 10% fines (SP).	<5			
20 -	·	sand (SP) with a few laminae up to 10 mm in thickness	<5			
25-	- 28' Wet, white (5Y 8/1), fine gravel, between 25.5' and up to 10 mm in thicknes	sand (SP) with some medium grains and a little very fine 26.7' fines increase and a few gray (5Y 6/1) clay laminae s occur.	<5 <5			
28 -		GY 8/1), fine sand (SP), some very fine gravel	<5			

Page 1 of 2

b_tmp.dwg

eder associate environmental scient Locust Valley, NY; A Jacksonville FL; Tom		W		
Location: Waycross, Georgia	Date(s): 03/27/99 - 04/26/99	Site Id:		
Project Number: CSXT9415589	Project Name: RCRA Part B			
Logged By: Fred Pirkle	Certified By: C. Mottoir	Permit No		
	Drilling Method: Hollow Stem Auger	Total Depth:		
Contractor: Env. Exploration	Drining method: Hollow Stell Adger	Blank Casina		

ocation: Wayer	oss, Georgia	Date(s): 03/27/99 - 04/26/99	Site Id: MW	-89		
roject Numbe	r: CSXT9415589	Projec	t Name: RCRA Part B			Durana Maritaria	- Well Challen
ogged By: Fre	d Pirkle	Certific	ed By: C. Mattair	Permit No.: N/A		Purpose: Monitoring	-
ontractor: Env	. Exploration	· Drilling	Method: Hollow Stem Auger	Total Depth: 44.00'		Completed Depth:	J9.00
levation: 139.6	55'	Boreho	ole Dia.: 10.00in	Blank Casing: type: Stainless	dia: 2.	00in fm: .0°	to: 24.00'
Remarks: Exploratory boring completed with a Geoprobe. GC data is sum of trichloroethylene, cis-1,2- dichloroethylene, and 1,1-dichloroethylene.			Screens: type: Wire-wrop	size: .010in dia: 2.	00in fm: 24.00°	to: 34.00"	
	oumping until c		e e	Annular Fill: type: Grout type: Bentonite type: Sand Filter		fm: .00' fm: 20.00' fm: 22.00'	to: 20.00' to: 22.00' to: 40.00'
Depth (11) Graphic Log	Construction		Material Description		,		(3-7) 66
55		32 - 36' 36 - 37.5' 37.5 - 40' 40 - 43'	Wet, white (2.5Y 8/1), fine very fine gravel, deeper possible. Moist, greenish gray (10Y 6) Wet, light greenish gray (10 Wet, light greenish gray (10)	ortions appear to con (/1), clay (CH). (Y 7/1), fine sand (Senses of greenish gra	ntain less very fin SP), with some m ay (10Y 6/1) clay	e gravel. edium size sand,	<
10-		43 - 44'	lower one foot, 40 mm the	ick lenses of greenis			
15 - 15 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1							

b_tmp.dwg

Page 2 of 2

•					
eder associate environmental scient Locust Valley, NY; A Jacksonville FL; Tam		WELL AND F	BORING LOG	•	
Location: Waycross, Georgia	Date(s): 03/27/99 - 04/27/99	Site Id: MW-90			
Project Number: CSXT9415589	Project Name: RCRA Part B	Permit No.: N/A	Purpose: Monitoring Well,	Shallow	
Logged By: Fred Pirkle	Certified By: C. Mattair	Total Depth: 44.00'	Completed Depth: 41.00'		
Contractor: Env. Exploration	Drilling Method: Hollow Stern Auger	Blank Casing:			
Elevation: 139.81'	Borehole Dia.: 10.00in	type: Stainless dia: 2.	.00in fm: .0° to:	26.00'	
Remarks: Exploratory boring completed with a Geoprobe. GC data is sum of trichloroethylene, cis-1,2- dichloroethylene, and 1,1-dichloroethylene. Screens: type: Wire-wrap size: .010in dia: 2.00in fm: 26.00' to:					
Developed by pumping until clear.	inyiene.	Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: 22.00' to:	22.00° 24.00° 41.00°	
Graphic Log Construction	Material Description			(qdd) 25	
2.5 3.1 5-0.0 5-0.0 5-0.0 5-0.0 7.2 8-9 9-1 15-1 16	silt, and gravel; fill. Moist, brownish yellow (10 Wet, very dark gray (2.5Y) Wet, very dark gray (2.5Y) Wet, gray (5Y 5/1), very Wet, gray (5Y 5/1), very Wet, gray (5Y 5/1), very Sand with clay and silt Wet, gray (5YR 5/1) gray Wet, gray (5YR 5/1) gray Wet, gray (10YR 6/1) gray sand (SP). Wet, light brownish gray with some silt (SP) gray silt. Wet, gray (10YR 6/1) gray with some silt (SP) gray silt. Wet, gray (10YR 6/1) gray with some silt (SP) gray silt. Wet, gray (10YR 6/1) gray wery fine sand with silt thick lenses of light grey 1'. Wet, white (5Y 8/1) grad (SC) grading into about (SP) and then back into	y fine sand (SP). (1) mottled with light olive brown (2 (SC), fines increase with depth. ading into light gray (5Y 7/1), very fine sand with 10% silt and clay ading into white (5Y 8/1), very fine sand with some ading into white (10YR ding into a very fine sand with some and clay (SC), fines increasing with senish gray (10Y 7/1) clay (CH) are to very fine sand with some fire very fine sand with some fire very fine sand with some silt (SC).	e recovery. 2.5Y 5/6), very fine fine sand (SP). (SC). sand with some fine 8/1), very fine sand e fine grains and less and (SP) grading into a depth, 20-30 mm present in the lower sand with some silt are sand and less silt	<5 <5 <5	
23.5	5 - 24' Moist, greenish gray (10Y greenish gray (10Y 8/1	' 6/1), clay (CH) with lamina (2-4), very fine sand.		<5	

Wet, light greenish gray (10Y 8/1), fine sand (SP) with some very fine sand grains, coarsening with depth, in lower 1 some coarse grains and a little fine

aravel are present.
Page 1 of 2

b_lmp.dwg



		Jacksonville FL	; Tampa, FL; Trer	nton, NJ; Stoneham, MA						
Locat	ion: Waycro	ss, Georgia	Date(s):	03/27/99 - 04/27/99	Site Id:	MW-90)			
Proje	ct Number:	CSXT9415589	Project	Name: RCRA Part B	Permit No.:	N/A		Purpose: Monitoring V	Jell Shallow	
Logge	d By: Fred	Pirkle	le Certified By: C. Mattair					Completed Depth: 41.		
Contr	actor: Env.	Exploration	Drilling	Method: Hollow Stern Auger	Total Depth			Completed Depth. 41.	-	
Eleva	tion: 139.81	ļ .	Borehole	Dîa.: 10.00in	Blank Casin type: Stainle		dia: 2.0	00in fm: .0*	to: 26.00'	
GC d	ata is sum	atory boring con of trichloroel and 1,1—dich	ompleted with a (thylene, cis-1,2- nloroethylene.	Geoprobe.	Screens: type: Wire-v	vrap size: .C)10in dia: 2.0	00in fm: 26.00°	to: 36.00°	
Devel	oped by pi	umping until c	lear.		Annular Fill type: Grout type: Bentor type: Sand	nite		fm: .00' fm: 22.00' fm: 24.00'	to: 22.00' to: 24.00' to: 41.00'	
	00.	•				,				
Depth (ft)	Graphic Log	Construction		Material Description					(qdd) 29	
	Çu	,		,		,			<u> </u>	
-	0		28 - 30.5 ' 30.5 - 32'	Wet, light greenish gray Wet, light greenish gray						
•	9 0		30.3 – 32	occasional white clay b				in very time deme,	_	
	0 0		32 - 36'	Wet, light greenish gray fines than others, same					<5	
35- -	o 0			what appears to be fel	_					
-	9 0		36 - 40'	Wet, same as above.						
-	0 0		40 - 41.5'	Same as above.					<5	
40-	o o		41.5 - 44'	Moist, dark greenish gray	(10Y 4/1),	clay (CH), pla	stic, massi	/e.		
-									<5	
-										
45-										
_										
-										
50-										
1										
1										
55-			•							
_										
4										
b_tmp	.dwg			Page 2 of 2						

2	eder associates environmental scientists and engineers Locust Valley, NY; Ann Arbor, MI; Madison, WI; Jacksonville FL; Tampa, FL; Trenton, NJ; Stone
	Jacksonville FL; Tampa, FL; Trenton, NJ; Stone

C	<u> </u>		sts and engineers n Arbor, MI; Madison, WI; Augusta, GA; a, FL; Trenton, NJ; Stoneham, MA	WELL AND I	BORING LOG	·
Locatio	n: Waycros	ss, Georgia	Date(s): 03/27/99 - 04/26/99	Site ld: MW-91		
Project	Number:	CSXT9415589	Project Name: RCRA Part B	Permit No.: N/A	Purpose: Monitoring Wel	I. Shallow
Logged	By: Fred	Pirkle -	Certified By: C. Mattair	Total Depth: 40.00'	Completed Depth: 38.00	
Contra	ctor: Env.	Exploration	Drilling Method: Hollow Stem Auger	Blank Casing:	onp.o	
Elevation	on: 139.09	1	Borehole Dia.: 10.00in	type: Stainless dia: 2.	.00in fm: .0' to	o: 23.00 '
GC dat	ta is sum oethylene,	Itory boring complete of trichloroethylene, and 1,1-dichloroeth imping until clear.	cis-1,2-	Screens: type: Wire-wrap size: .010in dia: 2 Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: .00' to	o: 33.00° o: 18.75° o: 20.75° o: 40.00°
Depth (ft)	Graphic Log	Construction	Material Description			(dq) 25
5-110-		0 - 1 - 2 - 4 - 5.5 7 - 8 - 8.3	fill. 2' Moist, black (2.5Y 2.5/1), sand, 2.5' Moist, dark grayish bro 5.5' Wet, black (10YR 2/1) cement contamination; this - 7' Wet, very dark gray (1 (SP). 8' Wet, very dark gray (5YR 3/1), 8.3' Wet, very dark gray (5 very fine sand is present 12' Wet, gray (7.5YR 6/1)	with olive yellow (2.5Y 6/8), fine sand silt, and gravel; probably fill. with (2.5Y 4/2), sand, silt, and gravel., fine sand (SP), at 4.3' a 2" zone of material may be fill material. OYR 3/1) grading into grayish brown (very fine sand with <10% silt (SP). YR 3/1), very fine sand, some light grantled with brownish yellow (10YR 6/8).	what appears to be 10YR 5/2), fine sand ray (7.5YR 7/1)	<5 <5
15-			with silt and clay, a clayey) mottled with brownish yellow (10YR (, sand (SC). ed with light gray (10YR 7/1), very fin		<5
20-		1/1 1/11	- 14' Wet, dark grayish brown 16' Moist, light gray (7.57) (SC), compacted when pro	n (10YR 4/2), very fine sand with son R 7/1), very fine sand with some silt bed. DYR 5/2), fine sand (SP).		<5
25-		19 -	Moist, light brown gray thick lenses of interbedded thick laminae of white (10)	(10YR 6/2), very fine sand (SP) with greenish gray (5GY 6/1) clay are pre YR 8/1), very fine sand are also prese se of unit is a clay lens 60 mm thick	sent, 2–5 mm ent.	<5
	•	21 -		7/1), fine sand (SP) with some mediun 10Y 6/1), very fine sand with lenses u		<5
\$	0		thick greenish gray (5GY 6	/1) clay interbedded.		,
-	•	24 -	28' Wet, greenish gray (10	Y 6/1), medium sand with coarse grain	ins and some very fine	<5

Page 1 of 2

b_tmp.dwg

eder associates environmental scienti Locust Valley, NY; An Jacksonville FL; Tampo		WELL AND I	BORING L	OG .
Location: Waycross, Georgia	Date(s): 03/27/99 - 04/26/99	Site Id: MW-91	•	
Project Number: CSXT9415589	Project Name: RCRA Part B			
Logged By: Fred Pirkle	Certified By: C. Mattair	Permit No.: N/A	Purpose: Monitorin	
Contractor: Env. Exploration	Drilling Method: Hollow Stem Auger	Total Depth: 40.00'	Completed Depth:	38.00'
Elevation: 139.09'	Borehole Dia.: 10.00in	Blank Casing: type: Stainless dia: 2.	00in fm: .0°	to: 23.00'
Remarks: Exploratory boring complete GC data is sum of trichloraethylene, dichloraethylene, and 1,1-dichloraethy	d with a Geoprobe. cis-1,2-	Screens: type: Wire-wrap size: .010in dia: 2.	00in fm: 23.00'	- to: 33.00°
Developed by pumping until clear.	yene.	Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: .00' fm: 18.75' fm: 20.75'	to: 18.75' to: 20.75' to: 40.00'
Grophic Log Coustruction	Material Description			(c (ppb)
35- 35- 30- 40- 50- 55-	·	iG 6/1), clay (CH).		

Page 2 of 2

b_lmp.dwg

		WELL AND I	BORING LOG	•	
Location: Waycross, Georgia	Date(s): 03/26/99 - 04/27/99	Site Id: MW-92			
Project Number: CSXT9415589	Project Name: RCRA Part B	Permit No.: N/A	Purpose: Monitoring Wel	I. Shallow	
Logged By: C. Mattair	Certified By: C. Mattair		Completed Depth: 41.00		
Contractor: Env. Exploration	Drilling Method: Hollow Stem Auger				
Elevation: 139.08'	Borehole Dia.: 10.00in	type: Stoinless dia: 2.	00in fm: .0' to	o: 26.00'	
Remarks: Exploratory boring complet GC data is sum of trichloroethylene dichloroethylene, and 1,1—dichloroet Developed by pumping until clear.	e, cis-1,2-	Screens: type: Wire—wrap size: .010in dia: 2. Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: .00' to	o: 36.00° o: 22.00° o: 24.00° o: 42.00°	
Graphic Log Construction	Material Description			(qdd) 29	
10- 12- 14- 16.5 17.3 19.3 20- 24- 26- 28-	8' Moist to wet, very dark brown and slag fill. 9.5' Wet to moist, gray (7.5YR 6), 10-15% clay (SP-SC), slight metal. 14' Moist, dark grayish brown (10 mottling of above colors, fine the wet, dark grayish brown (10 mottling of above colors, fine 16' Wet, dark grayish brown (10 mottling of above colors, fine 19.3' Moist, light greenish gray (10 moist, light greenish gray (10 moist, light greenish gray (10 sandy clay and one 80mm for 10 moist, with a few 10-sand (SP), trace clay with a gray (10 moist, light greenish gray (10 moist), with a few 10-sand (SP), trace clay with a gray (10 moist), with a few 10-sand (SP), trace clay with a gray (10 moist), with a few 10-sand (SP), trace clay with a gray (10 moist), with a few 10-sand (SP), trace clay with a gray (10 moist), with a few 10-sand (SP), trace clay with a gray (10 moist), with a few 10-sand (SP), trace clay with a gray (10 moist), with a few 10-sand (SP), trace clay with a gray (10 moist), with a few 10-sand (SP), trace clay with a gray (10 moist), with a few 10-sand (SP), trace clay with a gray (10 moist), with a few 10-sand (SP), trace clay with a gray (10 moist), with a few 10-sand (SP), trace clay with a gray (10 moist), with a few 10-sand (SP), trace clay with a gray (10 moist), with a few 10-sand (SP), trace clay with a gray (10 moist), with a few 10-sand (SP), trace clay with a few 10-sand (SP), trace clay with a few 10-sand (SP), trace clay with a few 10-sand (SP), trace clay with a few 10-sand (SP), trace clay with a few 10-sand (SP), trace clay with a few 10-sand (SP), trace clay with a few 10-sand (SP), trace clay with a few 10-sand (SP), trace clay with a few 10-sand (SP), trace clay with a few 10-sand (SP), trace clay with a few 10-sand (SP), trace clay with a few 10-sand (SP), trace clay with a few 10-sand (SP), trace clay with a few 10-sand (SP).	• ' ' '), sand, silt, gravel, R 4/1), fine sand with the ceramic and sheet by (58G 8/1) with oft to firm. the clay. The clayey firm. The mrn thick lamina of the crack of gray (10Y 7/1), fine the cyers of moist, greenish by fine sand,	<5 <5 <5 <5	
b_tmp.dwg	Page 1 of 2				



b_tmp.dwg

eder associates environmental scientists and engineers Locust Valley, NY; Ann Arbor, MI; Madison, WI; Augusta, GA;

WELL AND BORING LOG

ocation: Waycross, C	eorgia	Date(s): 03/26/99 - 04/27/99	Site Id: MW-92		
roject Number: CSX	19415589	Project Name: RCRA Part B	Permit No.: N/A	Purpose: Monitoring	Well Shollow
ogged By: C. Mattai		Certified By: C. Mattair	Total Depth: 48.00'	Completed Depth: 4	
ontractor: Env. Expl	oration	Drilling Method: Hollow Stern Auger	- Blank Casing:	. competed septim.	1.00
levation: 139.08'		Borehole Dia.: 10.00in	type: Stainless dia: 2	2.00in fm: .0'	to: 26.00'
Temarks: Exploratory C data is sum of ichloroethylene, and eveloped by pumpi	trichloroethylene 1,1-dichloroet	ted with a Geoprobe. e, cis-1,2- hylene.	Screens: type: Wire-wrap size: .010in dia: 2 Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: .00' fm: 22.00' fm: 24.00'	to: 36.00' to: 22.00' to: 24.00' to: 42.00'
Graphic Log	struction	Material Description	n ,		(900)
35 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	37	coarsening downward to regravel, loose. — 41' Wet, light greenish gray (1) coarse sand, trace silty or	OY 7/1), fine to medium sand (SP), trace solven solven sand with some coorser solven s	and and trace fine	<br </td
5		•	w 10-60 mm thick layers or lenses of n		
					<5
50-					
55-					

Page 2 of 2

		Jucksonville Fi	.; 10mpa, r.; 11	renton, NJ; Stoneham, MA				
Locat	ion: Waycro	ss, Georgia	Date(s): 03/26/99 - 05/03/99	Site Id: MW-93	4		
Proje	ct Number:	CSXT9415589	Proje	ct Name: RCRA Part B	Permit No.: N/A	Purpose: Monitoring	Well. Shallo	
Logge	d By: Fred	Pirkle	Certif	ied By: C. Mattair	Total Depth: 48.00'	Completed Depth: 4	-	
Contr	actor: Env.	Exploration	Drillin	g Method: Hollow Stern Auger	Blank Casing:			
Eleval	tion: 139.15	5'	Boreh	ole Dia.: 10.00in		00in fm: .0'	to: 25.00'	į
GC de	ota is sum roethylene,	of trichloroe and 1,1—dic		Geoprobe.	Screens: type: Wire-wrap size: .010in dia: 2.	00in fm: 25.00°	to: 35.00'	,
Devel		umping until o	clear.		Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: .00' fm: 20.00' fm: 22.50'	to: 20.00' to: 22.50' to: 41.00'	•
t)	Log							<u> </u>
Depth (ft)	Graphic Log	Construction		Material Description	•			(agg) ප
	0.00		0 - 0.3) mottled with pale yellow (2.5Y 8/3)	to yellow		
	0.00	$\Gamma \Gamma \Gamma$	0.3 - 4'	(2.5Y 7/8), sand and silt; Moist, black (2.5YR 2.5/1),				
	0 0	ИИ	4 - 6.5	Moist, black (2.5YR 2.5), so				
5-	000				-			
-		ri ri	6.5 - 8'		very fine sand with streaks of organic	(SM), organic	ľ	
1		J J	8 - 8.5'	streaks are not present in	lower 0.5".), very fine sand with silt (SP).			
1		$r \mid r \mid$	8.5 - 9'	= = -, -	y, very rine soria with sin (3F). IY 4/3), very fine sand, with 5% silt ar	nd clay (SC).		<5
10-		ИИ	9 - 11.5'	Moist, dark gray (2.5Y 4/1)	, very fine sand, with <10% silt and cl			
-		ИИ	11.5 - 12'	plastic. Moist, dark gray (2.5Y 4/1)	mottled with light olive brown (2.5Y 5	/6), very fine		
+				sand, with <10% silt and a	* * * *			
15-		ИИ	12 - 12.5'	Moist, light olive brown (2.5' (SP-SC), plastic.	Y 5/6), very fine sand with 10% silt a	nd clay	<	:5
' }			12.5 - 13'), very fine sand (SP) with 5% clay.			
ļ		r I r I	13 – 15'	Moist, white (5Y 8/1) mottl	led with gray (5Y 5/1), very fine sand,	with < 10% clay		
+				(SP-SC).			<	:5
_ }			15 - 16'	Not recovered.	iv 6/0) and a description of the re-	/1)		
20-			16 - 19.5'	(SP), trace clay.	iY 6/2) grading down to gray (2.5Y 5/	ij, line sand	18	39
1			19.5 – 20'		sand (SP), with a few 5 mm thick lar	ning or lenses of		_
]				greenish gray (5GY 6/1) so				
-[20 - 21.5'		(7/1) grading into greenish gray (10Y	6/1) at 20.5',		
25-					t and clay (SP-SC), clay content incre			
1			21.5 - 22.2'		1), clay (CH), upper 0.3' of interval co	ntains Iamina	31,1	164
1		·: .	20.0	of moist, white (5Y 8/1), f		.4 (CD) -1		
†			22.2 - 24'	Moist, greenish gray (10Y 6/ lenses increasing with depth	⁽ 1), clay (CH) interbedded with fine son	ia (SP), clay		•
7	0		.24 - 27'	•	and (SP) coarsening downword			

Page 1 of 2

b_tmp.dwg



b_tmp.dwg

eder associates environmental scientists and engineers Locust Valley, NY; Ann Arbor, MI; Madison, WI; Augusta, GA; Jacksonville FL; Tampa, FL; Trenton, NJ; Stoneham, MA

WELL AND BORING LOG

	oss, Georgia	Date(s): 03/26/	99 - 05/03/99	Site Id: NATW	-93		
Project Number		Project Name: F		777 11			
ogged By: Fred		Certified By: C.		Permit No.: N/A		Purpose: Monitoring	Well, Shallow
Contractor: Env.			Hollow Stern Auger	Total Depth: 48.00°		Completed Depth: 4	10.00'
Levation: 139.1		Borehole Dia.: 1		Blank Casing: type: Stainless	dia: 2.0	00in fm: .0°	to: 25.00'
Remarks: Explor GC data is sur dichloroethylene	atory boring co n of trichloroet , and 1,1—dich	mpleted with a Geoprobe hylene, cis-1,2- loroethylene.		Screens: type: Wire-wrap	size: .010in dia: 2.0	00in fm: 25.00°	to: 35.00'
Developed by p	umping until cl	ear.		Annular Fill: type: Grout type: Bentonite type: Sand Filter		fm: .00' fm: 20.00' fm: 22.50'	to: 20.00' to: 22.50' to: 41.00'
Depth (ft) Graphic Log	Construction		Material Description				(400) (400)
35-000		28 - 30.5' Wet, g kaolin 30.5 - 31' Moist, may 31 - 32' Moist, 32 - 36' Wet, of fin 36 - 38' Moist, lense 38 - 40' Not re 40 - 42' Moist	gray (2.5Y 5/1), find contain kaolinized fel gray (2.5Y 6/1), find greenish gray (10Y 6), ne gravel (SP), possit greenish gray (5GY) s of greenish gray (5GY) ecovered.	sand (SP), some med	fines and a few contain kaolinized fei and with some co- grains. sand (SP), with to possible kaolinized	coarse sand grains, Idspar grains. Harse sand and a tr three 82 mm thick feldspan grains.	oce 38
50-							<
į	1						İ

Page 2 of 2

eder associates environmental scientists and engineers Locust Valley, NY; Ann Arbor, MI; Madison, WI; Augusta, GA; Jacksonville FL; Tampa, FL; Trenton, NJ; Stoneham, MA

				enton, NJ; Stoneham, MA	WELL AND	DOKING LOG	г.			
Loca	ation: Waycro	oss, Georgia	Date(s	s): 03/28/99 - 05/03/99	Site ld: MW-94					
Proj	ect Number	: CSXT9415589	Projec	t Name: RCRA Part B		T				
Log	ged By: Fred	Pirkle	Certifie	ed By: C. Mattair	Permit No.: N/A	Purpose: Monitoring We				
Con	tractor: Env.	Exploration	Drilling	Method: Hollow Stern Auger	Total Depth: 44.00*	Completed Depth: 41.0	O'			
Elev	ation: 138.5.	3'	Boreho	ole Dia.: 10.00in	Blank Cosing: type: Stainless dia:	2.00in fm: .0' t	o: 26.00°			
GC	Remarks: Exploratory boring completed with a Geoprobe. GC data is sum of trichloroethylene, cis-1,2- dichloroethylene, and 1,1-dichloroethylene. Screens: type: Wire-wrop size: .010in dia: 2.00in fm: 26.00' to:									
		umping until cl			Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: 22.00' to	o: 22.00' o: 23.75' o: 42.00'			
Depth (ft)	Graphic Log	Construction		Material Description			(qdd) 29			
	000		0 - 1.5'		5/2) grading into black (10YR 2/1), sand, silt, and				
			1.5 - 3' 3 - 4'							
5-	000		4 - 5.8° 5.8 - 8°		5/2), fine sand (SP), possible fill. of fine grained, dense sand (SP), ap	pears about 2' ran out	<5			
10-			8 - 12'		1), very fine dense sand, upper 4"	is a grayish brown	<5			
,			12 - 12.5' 12.5 - 13.5' 13.5 - 14.8'		OY 8/1), very fine sand with < 10.7/2), very fine sand with some silt (2), fine sand (SP).	• •				
15-			14.8 - 16' 16 - 17' 17 - 20'	Same as above.	, fine sand with some very fine sand fine sand with some silt (SP).	nd (SP).	<5			
		ИИ					<5			
20-			20 - 23		(2.5Y 6/2), very fine sand (SP) will thickness of greenish gray (10Y 6/					
	000		23 - 24' 24 - 28'	Moist, white (5Y 8/1), ven in thickness of greenish g	y fine sand with some silt (SP), ler ray (10Y 6/1) clay are present.		<5			
25 <i>-</i> -	000	+	4 T 4U		OY 8/1), fine sand (SP) with some a trace of very fine gravel.	very mic sond,	<5			
1 1	000		28 - 32'	Wet, same as above.						
	0 0 1	<u> </u>								

Page 1 of 2

b_lmp.dwg

eder associates environmental scientists and engineers Locust Valley, NY; Ann Arbor, MI; Madison, WI; Augusta, GA;
Jacksonville FL; Tampa, FL; Trenton, NJ; Stoneham, MA

Jo	cksonville FL;	Tampa, FL; Trenton, NJ; Stoneham, MA	·				
Location: Waycross	s, Georgia	Date(s): 03/28/99 - 05/03/99	Site Id: MW-94				
Project Number: 0	CSXT9415589	Project Name: RCRA Part B	Permit No.: N/A Purpose: Monitoring Well, Sho				
Logged By: Fred I	Pirkle	Certified By: C. Mattair	Total Depth: 44.00'	Completed Depth: 41			
Contractor: Env. E	xploration	Drilling Method: Hollow Stem Auger					
Elevation: 138.53'		Borehole Dia.: 10.00in type: Stainless dia: 2.00in fm: .0' to: 26					
GC data is sum dichloroethylene,	of trichloroeth and 1,1—dichl	loroethylene.	Screens: type: Wire-wrap size: .010in dia: 2	.00in fm: 26.00'	to: 36.00'		
Developed by pur	mping until cl	ear.	Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: .00' fm: 22.00' fm: 23.75'	to: 22.00' to: 23.75' to: 42.00'		
Depth (ft) Graphic Log	Construction	Material Descript	iion		(9dd) 29 S		
35 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		36 - 40' Wet, same as above; 0.5' may be fining sl (10Y 7/1) for about 40 - 43.5' Wet, same as above. 43.5 - 44' Moist, dark greenish gr	ot 38.7', a 40mm thick zone of increasinghtly; at 38.5', color changes to light a 25mm. Tay (5GY 4/1), clay (CH); the clay was plastic bag; it is not seen in the core	greenish gray	<5		
50- - - - 55-		Page 2 of 2					

eder associate environmental scienti Locust Valley, NY; An Jacksonville FL; Tamp	_	WELL AND I	BORING LO	G			
Location: Waycross, Georgia	Date(s): 03/29/99 - 05/02/99	Site Id: MW-95					
Project Number: CSXT9415589	Project Name: RCRA Part B	Permit No.: N/A	Purpose: Monitoring V	Vall Challen			
Logged By: Fred Pirkle	Certified By: C. Mattair	Total Depth: 56.00'	Completed Depth: 43				
Contractor: Env. Exploration	Drilling Method: Hollow Stem Auger	Blank Casing:	Completed Depth. 43.				
Elevation: 134.81'	Borehole Dia.: 10.00in		00in fm: .0'	to: 28.00'			
Remarks: Exploratory boring complete GC data is sum of trichloroethylene, dichloroethylene, and 1,1—dichloroethy Developed by pumping until clear.	cis-1,2-	Screens: type: Wire-wrop size: .010in dia: 2. Annular, Fill:		to: 38.00'			
		type: Grout type: Bentonite type: Sand Filter	fm: .00' fm: 24.00' fm: 26.00'	to: 24.00' to: 26.00' to: 44.00'			
Graphic Log Graphic Log Coustruction	Material Description			(pdd) 29			
Dry, grayish brown (2.5Y 5/2), fine sand. 0.5 - 1' Moist, pale yellow (2.5Y 7/4), fine sand. 1 - 1.5' Moist, black (5Y 2.5/1), very fine sand with a little silt. Wet, light brownish gray (2.5Y 6/2), very fine sand, dense, appears to have some organics present.							
4 - 8	Wet, dark gray (2.5Y 4/1) to 10mm in thickness of at 7.5', a single 5 mm th	organics present. Wet, dark gray (2.5Y 4/1), very fine sand with some silt (SP), a few laminae up to 10mm in thickness of light olive brown (2.5Y 5/6), very fine sand are present; at 7.5', a single 5 mm thick lens of greenish gray (10Y 6/1) clay exists. Wet, light greenish gray (10Y 8/1), very fine sand with some silt (SP),					
9.3 -	occasional patch of dark of the second second patch of dark of the second secon	gray (2.5Y 4/1) finer sand is present. sand, unit contains some light greenis silty layers and light gray (2.5Y 7/4)	sh gray	<5			
15 - 16 -	a 50 mm thick zone of g 14.8', 10—20 mm thick le	OY 8/1), very fine sand with some sill ray (10YR 5/1), very fine sand with s nses of greenish gray (10Y 6/1) clay OY 8/1), fine sand with some zones b	ome silt, starting at are present.	<5			
20 -	clay are present.	ional $10-20$ mm thick lenses of green DY $8/1$), fine sand (SP) with some ver		<5			
		Wet, light greenish gray (10Y 8/1), fine sand (SP) with some very fine and some medium sand sized grains and a trace of very fine gravel; same unit as above.					
25 - 24 - 2	28' Wet, same as above, occasi present.	ional 10 mm thich lenses of greenish	groy (10Y 6/1) clay	<5			
28 - 32' Wet, light greenish gray (10Y 8/1), fine sand with some medium sized sand (SP), same unit as above, only a little coarser.							
b_tmp.dwg	Page 1 of 2						



				renton, NJ; Stoneham, MA					
Location: \	Naycros	s, Georgia		s): 03/29/99 - 05/02/99	Site Id: MW-95				
Project No	umber:	CSXT9415589	Projec	t Name: RCRA Part B	Permit No.: N/A		Purpose: Monitorin	g Well, Shallow	
Logged By	y: Fred	Pirkle	Certifi	ed By: C. Mattair	Total Depth: 56.00°		Completed Depth:	43.00*	
Contractor	Contractor: Env. Exploration Drilling Method: Hollow Stem Auger Blank Casing:								
Elevation:	134.81		Boreh	ole Dia.: 10.00in	type: Stainless dia: 2.00in fm: .0' to: 28.				
Remarks: Exploratory boring completed with a Geoprobe. GC data is sum of trichloroethylene, cis-1,2- dichloroethylene, and 1,1-dichloroethylene.					Screens: type: Wire-wrop siz	e: .010in dia: 2.	00in fm: 28.00'	to: 38.00°	
Developed	by pu	mping until c	lear.	·	Annular Fill: type: Grout type: Bentonite type: Sand Filter		fm: .00' fm: 24.00' fm: 26.00'	to: 24.00' to: 26.00' to: 44.00'	
Depth (ft)	Graphic Log	Construction		Material Description	n ,			(dec)	
	0		:					~ <	
35-	0 0 0 0		32 - 36'	Wet, same as above. Wet, same as above.				<	
40-	0. 0. 0		40 - 44'	Wet, same as above.				<	
45	0. 0.		44 – 48'	Wet, greenish gray (10G) coorser (coorsening dow	7 5/1), bassically same to nward) and lessening of		but slightly	<	
50-	0 0 0		48 - 52'	Wet, greenish gray (10Y lenses of dark greenish finer.	6/1), sand (SP), mostly gray (5GY 4/1) clay are			<:	
55-	7. 0. 0. 1		52 - 53.7° 53.7 - 56°	Same as above. Wet, grayish brown (2.5Y	5/2), fine sand with silt	and clay (SC)		</td	
7									
b_tmp.dwg				Page 2 of 2					

	eder associates
C	environmental scientists and engine Locust Valley, NY; Ann Arbor, MI; M Jacksonville FL; Tampa, FL; Trenton,

eder associates environmental scienti Locust Valley, NY; An Jacksonville FL; Tampi		WELL AND I	BORING LOC	,				
Location: Wayccorss, Georgia	Date(s): 03/28/99 - 04/28/99	Site ld: MW-97						
Project Number: CSXT9415589	Project Name: RCRA Part B	Permit No.: N/A	Purnoco Monitorina W	oli Challen				
Logged By: Fred Pirkle	Logged By: Fred Pirkle Certified By: C. Mattair							
Contractor: Env. Exploration	Drilling Method: Hollow Stern Auger	Total Depth: 48.00'	Completed Depth: 43.0					
Elevation: 137.73'	Borehole Dia.: 10.00in	Blank Casing: type: Stainless dia: 2.	00in fm: .0'	o: 28.00°				
Remarks: Exploratory boring complete GC data is sum of trichloroethylene, dichloroethylene, and 1,1-dichloroethy	cis-1.2-	Screens: type: Wire-wrap size: .010in dia: 2.	00in fm: 28.00° 1	o: 38.00'				
Developed by pumping until clear.		Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: 24.00° t	o: 24.00' o: 26.00' o: 44.00'				
Graphic Log Coustruction	Material Description			(qdd) 29				
5- 2 - 2 2.1 - 2.9 - 4 - 4	slightly coarser, strong odor. 2 - 2.1' Moist, light gray (2.5Y 7/1), very fine sand with some silt and laminae of very							
8 - 1	0' Moist, gray (2.5Y 5/1)	same as 4.8 - 5.2, but ran out of mottled with olive yellow (2.5Y 6/8), n (2.5Y 4/2), fine sand (SP), very	clayey sand (SC).	<5				
15 - 13.5 - 16 -	- 16' Moist, light brownish gray sand and silt.	(2.5Y 6/2), fine sand (SP) with a	·	<5				
20 - 20.5 -	20' Wet, light brown gray (10 20.5' Wet, same as above. 24' Wet, light greenish gray (r fine sand (SP) with <10% silt; very IYR 6/2), fine sand with a little very 10Y7/1), very fine sand with some thickness of greenish gray (SGY 6/	fine sand and silt.	<5				
24 - :	lenses up to 50 mm in thickness of greenish gray (5GY 6/1) clay are present; the water immediately on top of this unit had a sheen on it; odor is not as great as on the 16 - 20' core. 26.8' Wet, same as above, except clay lenses have a maximum thickness of 100 mm.							
	26.8 - 28' Wet, light greenish gray (10Y 7/1), fine sand (SP) with 20 mm thick lenses of greenish gray (5GY 6/1) clay. 28 - 32' Wet, light greenish gray (10Y 7/1), fine sand (SP) with some very fine sand, some medium sand, and a trace of very fine gravel; strong odor.							
b_tmp.dwg	Page 1 of 2			<u> </u>				



b_tmp.dwg

eder associates
environmental scientists and engineers

Location: Wayccorss, Georgia Date(s): 03/28/99 - 04/28/99					Site Id: MW-97	;			
Project	Number	: CSXT9415589	Projec	t Name: RCRA Part B			Durana Maritaria	Well Chellen	
_ogged	By: Fred	Pirkle	Certific	ed By: C. Mottair	Permit No.: N/A		Purpose: Monitoring		
Contract	or: Env.	Exploration	Drilling	Method: Hollow Stern Auger	Total Depth: 48.00'		Completed Depth: 4	3.00	
levation	: 137.7	3'	Boreho	ole Dia.: 10.00in	Blank Cosing: type: Stainless dia: 2.00in fm: .0* t				
GC data Iichloroe	is sun thylene,	atary boring c of trichloroe and 1,1—dicl umping until c	ompleted with a thylene, cis-1,2- hloroethylene. llear.	Geoprobe.	Screens: .type: Wire-wrop size: .0 Annular Fill: type: Grout	10in dia: 2.00	oin fm: 28.00°	to: 38.00°	
					type: Bentonite type: Sand Filter		fm: 24.00' fm: 26.00'	to: 26.00' to: 44.00'	
\Box	bo.				4				
Depth (ft)	Graphic Log	Construction		Material Description	,			(dray)	
0, 0, 0	0. 0. 0		32 - 36*	Wet, same as above; p	oossible kaolinized feldspar	grains; stror	ng odor.	<:	
55	0		36 - 40°	Wet, same as above; p	oossible kaolinized feldspar	grains; stror	ng odor.	<	
0-	0 0		40 – 44°	Wet, same as obove; p	ossible kaolinized feldspar	grains; stron	g odor.	</td	
8	0		44 - 45'	Moist, greenish gray (5: şlight odor.	GY 5/1), very fine sand (S	P), fining d	ownward;	<5	
5-			45 – 48'		oy (5GY 4/1), clay (CH), in	n the lower	4" the very fine	<5	
0-	- 2-								
1									
4	J	1							

Page 2 of 2



eder associates
environmental scientists and engineers
Locust Valley, NY; Ann Arbor, MI; Madison, WI; Augusta, GA;

	mpa, FL; Trenton, NJ; Stoneham, MA	WELL AND I	JOINING LO	u
Location: Wayccorss, Georgia	Date(s): 03/28/99 - 04/28/99	Site Id: MW-97		
Project Number: CSXT9415589	Project Name: RCRA Part B	Cormit No. N./A	Purpose: Monitoring V	Vall Shollow
Logged By: Fred Pirkle	Certified By: C. Mattair	Permit No.: N/A	•	
Contractor: Env. Exploration	Drilling Method: Hollow Stern Auger	Total Depth: 48.00*	Completed Depth: 43.	
Elevation: 137.73'	Borehole Dia.: 10.00in	Blank Casing: type: Stainless dia: 2.	00in fm: .0'	to: 28.00'
Remarks: Exploratory boring compl GC data is sum of trichloroethyler dichloroethylene, and 1,1—dichloroe Developed by pumping until clear.	ne, cis-1,2- ethylene.	Screens: type: Wire—wrap size: .010in dia: 2. Annular Fill: type: Grout type: Bentonite type: Sand Filter	00in fm: 28.00' fm: .00' fm: 24.00' fm: 26.00'	to: 38.00° to: 24.00° to: 26.00° to: 44.00°
Graphic Log	Material Description	•		(qdd) 29
		os <u>sibl</u> e kaolinized feldspar grains; str	ong odor.	<5 <5
		ossible kaolinized feldspar grains; str		<5
	slight odor.	GY 5/1), very fine sand (SP), fining		< 5
45	- 48' Moist, dark greenish gra sand content increases.	y (5GY 4/1), clay (CH), in the lowe	er 4° the very fine	73
50-	•			
55-				
b_tmp.dwg	Page 2 of 2			

eder ass
environment
Locust Valley
Jacksonville

Location: Waycross, Ceorgia Data(s): 03/28/99 - 04/27/99									
Logged By: Fred Pirkle Controctor: Exploration Drilling Method: foliow Stem Auger Elevation: 136.09* Borehole bilo: 10.000n Ramaris: Exploratory boring completed with a Geoprobe. GC dots is sum of histolino-estylene. Developed by pumping until clear. Developed by pumping until clear. Moterfal Description Moterfal Descri	Location: Waycı	ross, Georgia	Date(s	s): 03/29/99 — 04/27/99	Site Id: MW-98				
Loged By Fred Pirkle Certified By C. Mettloir Controctor: Env. Exploration Drilling Method: Hollow Stem Auger Total Depth: 36.00" Completed Depth: 36.00" Screens: Stee: 0.100 Screens: Screens: 0.100 Screens: Screens: 0.100 Screens: Screens: 0.100 Screens: 0.100 Screens: Screens: 0.100 Screens: 0.100 Screens: 0.100 Screens: 0.100 Screens: 0.100 Screens: 0.100 Screens: 0.100 Screens: 0.100 Screens: 0.100 Screens: 0.100 Screens: 0.100 Screens: 0.100 Screen	Project Numbe	r: CSXT9415589	Projec	t Name: RCRA Part B		Burnan Maritaria	Well Challen		
Develor Exploration Delining Methods Hollow Stem Auger Blonchico Dia; 10,00 in Develor 136,09 Borchole Dia; 10,00 in Develor Dia; 10,00 in	Logged By: Fre	d Pirkle	Certific	ed By: C. Mattair			· · · · · · · · · · · · · · · · · · ·		
Bereins 136.09' Bereinble Disc 10.00in Upe: Skolless Giz: 2.00in fm: 0' to: 21.00' Remarks: Expand of Indication profiled with a Geograbe. Coda is sum of Indication profiled with a Geogrape. Developed by pumping until clear. Meterial Description Meterial Descri	Contractor: Env	. Exploration	· Drilling	Method: Hollow Stern Auger		Completed Depth: 3	2.00		
Sc data is sum of trichlorethylene, cis-1,2-4 circhlorethylene. Developed by pumping until clear. Developed by pumping until clear. Annular filt type: Const filter Annul	Elevation: 136.0)9'	Boreho	ole Dia.: 10.00in	type: Stoinless dia: 2	.00in fm: .0'	to: 21.00°		
Moist, grayish brown (2.5Y 5/2) contacting black (5Y 2.5/1), send, silt, gravel; fill. 2 - 4' Wet, dark gray (5Y 4/1), very fine sand (SP), some dark (probably organic) inclusions, occasional 10 mm thick lenses of alive (5Y 5/6), very fine sand. 4 - 5.5' Moist, gray (2.5Y 6/1), very fine sand (SP), dense, lower 0.5' mottled with light olive brown (2.5Y 5/6). 8 - 12' Wet, dark gray (10Y 4/1), very fine sand (SP), with up to 10 mm thick lenses that seem to contain a fittle more silt. 12 - 13.5' Wet, gray (5YR 6/1), very fine sand (SP) with 5-60 mm thick lenses of light greenish gray (10Y 7/1) clay. Wet, light greenish gray (10Y 8/1), very fine sand with silt, occasional 5 mm thick lenses of greenish gray (10Y 6/1) clay present; lenses are thicker with depth. 20 - 24' Wet, light greenish gray (10Y 8/1), very fine sand with some zones of more fine sand grains, lenses up to 100 mm in thickness of greenish gray (10Y 6/1) clay present. 24 - 28' Wet, greenish gray (10Y 8/1), fine sand, up to 90 mm thick lenses of greenish gray (5Y 5/1) clay ore present in the lower 1'. 28 - 31' Same as above except clay is more prominent with one lens reaching a thickness of 140 mm.	GC data is sui dichloraethylen	m of trichloroe e, and 1,1—dic	thylene, cis-1,2- hloroethylene.	Geoprobe.	type: Wire-wrop size: .010in dia: 2 Annular Fill: type: Grout type: Bentonite	fm: .00° fm: 17.00°	to: 17.00' to: 19.00'		
inclusions, grays in trawn (2.31 3/2) contacting back (31 2.3/1), sond, silt, grave; fill. 2 - 4' Wet, dark gray (5Y 4/1), very fine sand (SP), some dark (probably organic) inclusions, occasional 10 mm thick lenses of olive (5Y 5/6), very fine sand. Moist, gray (2.5Y 6/1), very fine sand (SP), dense, lower 0.5' mottled with light olive brown (2.5' 5/6). 8 - 12' Wet, dark gray (10YR 4/1), very fine sand (SP), with up to 10 mm thick lenses that seem to contain a fittle more silt. 12 - 13.5' Wet, gray (5YR 6/1), very fine sand (SP) with 5-60 mm thick lenses of light greenish gray (10Y 7/1) clay. Wet, light greenish gray (10Y 8/1), very fine sand with silt, occasional 5 mm thick lenses of greenish gray (10Y 8/1), very fine sand with silt, up to 100 mm thick lenses of greenish gray (10Y 6/1) clay present; lenses are thicker with depth. 20 - 24' Wet, light greenish gray (10Y 6/1) clay present; lenses are thicker with depth. 20 - 24' Wet, light greenish gray (10Y 8/1), very fine sand with some zones of more fine sand grains, lenses up to 100 mm in thickness of greenish gray (10Y 6/1) clay present. 24 - 28' Wet, greenish gray (10Y 8/1), fine sand, up to 90 mm thick lenses of greenish gray (10Y 6/1) clay present in the lower 1'. 28 - 31' Same as above except clay is more prominent with one lens reaching a thickness of 140 mm.		Construction		Material Description			(pdd) 29		
greenish gray (10Y 7/1) clay. 13.5 - 16' Wet, light greenish gray (10Y 8/1), very fine sand with silt, occasional 5 mm thick laminae of light greenish gray (10Y 7/1) clay. Wet, light greenish gray (10Y 8/1), very fine sand with silt, up to 100 mm thick lenses of greenish gray (10Y 6/1) clay present; lenses are thicker with depth. 20 - 24' Wet, light greenish gray (10Y 8/1), very fine sand with some zones of more fine sand grains, lenses up to 100 mm in thickness of greenish gray (10Y 6/1) clay present. 24 - 28' Wet, greenish gray (10Y 6/1), fine sand, up to 90 mm thick lenses of greenish gray (5GY 5/1) clay are present in the lower 1'. 28 - 31' Same as above except clay is more prominent with one lens reaching a thickness of 140 mm.	100 100 100 100 100 100 100 100 100 100	block (St 2.5/1), sand, sitt, graver; fill. 2 - 4' Wet, dark gray (5Y 4/1), very fine sand (SP), some dark (probably organic) inclusions, occasional 10 mm thick lenses of olive (5Y 5/6), very fine sand. Moist, gray (2.5Y 6/1), very fine sand (SP), dense, lower 0.5' mottled with light olive brown (2.5Y 5/6). Wet, dark gray (10YR 4/1), very fine sand (SP), with up to 10 mm thick lenses that seem to contain a little more silt.							
sand grains, lenses up to 100 mm in thickness of greenish gray (10Y 6/1) clay present. 24 - 28' Wet, greenish gray (10Y 6/1), fine sand, up to 90 mm thick lenses of greenish gray (5GY 5/1) clay are present in the lower 1'. 28 - 31' Same as above except clay is more prominent with one lens reaching a thickness of 140 mm.	15-			greenish gray (10Y 7/1) Wet, light greenish gray (1 thick laminae of light gre Wet, light greenish gray (1 thick lenses of greenish gray (1)	clay. 10Y 8/1), very fine sand with silt, occ senish gray (10Y 7/1) clay. 10Y 8/1), very fine sand with silt, up	osional 5 mm to 100 mm			
greenish gray (5GY 5/1) clay are present in the lower 1'. 28 - 31' Same as above except clay is more prominent with one lens reaching a thickness of 140 mm.	20-		20 - 24'	Wet, light greenish gray (10Y 8/1), very fine sand with some zones of more fine sand grains, lenses up to 100 mm in thickness of greenish gray (10Y 6/1) clay					
140 mm. <5.	25-	greenish gray (5GY 5/1) clay are present in the lower 1'.							
					y is more profilment with one lens fed	icing a inickness of	1 1		
	b_tmp.dwg	<u> </u>		Page 1 of 2					

			_								
6	eder ass environmento Locust Valley, Jacksonville F	i scienti: NY; An	sts and engi n Arbor, MI;	neers Madison, Wi; <i>F</i> n, NJ; Stoneho	Augusto, GA; om, MA	WE	LL AND 1	BORI	NG L	OG	
Location: \	Waycross, Georgia	·	Date(s): 03	3/29/99 - 04	1/27/99	Site Id: MV	7–98				
Project No	umber: CSXT941558	9	Project No	me: RCRA Par	t B	Permit No.; N/A		Purnec	e: Monitorin	o Well	Shellow
Logged By	y: Fred Pirkle		Certified E	By: C. Mattair		Total Depth: 36.00	1	<u> </u>	ted Depth:		SHUILON .
Contractor	r: Env. Exploration	,	Drilling Me	thod: Hollow S	lem Auger	Blank Casing:		Comple	ted Deptil.		·
Elevation:	136.09'		Borehole I	Dia.: 10.00in		type: Stainless	dio: 2	.00in fm	: .0'	to: 2	21.00'
GC data i	Exploratory boring of trichloroomy trichloro	ethylene,	cis-1,2-	oprobe.	•	Screens: type: Wire-wrop	size: .010in dia: 2	.00in fm	21.00'	to: 3	31.00'
Developed	by pumping until	clear.				Annular Fill: type: Grout type: Bentonite type: Sand Filter		fm	: .00° : 17.00° : 19.00°	to: 1	17.00° 19.00° 36.00°
Depth (ft)	Construction			Moterio	ol Description			,			(pdd) 29
35- 40- 50- 55-		31 -	32'			5/1), clay (CH)					
b_tmp.dwg				Page 2 o	f 2						



		Jacksonville F	L; Iampo, F	L; Irenton, NJ; Stoneham, MA.			
Loco	ition: Waycro	oss, Georgia	D	ate(s): 03/30/99 - 05/05/99	Site Id: MW-99		
Proje	ect Number	r: CSXT941558	9 P	roject Name: RCRA Part B	5 24 4/4	T =	
Logg	ed By: Fred	i Pirkle	С	ertified By: C. Mattair	Permit No.: N/A	Purpose: Monitoring	Well, Shallow
Cont	ractor: Env.	Exploration	D	rilling Method: Hollow Stern Auger	Total Depth: 68.00'	Completed Depth: 33	3.00'
Elevo	ition: 135.2	4'		orehole Dia.: 10.00in	Blank Casing: type: Stoinless dia: 2	2.00in fm: .0°	to: 18.00°
GC o	lata is sun	atory boring on of trichloroes, and 1,1-dic	thylene, cis-	th a Geoprobe. -1,2-	Screens: type: Wire-wrop size: .010in dia: 2	.00in fm: 18.00°	to: 28.00°
Deve	loped by p	umping until (clear.		Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: .00' fm: 14.00' fm: 16.00'	to: 14.00' to: 16.00' to: 34.00'
	[od	<u>.</u>					•
Depth (ft)	Graphic Log	Construction		Material Description			(pdp) 29
<u>a</u>		, , , , , , , , , , , , , , , , , , , ,			•		႘
			0 - 2'	yellow (10YR 6/8) to po	YR 5/2) to light red (2.5YR 6/8) mo ale yellow (2.5Y 8/2) to block (5YR 2		
		ИИ	2 - 3'	sand, limerock; fill.	vent fine good with a little sit (CD)		<5
5-			3 - 4'	- may see the majority to be the see that th			
		ИИ	4 - 7.5'	Wet, light gray (10YR 7/1), very fine sand, some patches of	yellowish brown	<5
			7.5 - 8'	(10YR 5/8). Maist aray (10YR 5/1) m	nottled with yellowish brown (10YR 5/	(22) boss vevols (8)	
			8 - 8.5'	Wet, dark gray (2.5Y 4/1)		b), clayey suria (Sc).	
10-		ИИ	8.5 - 10.				<5
-			10.5 - 12	?' Wet, light brownish gray (2	2.5Y $6/2$), very fine sand with < 10	% silt (SP).	
1		ИИ	12 - 16'		(10YR 6/2), fine sand (SP), some lay		
), fine sand present; in the lower 1'	lenses up to 10 mm	
15-				tnick of light greenish gr	ay clay (10Y 7/1) occur.		85
137			16 - 20'	Wet, light greenish gray (10Y 8/1), very fine sand with some	silt (SP), some	
ł					ser and lenses up to 20 mm thick o		
+				gray (10Y 7/1) clay occu	•		181
-}					•		10.
20-			20 - 21.7	•		_	
1			21.7 - 24		OY 8/1), fine sand with some silt, ve	ery fine sand,	
1				and a trace of very fine	gravei (SP).		60
			24 - 26'	Wet, same as above.			
25-							<5
		+	26 - 28'	Lost sample as happened	at 26-28' on boring B-101.		
			28 - 32'	Wet light greenish grow (5)	GY 8/1) fine sand with some sill	en, fine eand	
Wet, light greenish gray (5GY 8/1), fine sand with some silt, very fine sand and a trace of very fine gravel (SP), some intervals are slightly coarser while							
ا				others are slightly finer	y (// miles rele and origina	, 220.00. #11110	· .
b_tmp.	dwg	_		Page 1 of 3			

0		1
L	9	

	_ Jacksonville r	L; Iampa, FL; Ir	enton, NJ; Stoneham, MA	·			
Location: Way	cross, Georgia	Date(s	e): 03/30/99 - 05/05/99	Site Id: MW-99			
Project Numb	er: CSXT9415589	9 Projec	t Name: RCRA Part B		I		
Logged By: Fr	ed Pirkle	Certific	ed By: C. Mattair	Permit No.: N/A	Purpose: Monitoring V		
Contractor: En	v. Exploration	Drilling	Method: Hollow Stem Auger	Total Depth: 68.00'	Completed Depth: 33.	.00'	
Elevation: 135.	.24'	Boreho	ole Dia.: 10.00in	Blank Casing: type: Stainless dia: 2.	.00in fm: .0'	to: 18.00'	
GC data is su dichloroethyler	um of trichloroe ne, and 1,1—dic	completed with a ethylene, cis-1,2- hioroethylene.	Geoprobe.	Screens: type: Wire-wrop size: .010in dia: 2.	.00in fm: 18.00'	to: 28.00 ⁱ	
Developed by	pumping until (clear.		Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: .00' fm: 14.00' fm: 16.00'	to: 14.00' to: 16.00' to: 34.00'	
Depth (ft) Graphic Log	Construction		Material Description	cription			
0 0		32 - 36'	Wet, same as above.			<5	
35-		36 - 39'	Wet, some as above, some intervals recovered very poorly.				
40		39 - 40' 40 - 43'	west many electric strain of Est visit Said with Said (Sim).				
45-0		43 - 44'	and a trace of very fine	medium sand (SP) with some fine sand, some very fine sand,			
0 0		47.5 – 48'	some silt (SP), and a trace of very fine gravel. At 47.5' wood was encountered.				
50-		48 - 49' 49 - 52'	a trace of very fine grav), mostly fine sand with some silt, ver rel (SP); at 50.3° a 30 mm thick lens curs; at 50.8° a 10 mm thick lens of	of dark gray	63	
55-		52 - 54' 54 - 56'	Wet, same as above excep Wet, dark grayish brown (: 5 mm thick lens of black	2.5Y 4/2), fine sand with some very $x = (5Y 2.5/1)$ clay is present.		29	
0 0		56 - 60'	55.5 - 56'.	vas recovered appeared to be the sam	ne as from	<5	
b_tmp.dwg		60 – 64'	No recovery Page 2 of 3				

9		
	9	

Continent Waycross, Georgia Date(s): 03/30/99 - 05/05/99 Site Id: MW-99							
Project Number: CSXT9415589 Project Name: RCRA Part B Logged By: Fred Pirkle Certified By: C. Mottair Contractor: Env. Exploration Drilling Method: Hollow Stem Auger Elevation: 135.24' Borehole Dia: 10.00in Remarks: Exploratory boring completed with a Geoprobe. CC data is sum of trichloroethylene, cis-1,2-dichloroethylene, and 1,1-dichloroethylene, Developed by pumping until clear. Moterial Description Moterial Description Moterial Description Moterial Description Permit No.: N/A Purpose: Monitoring Well, Sh. Total Depth: 68.00' Completed Depth: 33.00' Total Depth: 68.00' Completed Depth: 33.00' Total Depth: 68.00' Total Depth: 6			Site Id: MW_QQ	Date(s): 03/30/99 - 05/05/99	oss, Georgia	tion: Waycr	Loco
Contractor: Env. Exploration Drilling Method: Hollow Stem Auger			· · · · · · · · · · · · · · · · · · ·	Project Number: CSXT9415589 Project Name: RCRA Part B			
Elevation: 135.24' Borehole Dia.: 10.00in Remarks: Exploratory boring completed with a Geoprobe. GC data is sum of trichloraethylene, cis=1.2- dichloraethylene, and 1,1dichloraethylene. Developed by pumping until clear. Material Description Material Descrip	Shallow	Purpose: Monitoring Well,		Logged By: Fred Pirkle Certified By: C. Mattair			
Remarks: Exploratory boring completed with a Geoprobe. GC data is sum of trichloraethylene, cis-1,2- dichloraethylene, and 1,1-dichloraethylene. Developed by pumping until clear. Screens: type: Wire-wrap size: .010in dia: 2.00in fm: 18.00' to: 28. Annular Fili: type: Grout fm: 14.00' to: 14. type: Sand Filter Construction Material Description Material Description 64 - 68' Wet, greenish gray (5GY 6/1), fine sand with same medium sand, some very fine sand, some silt, and a trace of very fine gravel; at 64.2', a 50 mm thick lens of greenish gray (5GY 5/1) plastic clay exists.		Completed Depth: 33.00	Total Depth: 68.00'	Contractor: Env. Exploration Drilling Method: Hollow Stern Auger			
SC data is sum of frichloroethylene, cis-1,2—dichloroethylene, and 1,1—dichloroethylene. Developed by pumping until clear. type: Wire-wrap size: .010in dia: 2.00in fm: 18.00' to: 28. Annular Fill: type: Grout fm: .00' to: 14. type: Bentonite fm: 14.00' to: 34. Solution Construction Material Description	8.00'	00in fm: .0' to:		Borehole Dia.: 10.00in	4'	tion: 135.2	Elevo
Signature Sign	8.00'	00in fm: 18.00' to:		hylene, cis-1,2- lloroethylene.	n of trichloroet , and 1,1—dich	ata is sun roethylene	GC d
64 - 68' Wet, greenish gray (5GY 6/1), fine sand with some medium sand, some very fine sand, some silt, and a trace of very fine gravel; at 64.2', a 50 mm thick lens of greenish gray (5GY 5/1) plastic clay exists.	6.00'	fm: 14.00' to:	type: Grout type: Bentonite	lear.	oumping until c	oped by p	Devel
Wet, greenish gray (5GY 6/1), fine sand with some medium sand, some very fine sand, some silt, and a trace of very fine gravel; at 64.2', a 50 mm thick lens of greenish gray (5GY 5/1) plastic clay exists.	(qdd) ၁၁			Material Description	Construction	Graphic Log	Depth (ft)
	<5		race of very fine gravel; at 64.2', a 5	sand, some silt, and a			-
							80 -
_tmp.dwg Page 3 of 3				Page 3 of 3		rg	i tmp.d

eder
environm
Locust V
Jacksonvi

Jacksonville FL; Tam	pa, FL; Trenton, NJ; Stoneham, MA					
Location: Waycross, Georgia	Date(s): 03/30/99 - 05/02/99	Site Id: MW-100				
Project Number: CSXT9415589	Project Name: RCRA Part B	Permit No.: N/A	Purpose: Monitoring W	ell Shallow		
Logged By: Fred Pirkle	Certified By: C. Mattair		•			
Contractor: Env. Exploration	Drilling Method: Hollow Stern Auger	Total Depth: 44.00'	Completed Depth: 43.0	<u> </u>		
Elevation: 133.85'	Borehole Dia.: 10.00in	Blank Casing: type: Stainless dia: 2.	.00in fm: .0'	to: 28.00°		
Remarks: Exploratory boring complet GC data is sum of trichloroethylene dichloroethylene, and 1,1-dichloroet	cis-1,2-	Screens: type: Wire-wrap size: .010in dia: 2.	.00in fm: 28.00°	to: 38.00'		
Developed by pumping until clear.	in in the second second second second second second second second second second second second second second se	Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: 24.00'	to: 24.00' to: 26.00' to: 44.00'		
бо	•					
Graphic Log	Material Description			(qdd)))		
Grap		•		႘		
11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Dry, light olive brown (2.5Y 5/3), very fine sand (SP). $0.5 - 1.5'$ Moist, light gray (2.5Y 7/2) mottled with strong brown (7.5YR 5/8), very fine sand with < 10% silt (SP).					
5-	 3.5' Wet, gray (2.5Y 5/1), very fine sand with < 10% silt (SP), occasional patch of of strong brown (7.5YR 7/8). 4' Wet, light gray (7.5YR 7/1), very fine sand with > 10% silt (SP). 					
6 - 7 -	4 - 6' Wet, gray (10YR 5), clayey sand (SC). 6 - 7' Wet, light greenish gray (10Y 8/1), very fine sand with <10% silt (SP). 7 - 8' Wet, light brownish gray (2.5Y 6/2), very fine sand with some silt, some fine					
- 10 1 1 1	(10YR 8/2) clay exist. 10.5 - 12' Wet, white (2.5Y 8/1), very fine sand with a little silt (SP).					
Wet, light yellowish brown (2.5Y 6/3), fine sand (SP). Wet, light gray (2.5Y 7/1) grading into white (10YR 8/1), fine sand (SP) with varying amounts of very fine sand and silt, 4 mm thick lamina of light greenish gray (10Y 8/1) clay are present; a trace of very fine gravel is present. Wet, same as above except clay is occuring in lenses up to 100 mm in thickness;						
20 -	in the lower portion, clay - 23.3' Wet, same as above excep - 24' Wet, light gray (2.5Y 8/1)	y lenses are becoming more frequent. pt slightly coarser and clay lenses hav mottled with yellow (10YR 7/8), fine and and a trace of very fine gravel, t	re disappeared. sand with a	<5		
is a light greenish gray clay lens. 24 - 28' Wet, light gray (2.5Y 8/1), occasional reddish yellow (7.5YR 7/8), fine sand with some silt and very fine sand and a trace of very fine gravel, occasional 10 mm						
thick lenses of light greenish gray (10Y8/1) clay. 28 - 28.3' Wet, reddish yellow (7.5YR 7/8), fine sand, colored with iron oxide. 28.3 - 32' Wet white (10YR 8/1) with abundant iron oxide [reddish yellow (7.5YR 7/8)] b_tmp.dwg Page 1 of 2						



Location: Waycross, Georgia	Location: Waycross, Georgia Date(s): 03/30/99 - 05/02/99			Site Id: MW-100			
Project Number: CSXT9415589	Project Number: CSXT9415589 Project Name: RCRA Part B			•			
Logged By: Fred Pirkle	Certified By: C. Mattair	Total Depth: 44.00°		Purpose: Monitoring Well, Shallow			
Contractor: Env. Exploration	Drilling Method: Hollow Stern Auger			Completed Depth: 43.00'			
		Blank Casing: type: Stainless dia: 2.					
Elevation: 133.85'	Elevation: 133.85' Borehole Dia.: 10.00in		dia: 2.00	.00in fm: .0' to: 28.00'			
	Remarks: Exploratory boring completed with a Geoprobe. GC data is sum of trichloroethylene, cis-1,2- dichloroethylene, and 11-dichloroethylene			in fm: 28.00'	to: 38.00'		
Developed by pumping until clear.		Annular Fill: type: Grout type: Bentonite type: Sand Filter		fm: .00' fm: 24.00' fm: 26.00'	to: 24.00' to: 26.00' to: 44.00'		

Depth (ft)	Graphic Log	Construction	Material Description	(qdd) ၁၁
-	0 0 0		staining, clayey sand (SC) with 100 mm thick lenses of light greenish gray clay (10Y 8/1). 32 - 36' Wet, light greenish gray (5GY 7/1), fine sand with some very fine sand (SP), trace of very fine gravel.	30 65
35-			36 - 38' Wet, light greenish gray (5GY 7/1), fine sand with some very fine sand and silt (SP), upper 5" is light gray (2.5Y 7/2). 38 - 40' Moist, dark greenish gray (5GY 4/1), clay (CH).	759
40-				
45-	- <i>J</i>	السند، منسا		
50- -				
55-				
b_tmp.	dwg		Page 2 of 2	

C	1	\
L	9	

b_lmp.dwg

eder associates environmental scientists and engineers Locust Valley, NY: Ann Arbor, MI: Madis

Locat	ion: Wayer	oss, Georgia	Date(s): 03/30/99 - 05/05/99	Site Id: MW-101			
Proje	ct Number	:: CSXT9415589	Project Name: RCRA Part B	M#-101			
Logge	ed By: Fred	i Pirkle	Certified By: C. Mattair	Permit No.: N/A	Purpose: Monitoring	Well, Shallow	
Contr	actor: Env.	Exploration	Drilling Method: Hollow Stern Auger	Total Depth: 52.00'	Completed Depth: 37	7.00'	
Eleval	tion: 133.3	5'	Borehole Dia.: 10.00in	Blank Casing: type: Stainless dia: 2	.00in fm: .5'	to: 22.00'	
GC de dichlo	ota is sun roethylene,	atory boring complet n of trichloroethylene , and 1,1—dichloroet umping until clear.	ed with a Geoprobe. , cis—1,2— hylene.	Screens: type: Wire-wrap size: .010in dia: 2. Annular Fill: type: Grout type: Bentonite type: Sand Filter	.00in fm: 22.00' fm: 1.00' fm: 18.00' fm: 19.75'	to: 32.00° to: 18.00° to: 19.75° to: 38.00°	
Depth (ft)	Graphic Log	Construction	Material Description	·		(cc (doo)	
brown (10YR 5/2) to pale				5/2) to very dark grayish brown (10) e yellow (2.5Y 8/2), sand, silt, and s 5/2) mottled with yellow brown (10).	ome limerock, fill.	<5	
5-	4 - 8' Wet, gray (7.5YR 5/1) mottled with yellow brown (10YR 5/8), clayey sand (SC), mottling becomes more prevelant with depth.					<5	
]		ИИ	- """ """ """ (""")	, very fine sond with a little silt (SP) f very dark groy (2.5Y 3/1) clay.	, near the top		
ુી		9 -	and grayion ordan (tolk)	5/2), very fine sand with a little silt	(SP).	<5	
0		9.9 - 12 - 12.5	12' Moist, greenish gray (10Y 7 12.5' Moist, greenish gray (10Y 7 - 13.5' Wet, grayish brown (10YR 5,	7/1), clay (CH). 7/1), clay (CH), some sand laminae p /2), fine sand with a little silt (SP).	*	<5	
5-1		14.5 16 - 16.2	with alternating laminae (u - 16' Moist, greenish gray (10Y 6 16.2' Moist, greenish gray (10Y 6	with alternating laminae (up to 10 mm thick) of clay. Moist, greenish gray (10Y 6/1), clay (CH), with laminae of sand. Moist, greenish gray (10Y 6/1), clay (CH).			
,-		· · · · · · · · · · · · · · · · · · ·	lenses up to 50 mm thick material.	of greenish groy (10Y 6/1) clay or		372	
1		20 -	,	ens was 90 mm thick.		3,96	
		24 -	28' Wet, ran out of core tube o	os happened at 26–28' on boring B–	99, seemed to be a	1,864	
		28 -	very fine sand.	Can and the second second			
L	1		very fine gravel (SP).	fine sand with very fine sand, silt, an	a a trace of	'	

Page 1 of 2



		Jacksonville F	L; Tampa,	FL; Trenton, NJ; Stoneham, MA	"ELL AND I	JOMING I	iO G	
Loca	ition: Wayer	oss, Georgia		Date(s): 03/30/99 - 05/05/99	Site Id: MW-101			
Proje	ect Numbe	r: CSXT941558	9	Project Name: RCRA Part B				
Logg	ed By: Free	d Pirkle		Certified By: C. Mattair	Permit No.: N/A	Purpose: Monitorin		hallow
Cont	ractor: Env.	Exploration		Drilling Method: Hollow Stern Auger	Total Depth: 52.00'	Completed Depth:	37.00'	
Elevo	ition: 133.3	5'	1	Borehole Dia.: 10.00in	Blank Casing: type: Stainless dia: 2.0	00in fm: .5'	to: 22	.00 '
GC d	lata is sun oroethylene	n of trichloroe and 1.1—dic	thylene, cis hloroethylen	rith a Geoprobe. ~1,2~ e.	Screens: type: Wire-wrap size: .010in dia: 2.0	00in fm: 22.00'	to: 32	.00°
Deve	loped by p	umping until (clear.		Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: 1.00' fm: 18.00' fm: 19.75'	to: 18 to: 19 to: 38	.75'
Depth (ft)	Graphic Log	Construction		Material Description				(qdd) ၁၁
35-	0 0 0		32 - 36	Same as above.				80
- - - -			36 - 40		mm thick lens of very dark gray (2.5Y staining of fine sand); possible kaolinize	3/1) material d feldspar.		416
40-			40 - 44'	Same as above though po possible kaolinized feldspo	ossible a little coarser, lower 0.5' is gr or.	oy (2.5Y 5/1);		
45-	0		44 - 46.5					<5
			46.5 - 48	3' Wet, light yellowish brown (2.5Y 6/3), very fine sand (SP).			
,	0		48 - 52'	Wet, light yellowish brown	(2.5Y 6/3), sand, silt, and very fine gr	avel (SM).		<5
50-	0							<5
55-								
b_tmp.d	* 9	·		Page 2 of 2				

ocation:	Waycros	s, Georgia	Date(s	s): 03/31/99 - 04/28/99	Site Id: MW-102			
		CSXT9415589		t Name: RCRA Part B	1V1 W — 1 U Z			
	By: Fred			ed By: C. Mattair	Permit No.: N/A	Purpose: Monitoring Well,	Shallow	
					Total Depth: 40.00'	Completed Depth: 39.00'		
		Exploration		Method: Hollow Stem Auger	Blank Casing:	1"- 0.00°- (0)	24.001	
	: 134.86	,		ole Dia.: 10.00in	type: Stainless	dia: 2.00in fm: .0' to: :	24.00'	
SC data	is sum	of trichloroe	completed with a thylene, cis-1,2- hloroethylene.		Screens: type: Wire-wrap size: .010in	dia: 2.00in fm: 24.00' to:	3'4.00'	
Develope	d by pu	mping until (clear.		Annular Fill: type: Grout type: Bentonile type: Sand Filter	fm: 20.00' to:	20.00' 21.75' 40.00'	
Depth (ft)	Graphic Log	Construction		Material Description			C (not)	
Dry, pale yellow (2.5Y 8/3), limerock; fill. 0.3 - 1.6' Moist, dark yellowish brown (10YR 3/6) mottled with yellowish brown (10YR 5/8), very fine sand with < 5% silt (SP). 1.6 - 2.1' Moist, grayish brown (10YR 5/2), silty sand (SM), very dense. 2.1 - 4' Moist, grayish brown (10YR 5/2), silty sand (SM), very dense. 2.1 - 4' Moist, grayish brown (10YR 5/2), very fine sand with <10% silt, clay contains 5 mm thick faminae of what appears to be organic material; entire interval smells of diesel. 4 - 4.2' Wet, dark gray (2.5Y 4/1), very fine sand (SP).					<:			
10-			4.9 - 8'	fine gravel. Wet, light brownish gray (ery fine sand with some wood a 2.5Y 6/2), very fine sand with s atly more silt, occasional streaks	ome silt (SP),	<:	
5-			8 - 12'	Wet, gray (10YR 6/1), very fine sand with < 10% silt (SP), a 200 mm thick lens of dark gray (5YR 4/1) clay occurs at 8.8"; in upper 8", 10 mm thick lenses of greenish gray (10Y 6/1) clay occur.				
0-			16 – 20'	increases with depth, in the lower foot lenses up to 30 mm thick of greenish gray (10Y 6/1) clay occur.				
			20 - 24' 24 - 24.3' 24.3 - 28'	ore slightly coarser and s Wet, same as above; wate Wet, same as above.	some are slightly finer. or that came up had a sheen.		<5	
5			24.J - 20		OY 8/1), fine sand with some ve gravel (SP); water in this intervo	i i	<5	

Page 1 of 2

b_tmp.dwg



eder associates
environmental scientists and engineers
Locust Valley, NY; Ann Arbor, MI; Madison, WI; Augusta, GA;
Jacksonville FL; Tarnag, FL; Trenton, NJ; Stockhor, MA

	Jacksonville F	FL; Tampa	, FL; Trento	n, NJ; Stoneh	Augusta, GA; iam, MA		WELL	AND I	BORING	LOG	
Location: Wayo	ross, Georgia		Date(s): 03	/31/99 - 0	4/28/99	Site Id:	3.6707				
Project Numbe	er: CSXT9415589	9		me: RCRA Par			MW-1	02			
Logged By: Fre	d Pirkle			r: C. Mattair		Permit No.:	N/A		Purpose: Monitori	ing Well, S	Shallow
Contractor: Env	- Exploration		Drilling Met	hod: Hollow S	tem Auger	Total Depth	: 40.00*		Completed Depth	: 39.00'	
Elevation: 134.8	36'		Borehole Di			Blank Casin type: Stainle	g: ess	dia: 2.0	0in fm: .0"	to: 2	4.00'
Remorks: Explor GC data is sur dichloroethylene	n of trichloroet a and 1.1—dich	thylene, c	ie 1 2	robe.		Screens: type: Wire-w	rop size: .	010in dia: 2.0	Oin fm: 24.00'	to: 3	4.00"
Developed by p	umping until cl	lear.				Annular Fill: type: Grout type: Bentoni type: Sand F	ite		fm: .00' fm: 20.00' fm: 21.75'	to: 20 to: 21 to: 40	.75'
Depth (ft) Graphic Log	Construction			Material	Description						(qdd) 29
45-		36 - 40)' We				the same ma				
1											
tmp.dwg			F	age 2 of 2	· · · · · · · · · · · · · · · · · · ·		 		· · · · · · · · · · · · · · · · · · ·		\dashv

4	1

eder associates
environmental scientists and engineers
Locust Valley, NY; Ann Arbor, MI; Madison, WI; Augusta, GA;

Jacksonville FL; Tamp	a, FL; Trenton, NJ; Stoneham, MA	WELL AND	BORING LO)G	
Location: Waycross, Georgia	Date(s): 03/31/99 - 04/28/99	Site ld: MW-103			
Project Number: CSXT9415589	Project Name: RCRA Part B	MW-103			
Logged By: Fred Pirkle	Certified By: C. Mattair	Permit No.: N/A	Purpose: Monitoring Well, Shallo		
Contractor: Env. Exploration	Drilling Method: Hollow Stem Auger	Total Depth: 35.00'	Completed Depth: 34	-00'	
Elevation: 132.83'	Borehole Dia.: 10.00in	Blank Casing: type: Stainless dia: 2.	.00in fm: .5'	to: 19.00'	
Remarks: Exploratory boring completed GC data is sum of trichloraethylene, dichloraethylene, and 1,1—dichloraethylene	ris_1 2_	Screens: type: Wire-wrap size: .010in dia: 2.		to: 29.00'	
Developed by pumping until clear.		Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: 1.00' fm: 15.00' fm: 17.00'	to: 15.00° to: 17.00° to: 35.00°	
Graphic Log	Moterial Description	,		(c (ppb)	
10-0.0 10-0.0 0.3-0.8-1.1-1.8-3 1.1-1.8-3 4-4.8 4.8-5 5.8-6 6.6-8 8-9' 9-12' 12-12 12.5-1	0.8' Moist, reddish yellow (7.5Yf 1.1' Moist, grayish brown (2.5Y very fine sand and silt; f 1.8' Moist, black (5Y 2.5/1), so 4' Wet, dark gray (2.5Y 4/1) (5Y 7/1), silty, sand occ very fine sand also exist; swamp complex. Wet, same as above. Wet, olive yellow (2.5Y 6/8) gray (5Y 7/1) very fine s Moist, brown (7.5YR 5/2), v Moist, very dark gray (2.5Y Wet, dark grayish brown (1 of gray (10YR 5) clay. 5' Wet, same as above.	and, silt, and gravel; fill. very fine sand, dense, a 10 mm thic urs at 31"; lumps of light grayish bro a few intervals of black (2.5Y 2.5/1) silty sand (SM), in lower portion a z and occurs. very fine sand (SP). 3/1), clayey sand (SC), contains <10 3/1), silty sand (SM). OYR 4/2), very fine sand, occasional	n (2.5Y 6/3), k lens of light gray wn (2.5Y 6/2) , very fine sand, tone of light % silt.	<5 <5 <5	
20 - 12.5 - 1 16 - 16. 16.8 - 2 20 - 22.5 22.5 - 24 24 - 28'	8' Wet, same as above, silt ind 0' Wet, grayish brown (2.5Y 5/1 10 mm thick of light green more silt are present. 5' Wet, same as above. 4' Wet, light greenish gray (5GY 40 mm thick of greenish gray (5GY Wet, light greenish gray (5GY	t), very fine sand with some silt (SP). reases slightly in last 2". 2), very fine sand with < 10% silt (SF). rish gray (10Y 8/1), very fine sand with gray (10Y 8/1), very fine sand with some silt (SP), ray (10Y 6/1) clay are present. 7 7/1), fine sand with some very fine gray (SP); at 28' 60 mm thick lens of	e), laminae up to th slightly lenses up to	<5 <5	
28 - 29'	(5GY 5/1) clay is present. Wet same as above	Company of the contract of the	greensu gray		
b_tmp.dwg	Page 1 of 2				



eder associates environmental scientists and engineers Locust Valley, NY; Ann Arbor, MI; Madison, WI; Augusta, GA; Jacksonville FL; Tampa, FL; Trenton, NJ; Stoneham, MA

Jacks	onville FL; Iom	pa, FL; Trenton, NJ; Stoneham, MA			BOILING 1	LUG	
Location: Waycross, G	eorgia	Date(s): 03/31/99 - 04/28/99	Site Id:	MW-103			<u> </u>
Project Number: CSXT	9415589	Project Name: RCRA Part B					
Logged By: Fred Pirkle	!	Certified By: C. Mottair	Permit No.: 1		Purpose: Monitori	ng Well	, Shallow
Contractor: Env. Explor	ation	Drilling Method: Hollow Stern Auger	Total Depth:	35.00*	Completed Depth	: 34.00'	,
Elevation: 132.83'		Borehole Dia.: 10.00in	Blank Casing type: Stainles		00in fm: .5°	to:	: 19.00'
Remarks: Exploratory b GC data is sum of tri dichloroethylene, and Developed by pumping	chloroethylene, I.1-dichloroeth	cic	Screens: type: Wire-wro	ap size: .010in dia: 2.0	00in fm: 19.00°	to:	29.00'
parity systems	until cledr.		Annular Fill: type: Grout type: Bentonite type: Sand Fill	e ter	fm: 1.00' fm: 15.00' fm: 17.00'	to:	15.00° 17.00° 35.00°
Graphic Log		Material Description					(pdd) 29
35- 40- 45- 55-	29 -	32' Wet, pale green (5G 6/2) (5BG 6/1), fine sand, classandy clay.	, clayey sand ((SM) with intervals of gr	eenish gray at 31', becomes	a	<5
b_tmp.dwg		Page 2 of 2					
		-3 4					

eder associates
environmental scientists and engineers
Locust Valley, NY: Ann Arbor, Mr Madison
Jacksonville FL: Tampo, FL: Trenton, NJ: Sto

Localian Waycross, Georgia Date(a): 03/28/99 - 05/03/99 Site lift MW - 104		G	Locust Valle	V. NY: Ann A	and engineers vrbor, MI; Madison, WI; Augusto, GA; FL; Trenton, NJ; Stoneham, MA	WELL	AND :	BORING L	OG
Logged By: Fred Pride Logged By: Fred Pride Controlled By: C. Matloir Controlled Evention: 155.83* Borehole Dis: 10.000n Remarks: Exploratory boring completed with a Geoprobe. GC ato is sum of trichforcethylene, cis-12. Controlled Evention: 155.83* Remarks: Exploratory boring completed with a Geoprobe. GC ato is sum of trichforcethylene, cis-12. Developed by pumping until clear. Material Description Mater	Loc	cation: Wayo	ross, Georgia	0	Oate(s): 03/29/99 - 05/03/99	Site Id: NETAL 4			
Controctor Env. Exploration Drilling Method: Hollow Stern Auger Elevation: 135.83' Borehold Dat. 10.00in Remarks: Exploratory baring completed with a Ceprobe. GC dota is sum of trichioroethylene, cis-1-2. Developed by pumping until clear. Molarid Description Molarid Descript	Pro	oject Numbe	er: CSXT941558	19 P	Project Name: RCRA Part B				
Elevation: 13.8.87 Borehold Disc. 10.00in Remarks: Exploratory buring completed with a Ceoprobe. CC dota is sum of trichrorethylene, cis-1-2. Calchforethylene, cis-1-2. Construction Moterial Description Moterial De	Log	ged By: Fre	ed Pirkle	С	Pertified By: C. Mattair	Permit No.: N/A		Purpose: Monitoring	Well, Shallow
Elevation: 13.5.83' Borchole Dia: 10.00in Blank Coaing: Syper Stainless dia: 2.00in fm: 0' to: 20.00' Secretary Syper Stainless dia: 2.00in fm: 20.00' to: 30.00' secretary secr	Cor	ntractor: Env	. Exploration	D	rilling Method: Hollow Stem Auger	Total Depth: 36.00'		Completed Depth: 3	35.00°
Remarks: Exploratory being completed with a Geoprobe. GC doto is am of Irichtorethylene, dis-1,2-2 dichloreshylene, and 1,1-dichloreshylene. Developed by pumping until clear. Moterial Description	 			В	orehole Dia.: 10.00in	Blank Casing: type: Stainless	dia: 2.	00in fm: .0'	to: 20.00'
Moist, olive brown (2.57 4/3), fine sand with some very fine sand and sitt. 1 - 2' Moist, black (10'R 2/1), fine sand with some very fine sand with some silt. Moist, gray (2.57 5/1) mottled with olive yellow (2.57 6/8), very fine sand with silt and clay (SC). 3.8 - 4' Moist, gray (2.57 5/2), fine sand with some very fine sand and a little silt (SP). 4 - 6' Moist, grayish brown (2.57 5/2), fine sand with some very fine sand and a little silt (SP) grades into gray (2.57 5/1) mottled with olive yellow (2.57 6/8), very fine sand with silt and clay (SC). Moist, dark olive brown (2.57 3/3), very fine sand with a little silt (SP), very dense. 6.3 - 8' Moist, gray (2.57 5/1), very fine sand with some fine sand (SP). 8 - 12' Wet, gray (2.57 5/1), very fine sand with some fine sand (SP). 8 - 12' Wet, gray (2.57 5/1), very fine sand with silt and clay (SC), in the lower 1' some intervals up to 50 mm in thickness contain more medium sand and less silt, some lenses up to 100 mm in thickness of greenish gray (10Y 6/1) clay are present. 20 - 24' Wet, greenish gray (10Y 6/1), very fine sand with some silt and some clay (SC), lominoe up to 10 mm in thickness of light greenish gray (10Y 7/1) clay are present. 21 - 22' Wet, greenish gray (10Y 6/1), fine sand with some silt, lenses up to 90 mm thick of greenish gray (10Y 7/1) clay are present.	dich	loroethylene	m or trichloroe e. and 1.1—dic	thylene, cis- hloroethylene	-1 2	type: Wire-wrap size: .0 Annular Fill: type: Grout type: Bentonite	10in dia: 2.0	fm: ,00' fm: 16.00'	to: 30.00° to: 16.00° to: 18.00°
Moist, olive brown (2.5Y 4/3), fine sand (SP). Moist, block (107R 2/1), fine sand with same very fine sand and silt. 1 - 2' Moist, very dark gray (1078 7/1), very fine sand with same silt. 3.8 - 4' Moist, grayish brown (2.5Y 5/2), fine sand with same very fine sand and a little silt (SP). Moist, grayish brown (2.5Y 5/2), fine sand with same very fine sand and a little silt (SP) grades into gray (2.5Y 5/2), fine sand with same very fine sand and a little silt (SP) grades into gray (2.5Y 5/2), fine sand with same very fine sand and a little silt (SP) grades into gray (2.5Y 5/1) mottled with olive yellow (2.5Y 6/8), very fine sand with silt and clay (SC). 6 - 6.3' Moist, grayish brown (2.5Y 3/3), very fine sand with a little silt (SP), very dense. 5.3 - 8' Moist, gray (2.5Y 5/1) mottled with yellowish brown (10YR 5/8), very fine sand with same silt, very dense. 12 - 12.5' Same as above. 12.5 - 16' Wet, grayish brown (10YR 5/2), very fine sand with silt and clay (SC), in the lower 1' some intervals up to 50 mm in thickness contain more medium sand and less silt, some lenses up to 100 mm in thickness of greenish gray (10Y 6/1) clay are present. 20 - 24' Wet, greenish gray (10Y 6/1), very fine sand with some silt and some clay (SC), laminae up to 10 mm in thickness of light greenish gray (10Y 7/1) clay are present. 21 - 22' Wet, greenish gray (10Y 6/1), fine sand with some silt, lenses up to 90 mm thick of greenish gray (10Y 7/1) clay are present.	Depth (ft)	Graphic Log	Construction		Material Description				(pdp)
fine sand with silt and clay (Sc). 6 - 6.3' Moist, dark olive brown (2.5Y 3/3), very fine sand with a little silt (SP), very dense. 6.3 - 8' Moist, gray (2.5Y 5/1), very fine sand with some fine sand (SP). Wet, gray (2.5Y 5/1) mottled with yellowish brown (10YR 5/8), very fine sand with some silt, very dense. 12 - 12.5' Same as above. 12.5 - 16' Wet, grayish brown (10YR 5/2), very fine sand with silt and clay (SC), in the lower 1' some intervals up to 50 mm in thickness contain more medium sand and less silt, some lenses up to 100 mm in thickness of greenish gray (10Y 6/1) clay are present. Wet, greenish gray (10Y 6/1), very fine sand with some silt and some clay (SC), laminae up to 10 mm in thickness of light greenish gray (10Y 7/1) clay are present. 20 - 24' Wet, greenish gray (10Y 6/1), fine sand with some silt, lenses up to 90 mm thick of greenish gray (10Y 7/1) clay are present.	5-		0.5 - 1' Moist, black (10YR 2/1), fine sand with some very fine sand and silt. Moist, very dark gray (10YR 3/1), very fine sand with some silt. Moist, gray (2.5Y 5/1) mottled with olive yellow (2.5Y 6/8), very fine sand with silt and clay (SC). 3.8 - 4' Moist, grayish brown (2.5Y 5/2), fine sand with some very fine sand and a little silt (SP).					<5	
wet, gray (2.57 5/1) mottled with yellowish brown (10YR 5/8), very fine sand with some silt, very dense. 12 - 12.5' Same as above. 12.5 - 16' Wet, grayish brown (10YR 5/2), very fine sand with silt and clay (SC), in the lower 1' some intervals up to 50 mm in thickness contain more medium sand and less silt, some lenses up to 100 mm in thickness of greenish gray (10Y 6/1) clay are present. 16 - 20' Wet, greenish gray (10Y 6/1), very fine sand with some silt and some clay (SC), laminoe up to 10 mm in thickness of light greenish gray (10Y 7/1) clay are present. 20 - 24' Wet, greenish gray (10Y 6/1), fine sand with some silt, lenses up to 90 mm thick of greenish gray (10Y 7/1) clay are present.	10-		111.		fine sand with silt and clay Moist, dark olive brown (2.5y dense.	(2.5Y 5/1) mottled with oliver (SC). (3/3), very fine sand with	ve yellow (a little sil	2.5Y 6/8), very	<5
lower 1' some intervals up to 50 mm in thickness contain more medium sand and less silt, some lenses up to 100 mm in thickness of greenish gray (10Y 6/1) clay are present. Wet, greenish gray (10Y 6/1), very fine sand with some silt and some clay (SC), laminae up to 10 mm in thickness of light greenish gray (10Y 7/1) clay are present. 20 - 24' Wet, greenish gray (10Y 6/1), fine sand with some silt, lenses up to 90 mm thick of greenish gray (10Y 7/1) clay are present. 24 - 28' Wet, greenish gray (10Y 6/1), fine sand with some very fine sand; when core was pulled lower 3' flowed from tube.	15-		1	3 - 12' 2 - 12.5'	some silt, very dense. Same as above.	d with yellowish brown (10Y	R 5/8), ve		<5.
laminae up to 10 mm in thickness of light greenish gray (10Y 7/1) clay are present. 20 - 24' Wet, greenish gray (10Y 6/1), fine sand with some silt, lenses up to 90 mm thick of greenish gray (10Y 7/1) clay are present. 24 - 28' Wet, greenish gray (10Y 6/1), fine sand with some very fine sand; when core was pulled lower 3' flowed from tube.	20-				less silt, some lenses up to are present.	o 50 mm in thickness con 100 mm in thickness of g	tain more reenish gro	medium sand and by (10Y 6/1) clay	<5
of greenish gray (10Y 7/1) clay are present. 24 - 28' Wet, greenish gray (10Y 6/1), fine sand with some very fine sand; when core was pulled lower 3' flowed from tube.				o - 20°	iditinde up to 10 mm in thic	, very fine sand with some ckness of light greenish gra	silt and s by (10Y 7/	ome clay (SC), (1) clay are	<5
b tmp.dwg	25-		20	- 24'	Wet, greenish gray (10Y 6/1), of greenish gray (10Y 7/1) c	fine sand with some silt, lay are present.	lenses up	to 90 mm thick	<5
	b_tmp.dwg		24	- 28'	Times weet I flowed from tu	fine sand with some very t	fine sand;	when core was	59

er	cust Valley, NY:	entists and engine Ann Arbor, MI; M	eers fadison, WI; Augusta, CA; , NJ; Stoneham, MA	WELL A	AND I	BORING LO	G	•
Location: Waycross	, Georgia	Date(s): 03/	/29/99 - 05/03/99	Site Id: MW-10)4			
Project Number: C	SXT9415589	Project Nar	me: RCRA Part B	Permit No.: N/A		Purpose: Monitoring	Well, S	Shallow
Logged By: Fred F	Pirkle	Certified By	r: C. Mattair	Total Depth: 36.00'	•	Completed Depth: 3		
Contractor: Env. E	xploration	Drilling Met	hod: Hollow Stem Auger	Right Casing:				
Elevation: 135.83		Borehole D	ia.: 10.00in	type: Stainless	dio: 2	.00in fm: .0°	to: 2	.0.00
Remarks: Explorate GC data is sum dichloraethylene;	ene, cis-1,2-	Screens: type: Wire-wrap size: .(010in dia: 2	.00in fm: 20.00'	to: 3	50.00*		
Developed by pun	mping until clear	r.		Annular Fill: type: Grout type: Bentonite type: Sand Filter		fm: .00' fm: 16.00' fm: 18.00'	to: 1	16.00' 18.00' 36.00'
Depth (ft) Graphic Log	Construction		Material Description				-	(9dd) 25
35-	3		(10Y 6/1) clay (CH); 1. Maist, greenish gray (5G greenish gray (5G 5/1)	(10Y 7/1), fine sand with 2' of greenish gray (5G 6, 6/1), fine sand with some clay are present. (5G 4/1) clay (CH), a fe	/1) clay o	sand. Lenses of		<5
45-								
50-								
55-								•

Page 2 of 2

b_tmp.dwg

		1
1	9	

eder associates environmental scientists and engineers Locust Valley, NY; Ann Arbor, MI; Madison, WI; Augusta, GA; Jacksonville FL; Tompa, FL; Trenton, NJ; Stoneham, MA

			L; Trenton, NJ; Stoneham, MA		BORING L	
	ycross, Georgia		ate(s): 03/31/99 - 05/04/99	Site Id: MW-105		
Project Num	ber: CSXT9415589) P	roject Name: RCRA Part B			
Logged By: F	red Pirkle	C	ertified By: C. Mattair	Permit No.: N/A	Purpose: Monitoring	Well, Shallow
Contractor: E	nv. Exploration	Dr	illing Method: Hollow Stem Auger	Total Depth: 48.00'	Completed Depth: 3	7.00'
Elevation: 132	2.44'	Во	rehole Dia.: 10.00in	Blank Casing: type: Stainless dia:	2.00in fm: .5'	le: 22 001
dichloroethyle	loratory boring co sum of trichloroet ne, and 1,1—dich	hylene, cis- loroethylene	1 7	Screens:	2.00in fm: 22.00°	to: 22.00'
	pumping until cl	ear.		Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: 1.00° fm: 18.00° fm: 20.00°	to: 18.00° to: 20.00° to: 39.00°
Depth (ft)	Construction		Material Description	·		(cc (ppb)
700	Dry, pale yellow (2.5Y 7/4), fine and very fine sand. 0.5 - 1.5' Moist, red (2.5YR 4/8) mottled with brownish yellow (10YR 6/8), clayey sand. 1.5 - 1.8' Moist, very dark gray (5Y 3/1), very fine sand with silt; fill. Moist, gray (2.5Y 5/1), very fine sand; dense; accasingly patches of wellow.					
10-	6 8	- 8' - 10'	Wet, grayish brown (2.5Y 5 Wet, dark grayish brown (2	looking material is present. (2), very fine sand with a little silt. (5) 4/2), very fine sand (SP) 25 a	nm lone of way to be	<5 <5
15-	12	0 - 12' ? - 12.8' !.8 - 15.3'	Not recovered. Wet, dark gray (10YR 4/1), gray (10YR 3/1) organic c	very fine sand and silt with a 40 m	n thick very dark	
		.3 – 16' – 20'	Wet, greenish gray (10Y 6/1)	1) plastic clay.) plastic clay (CH).		<5
, -		- 24'	to on this is thickness of C	7/1), very fine sand with some sill greenish gray (10Y 6/1) plastic clay of very fine gravel in lower 6".	t (SP), lenses up are present.	2,621
	24	- 28'	Wet, light greenish gray (10Y silt along with a trace of ver	7/1), fine sand with some very fine y fine gravel (SP).	sand and some	<5
0 0	28 -	- 32'	Wet, same as above; lost above	ut 1' of recovery, probably the finer	intervals.	12
Imp.dwg	' 				j	<5



eder associates environmental scientists and engineers Locust Valley, NY; Ann Arbor, MI; Madison, WI; Augusta, GA; Jacksonville FL; Tampa, FL; Trenton, NJ; Stoneham, MA

	L		res rompos	rt, Irenton, NJ; Stonenom, MA			io u
	Location: Y	Vaycross, Georgia	1	Oate(s): 03/31/99 - 05/04/99	Site Id: MW-105		
	Project Nu	mber: CSXT941558	39 F	Project Name: RCRA Part B			
	Logged By	: Fred Pirkle	C	ertified By: C. Mattair	Permit No.: N/A	Purpose: Monitorin	g Well, Shallow
	Contractor:	Env. Exploration	· D	rilling Method: Hollow Stem Auger	Total Depth: 48.00'	37.00'	
	Elevation: 1			orehole Dia.: 10.00in	Blank Casing: type: Stainless dia: 2.	00in fm: .5'	to: 22.00'
	dichloroethy	xploratory boring sum of trichloro dene, and 1,1—dic by pumping until	ethylene, cis- chloroethylene	-1.2	Screens: type: Wire-wrap size: .010in dia: 2.0	00in fm: 22.00'	to: 32.00'
		- Panipang anni	T		Annular Fill: type: Grout type: Bentonite type: Sand Filter	fm: 1.00' fm: 18.00' fm: 20.00'	to: 18.00' to: 20.00' to: 39.00'
1	(£)	`					
	Depth (ft) Graphic Loa	Construction		Material Description			(ddd) oo
1	-0	。					8
	,	$\cdot \parallel \mid \dashv \mid \parallel$	32 - 36'	Wet, same as above.			
	•						
	35-		36 - 38.5				<5
1	0 0		30 - 30,3	wet, light brownish gray (2 thick of greenish gray (10	2.5Y 6/2), silty sand (SM) with lenses of 7/1) plastic clay	up to 120 mm	
	a 0		38.5 - 40'	Wet, gray (2.5Y 5/1),fine s	sand (SP); upper 3" is a little finer.		
1.	40		40 - 44'		/1), fine sand with very fine sand, silt,		<5
	Po			very fine gravel; some zon	nes are finer than others.	and a trace of	
	70.0						
l	0 0	1 1	44 – 48'	Wet, same as above, the fi	iner portions want to run out of the c	ore tube	<5
4	5-						
	0 0						<5
	<u> </u>						\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
5	0-						
	1						
]						
	.						
55)				•		
	1 1						
	1						
b f	mp.dwg						
	····	•		Page 2 of 2	·		



eder associates environmental scientists and engineers Locust Valley, NY; Ann Arbor, MI; Madison, WI; Augusta, GA; Jacksonville FL; Tampa, FL: Trentan, NJ: Stonehom, MA

Tompo	p. FL; Trenton, NJ; Stoneham, MA	WELL AND BORING	LOG
Location: Waycross, Georgia	Date(s): 03/26/99 - 05/07/99	Site Id: NATAL 4.00	
Project Number: CSXT9415589	Project Name: RCRA Part B	MW-107	
Logged By: Fred Pirkle	Certified By: C. Mattair	Conductor Casing: type: PVC dia: 6.00in fm: .00'	to: 47.00°
Contractor: Env. Exploration	Drilling Method: Mud Rotary	Blank Casing:	
Elevation: 139.15'	Borehole Dia.: 6.00in	type: Stoinless dia: 2.00in fm: .0*	to: 48.00°
Total Depth: 64.00°	Completed Depth: 63.00'	Screens: type: Wire-wrop size: .010in dia: 2.00in fm: 48.00'	to: 58.00°
Remarks: Exploratory boring completed GC data is sum of trichloroethylene, a dichloroethylene, and 1,1-dichloroethyle Developed by pumping until clear.	in_ 1 3	Annular Fill: type: Grout fm: .00' type: Bentonite fm: 44.00' type: Sand Filter fm: 45.00'	to: 44.00° to: 46.00° to: 64.00°
(1) Hiday Well Construction	Material Descr	· 	(qdd) 29
5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(2.5Y 7/8), sand and s 3 - 4' Moist, black (2.5YR 2.5/1 - 6.5' Moist, black (2.5YR 2.5), - 8' Wet, light gray (10YR 7/2 streaks are not present - 8.5' Moist, light gray (10YR 7/ - 9' Moist, dark olive brown (2 - 11.5' Moist, dark gray (2.5Y 4/1 sand, with <10% silt and - 12.5' Moist, light olive brown (2.5 (SP-SC), plastic 13' Moist, dark gray (7.5YR 4/1 Moist, white (5Y 8/1) mott (SP-SC).	1), sand, silt, and gravel; fill. 2), very fine sand with streaks of organic (SM), organic in lower 0.5'. (2), very fine sand with silt (SP). .5Y 4/3), very fine sand, with 5% silt and clay (SC). 1), very fine sand, with <10% silt and clay (SC). 1) mattled with light alive brown (2.5Y 5/6), very fine	<5 <5
15 -		SY 6/2) grading down to gray (2.5Y 5/1), fine sand	<5
19.5 - 20 - 21.5 - 22.2 -	- 20' Moist, gray (2.5Y 6/1), fine greenish gray (5GY 6/1) so 21.5' Wet, light greenish gray (10Y very fine sand with 10% silt 22.2' Moist, greenish gray (10Y 6/1 of moist, white (5Y 8/1), fill Moist, greenish gray (10Y 6/1 lenses increasing with depth.	7/1) grading into greenish gray (10Y 6/1) at 20.5', and clay (SP-SC), clay content increases at 21.3'.), clay (CH), upper 0.3' of interval contains lamina ne sand (SP). 1), clay (CH) interbedded with fine sand (SP), clay	189 31,164
np.dwg	7' Wet white (5Y 8/1), fine son Page 1 of 3	d (SP) coorsening downward	

	eder associat
	environmental scien
T A	Locust Valley, NY; A
	Jacksonville FI . Tom

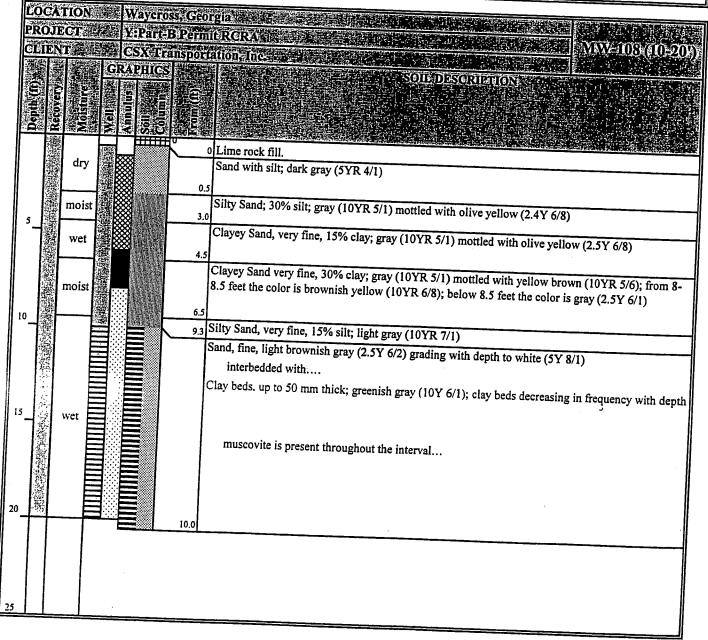
eder associates environmental scientists and engineers Locust Valley, NY; Ann Arbor, MI; Madison, WI; Augusta, GA; acksonville FL; Tampa, FL; Trenton, NJ; Stoneham, MA

	•	
Location: Waycross, Georgia	Date(s): 03/26/99 - 05/07/99	Site Id: 1675
Project Number: CSXT9415589	Project Name: RCRA Part B	MW-107
Logged By: Fred Pirkle	Certified By: C. Mottair	Conductor Casing: type: PVC dia: 6.00in fm: .00' to: 47.00'
Contractor: Env. Exploration	Drilling Method: Mud Rotary	Blank Casing:
Elevation: 139.15'	Borehole Dia.: 6.00in	type: Stainless dia: 2.00in fm: .0' to: 48.00'
Total Depth: 64.00°	Completed Depth: 63.00'	Screens: type: Wire-wrap size: .010in dia: 2.00in fm: 48.00' to: 58.00'
Remarks: Exploratory boring comple GC data is sum of trichloroethylend dichloroethylene, and 1,1—dichloroethylene, and 1,1—dichloroethylene, until clear.	o cic_1 2_	Annular Fill: type: Grout fm: .00' to: 44.00' type: Bentonite fm: 44.00' to: 46.00' type: Sand Filter fm: 46.00' to: 64.00'
(ti)		

	Log			
Depth (ft)	Graphic L	Well Construction	Material Description	(dd) 29
	9 0	IXI N J	27 - 28' Moist, white (5Y 8/1), fine sand (SP).	0 < 5
	0		28 - 30.5' Wet, gray (2.5Y 6/1), fine sand (SP), some medium size grains, may contain kaolinized feldspar grains.	
35-		AH	may contain kaolinized feldspar grains.	168
	0		32 - 36' Wet, greenish gray (10Y 6/1), mostly medium sand with some coarse sand and a trace of fine gravel (SP), possible kaplinized feldspar grains.	382
40-	0		Moist, greenish gray (5GY 6/1), very fine dense sand (SP), with three 82 mm thick lenses of greenish gray (5GY 5/1) clay (CH); possible kaolinized feldspan grains. Not recovered.	
	0	MWI	Moist to wet, greenish gray (5GY 6/1), very fine sand, dense; possible kaolinized feldspar grains.	160
45			possible kaolinized feldspar grains.	
		- 4	4.5 – 45.5' Moist, dark greenish gray (5GY 4/1), clay (CH), plastic.	<5
50-	0	40	5.5 - 46' Moist, greenish gray (5GY 6/1), fine sand (SP). 6 - 47.5' Moist, greenish gray (5GY 5/1), clay (CH) with some very fine sand. 7.5 - 48' Moist, greenish gray (5GY 4/1), clay (CH).	
	0		Moist, light gray (2.5Y 7/1), medium sand (SP) coarsening slightly with depth, one 70 mm thick lens of light gray (2.5Y 7/1), fine sand (SP) at 49.5'. Moist to wet, gray (2.5Y 5/1) with a few pale yellow (2.5Y 8/3) 50 mm diameter	<5
55	0	1. 1 1 1 1	5 - 55.5' Moist, light gray (2.5Y 7/2) grading to gray (2.5Y 6/1), fine sand (SP)	<5
A	0	1 1 1 1 1	5 - 57' Wet, dark bluish gray (5PB 4/1), fine sand with some medium sand (SP). - 57.5' Wet, bluish black mottled with light greenish gray (10Y 8/1), very fine sand with clay (OH).	
h Ima	0	57.5	5 - 59' Wet, greenish gray (10Y 6/1), very fine sand (SP) with some 10 - 20 mm thick	<5
b_tmp.dwg			Page 2 of 3	

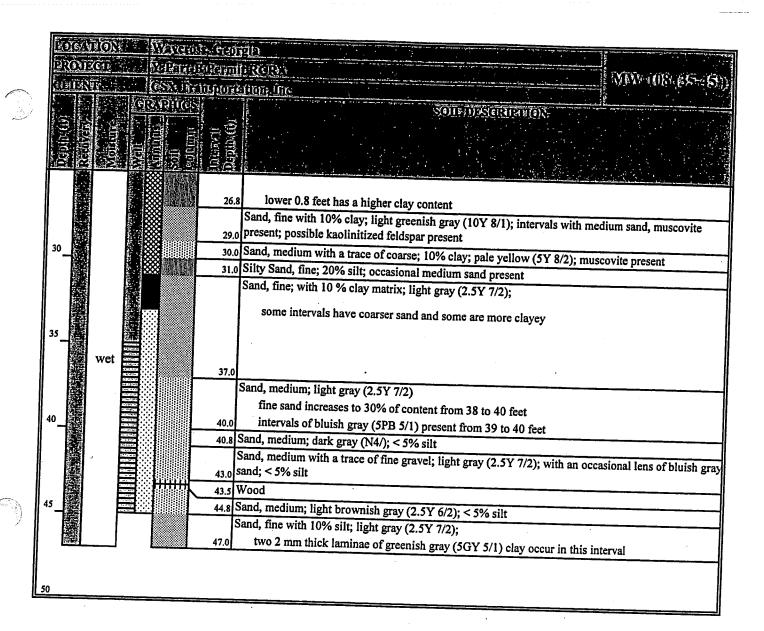
	6	LOCUST Valley, NY	otes ientists and engineers ; Ann Arbor, MI; Madison, WI; Augusta, GA; ompo, FL; Trenton, NJ; Stoneham, MA	WELL AND BORING I	LOG
Ī	Location: Way	cross, Georgia	Date(s): 03/26/99 - 05/07/99	Site Id:	
	Project Numb	er: CSXT9415589	Project Name: RCRA Part B	MW-107	
	Logged By: Fre	ed Pirkle	Certified By: C. Mattair	Conductor Casing: type: PVC dia: 6.00in fm: .00'	
	Contractor: En	v. Exploration	Drilling Method: Mud Rotary	Blank Casing:	to: 47.00'
	Elevation: 139.	15'	Borehole Dia.: 6.00in	type: Stainless dia: 2.00in fm: .0*	to: 48.00°
	Total Depth: 64	1.00*	Completed Depth: 63.00'	Screens: type: Wire-wrop size: .010in dia: 2.00in fm: 48.00'	L . 50 001
	lichloroethylend Developed by p	ratory boring comple m of trichloroethylen e, and 1,1-dichloroe pumping until clear.	eted with a Geoprobe. e, cis-1,2- thylene.	Annular Fill: type: Grout type: Bentonite type: Sand Filter fm: .00' fm: 44.00' fm: 46.00'	to: 58.00' to: 44.00' to: 46.00' to: 64.00'
, n- u	Graphic Log	Well Construction	Material Descri	ption	(qdd) 25
75 80-			61 - 63' Moist, greenish gray (5GY gray (5GY 4/1) clay (SC	7 5/1), very fine, very clayey sand with dark greenish (*/CH).	<5
1					
b_tmp	.dwg		Page 3 of 3		
					1

Elovation = [2 (NGVD 60 929)	Ground 34	. 135.00 ft	Logged 11/12/00 11/12/00 11/12/00
(NG VII) of 1929)	T TO C THE	134.42 ft	Construction 11/21/00 To 11/21/00 VIV 108/4103/60
Casings (stamicss steet)	Living Bar	10 ft	DEVIOUS 11/21/00 WW 108/10/20
(stainless steel)	Dimetera	2 in	11/25/01
		10.0 ft	
icreen sugarante		20.0 ft	Christopher J. Mattair, P.G. Drilling company. Moretrench, Inc.
វីធីរ៉ោចរួមច្នៃ៖	Diameter 9	2 in	Moretrench, Inc.
avito: Taristic	Slocsize	0.02 in	Desid Drilles de Sanford
	Opensor		Drilling Equipment Rig No. 0494
roin 3	Gontago	1.0 ft	Drilling Method Sonic, continuous 3" diameter core
7.0016	TOURSE	1.0 11	Well developed by purging followed by air lifting and purging.
	eron as sa	0.0 It	
entonice.	TOTAL	6.0 ft	
		8.0 ft	Location bored to 100 feet below grade and cluster wells installed in individual boreholes.
	From		and the state of t
orehole Diameter 3	To some	20.0 ft	
Arenate manueles		10 in	
irrace Completion	flush to surface	e manhole w	vith 2'x2' concrete pad; locking expandable plug



Elevation 4	Ground 3	135.00 ft	Loggeo 11/12/00 11/12/00 11/12/00
(NGVD of 1929)	100	134.43 ft	Constructed 11/12/00 10 11/12/00 VAN 108 02 (60)
Casing Sales Free	a Lancing a	35 ft	11/20/00 AVX 08 (55.45)
ពីជាហ្វាមែនកម្លៀប	Diameter #		
	From	35.0 ft	1章2088では1998年 MOMMATTCUTIC 1、PITVIA D / 1
creen-	In the last	45.0 ft	Reviewed By Christopher J. Mattair, P.G.
stainless steel 😸 💐	Diameter	TJ.U II	Moretrench, Inc.
owike) i i i i i i i i i i i i i i i i i i i	Significant	2 in	The state of the s
	Open was	0.02 in	
		%	Drilling Method and Sonic, continuous 3" diameter core
rout = = = = =	From: 12	1.0 11	Well developed by purging followed by air lifting and purging.
	TOWNE	31.U II	• • • • • • • • • • • • • • • • • • • •
entonite	From 1888	31.0 ft	
	10 核構製	33.0 ft	Location bored to 100 feet below grade and cluster wells installed in individual boreholes.
and (20/30)	From Parts	33.0 ft	oreholes.
	Towns	45.0 ft	
orehole Diameter 🎏		10 in	
rface Completion	flush to surface	manhole v	vith 2'x2' concrete pad; locking expandable plug

PROJE CLIEN	A Partition of Carl			IRCEAN MAY-108(65-45
Depth (ft)	Moisture	GRAPHIC Soll Soll Soll Soll Soll Soll Soll Sol		SOIL DESCRIPTION.
	dry	S S S S S S S S S S S S S S S S S S S	H0	Lime rock fill. Sand with silt; dark gray (5YR 4/1)
5_	moist wet		4.5	Silty Sand; 30% silt; gray (10YR 5/1) mottled with olive vellow (2.4% 6/2)
	moist		9.3	Clayey Sand very fine, 30% clay; gray (10YR 5/1) mottled with olive yellow (2.5Y 6/8) 8.5 feet the color is brownish yellow (10YR 6/8); below 8.5 feet the color is gray (2.5Y 6/1)
	wet		20.5	Silty Sand, very fine, 15% silt; light gray (10YR 7/1) Sand, fine, light brownish gray (2.5Y 6/2) grading with depth to white (5Y 8/1) interbedded with Clay beds. up to 50 mm thick; greenish gray (10Y 6/1); clay beds decreasing in frequency with depth of the
非常性和相对的			23.0	and, fine with a trace of coarse; pale yellow (2.5Y 8/2); < 5% silt ayey Sand, fine, 15% clay; light gray (2.5Y 7/2; muscovite present throughout entire core



Elevation .	Ground Sal	135.00 ft	11/12/00 11/12/00 11/12/00
(NGVD of 1929) #	POGME	134.27 ft	Constructed 11/20/00 10 11/20/00 VALVAGE 11/20/00
Casing		46 ft	Developed \$1,000 (40-S6)
(staintess steel) = 1	Diameter		11/21/00 11/25/00 11/25/00
	Reon # 4	46.0 ft	Reviewed By. Christopher J. Mattair, P.G.
Serecia - Caralles		56.0 ft	Drilling Sompany Moretrench, Inc.
Giainless steel.	Diameter		David Sanford
Gennlessotes). Aviron (1911)	Slot Size #	0.02 in	Drilling Equipment Rig No. 0494
	Onen et a	%	Driving September 1988 No. 0494
	Eron Ba	1.0 ft	Drilling Method Sonic, continuous 3" diameter core
rone	10 34 54	42.0 ft	Well developed by purging followed by air lifting and purging.
lentonite.	From 25	42.0 ft	
entonite : 1	To Tables		Location based to 100 C
	Eron Supp	44.0 ft	Location bored to 100 feet below grade and cluster wells installed in individual boreholes.
and (20/30)	To Wast	60.0 ft	
orehole Diameter		10 in	
urface Completion	flush to surface	manholeu	rith 2'x2' concrete pad; locking expandable plug
	Times to Surface	maimole W	Attn 2'x2' concrete pad; locking expandable plug

* #225 EAR * CO.	Johans.	TION	產 Wayc	ross, Geo	rgio con esta de la companya de la companya de la companya de la companya de la companya de la companya de la c
PRO	No.		部 Y:Pai	t B Pern	NORGRAY
CLII	EN		議議 CSX引	tauspor	ENDER (10-STOP)
©			GRAPHIC		SOLED SERVICOS
Depth (Recovery	Moisture			
å	Rec	2			
				" 0.	s Lime rock fill.
		dry	I∃ ₩		Sand with silt; dark gray (5YR 4/1)
				3.	
5		moist	l	4.:	Silty Sand; 30% silt; gray (10YR 5/1) mottled with olive yellow (2.4Y 6/8)
		wet			Clayey Sand, very fine, 15% clay; gray (10YR 5/1) mottled with olive yellow (2.5Y 6/8)
				6.5	
		moist			Clayey Sand very fine, 30% clay; gray (10YR 5/1) mottled with yellow brown (10YR 5/6); from 8-
	語数				(10 1 R 6/8); below 8.5 feet the color is gray (2.5Y 6/1)
10-				9.3	Silty Sand, very fine, 15% silt; light gray (10YR 7/1)
	**************************************	i: 2			Sand, fine, light brownish gray (2.5Y 6/2) grading with depth to white (5Y 8/1)
				1	interbedded with
1 12	1				Clay beds, up to 50 mm thick; greenish gray (10Y 6/1); clay beds decreasing in frequency with depth
15_4		· 344			m requeries with depth
			▓≣		
	Ι.	vet			muscovite is present throughout the interval
匿	Ι΄	101 See			
20					#
				20.5	
			 	s	and, fine with a trace of coarse; pale yellow (2.5Y 8/2); < 5% silt
			₩	23.0	, , , , , , , , , , , , , , , , , , ,
黨			₩ ii-f		layey Sand, fine, 15% clay; light gray (2.5Y 7/2; muscovite present throughout entire core
25		總			2. Muscovite present throughout entire core
				-	

	LOCA	TION	建 族 (V	layer	ीरास ्ट िस	
	PROJ	CT				TO MODELLA CONTRACTOR OF THE PARTY OF THE PA
	CHIEN	行李				Eudining VIVIIII (\$105515)
		Moisture	Well all 19	PH(e		₹6)15.(1)± ₹6 (₹1≥13(6)₹1
					26.	
	30				29.	Sand, fine with 10% clay; light greenish gray (10Y 8/1); intervals with medium sand, muscovite present; possible kaolinitized feldspar present
					30.0	Sand, medium with a trace of coarse; 10% clay; pale yellow (5Y 8/2); muscovite present
					31.0	Joseph Carlo, 100, 2070 Stit, Occasional medium sand present
						Sand, fine; with 10 % clay matrix; light gray (2.5Y 7/2);
	35					some intervals have coarser sand and some are more clayey
					37.0	•
						Sand, medium; light gray (2.5Y 7/2)
	40	ĺ	- 📟			fine sand increases to 30% of content from 38 to 40 feet
	"一劃	4			40.0	intervals of bluish gray (5PB 5/1) present from 39 to 40 feet
			***		40.8	Saild, medium; dark gray (N4/): < 5% silt
		wet	****		43.0	Sand, medium with a trace of fine gravel; light gray (2.5Y 7/2); with an occasional lens of bluish gray sand; < 5% silt
				****	43.5	Wood
4	5_				44.8	Sand, medium; light brownish gray (2.5Y 6/2); < 5% silt
					15	Sand, fine with 10% silt; light gray (2.5Y 7/2).
			3	L	47.0	two 2 mm thick laminae of greenish gray (5GY 5/1) glay googs in this is a
		2.2	3		S	Sand, fine with 10% clay as matrix; grayish brown (2.5Y 4/1); muscovite present
50						,,
					50.5	
					s	and, medium with gravel up to 1/2-inch long; dark gray (2.5Y 4/1);
l					31.8	a 50 mm thick bed of clay is present at 51.5 feet
					Ic	layey Sand; light yellowish brown (2.5Y 6/3);
55		Ē				50 mm thick beds of greenish gray (10Y 5/1) clay are present in the interval
		!				
60						
				美国教育	60.0	

Elevation je	Ground as	134.50 ft	11/12/00 11/12/00 11/12/00
(NGVD 861929)	TOCHE	133.99 ft	11/12/00 11/12/00 11/12/00 11/12/00 11/12/00 11/12/00 11/12/00
Cating Page 1	Lêngh 100	70 ft	11/12/00 11/13/00 VIV 108 6/03/50
(stainless steel)	Diameter 2	2 in	11/21/00 10 11/25/00
THE FORES	Grom Sale	70.0 ft	The particular of the property
creen 290	TO BELLEVI	75.0 ft	The state of the s
stamiess sieelk	Diameter	2 in	Party Party See Not Office and the Control of the C
wire) 🔭 🦻	Slocsize		PARTICIPATION OF THE PROPERTY
	Openware	0.02 in	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	From	%	Drilling Method Sonic, continuous 3" diameter core
rout	TO \$200.50		Well developed by purging followed by air lifting and purging.
	From Sales	66.0 ft	. 5-5
entonite	Tokesia	66.0 ft	
49/11/25/15/17	The second secon	68.0 ft	Location bored to 100 feet below grade and cluster wells installed in individual boreholes. The 70-75 feet well screen was place in the 100 feet by the state of the screen was place in the 100 feet by the state of the screen was place in the screen was placed in the scr
and (20/30)	From Aug.	68.0 ft	The 70-75 feet well screen was place in the 100 foot borehole after grouting the bottom of the borehole from 79 to 100 feet and allowing the grouting the bottom of
orehole Diameter	To sale	79.0 ft	the borehole from 79 to 100 feet and allowing the grout to cure.
cuvic Diameter S		1/1 in 1	
race Completion?	Iflush to surface	manhole v	with 2'x2' concrete pad; locking expandable plug

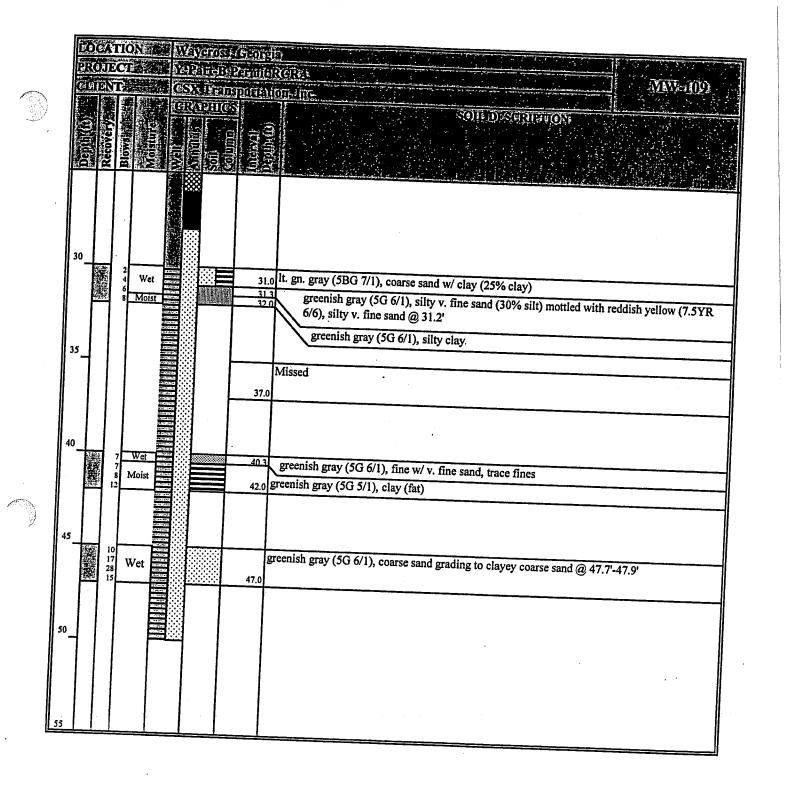
	TION 22 W	ayeross, Ge	901g(a) - 1/2 - 2/3 - 2/3 - 2/3 - 2/3 - 2/3 - 2/3 - 2/3 - 2/3 - 2/3 - 2/3 - 2/3 - 2/3 - 2/3 - 2/3 - 2/3 - 2/3
PROJ	ECT #25 Y:	Part-B Per	mile Report
CLIEN	der Control Columns	X Transpo	mailon inc. WWws 08 (70-57)
Depth (ff)			SOLDESCRIPTION:
			0.5 Lime rock fill.
	dry		Sand with silt; dark gray (5YR 4/1)
	moist 🐰		Silty Sand; 30% silt; gray (10YR 5/1) mottled with olive yellow (2.4Y 6/8)
5_			Clause See 1
	wet &	6	Clayey Sand, very fine, 15% clay; gray (10YR 5/1) mottled with olive yellow (2.5Y 6/8)
	moist	9.	
一震		10.0	0 Silty Sand, very fine, 15% silt; light gray (10YR 7/1)
			Sand, fine, light brownish gray (2.5Y 6/2) grading with depth to white (5Y 8/1) interbedded with Clay beds. up to 50 mm thick; greenish gray (10Y 6/1); clay beds decreasing in frequency with depth
3. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	wet		muscovite is present throughout the interval
		20,5	
		23.0	Sand, fine with a trace of coarse; pale yellow (2.5Y 8/2); < 5% silt
			Clayey Sand, fine, 15% clay; light gray (2.5Y 7/2; muscovite present throughout entire core
			2, muscovite present throughout entire core

DOCATION PROTECT	E Wavenood	engla:	
ATTEN THE REAL	Mariena Lieus	mis(GKX)	WANFIOE (70-7)
	ESETTATION ORANITES	DESTRUCTURE	
		(a) (a) (a) (a) (a) (a) (a) (a) (a) (a)	
TOTAL ES	Hattentirrennary		
		lower 0.8 feet has a higher clay content	
		Sand, fine with 10% clay; light greenish gray (10V 9/1), the	als with medium sand, muscovite
30	{ ₩		
		Sand, medium with a trace of coarse; 10% clay; pale yellow (5	Y 8/2); muscovite present
	ræmenentu	Sand, fine; 20% silt; occasional medium sand present Sand, fine; with 10 % clay matrix; light gray (2.5Y 7/2);	
	: ₩		
		some intervals have coarser sand and some are more clayey	,
35_			
	 	7.0	
	 	Sand, medium; light gray (2.5Y 7/2)	
	 	fine sand increases to 30% of content from 38 to 40 feet	
	0000	intervals of bluish gray (5PB 5/1) present from 30 to 40 fort	<u>t</u>
	₩ 14	spand, medium; dark gray (N4/): < 5% silt	
	> 1	Sand, medium with a trace of fine gravel; light gray (2.5Y 7/2); sand; < 5% silt	with an occasional lens of bluish gr
		Wood	
	CXXX:::::::::::	8 Sand, medium; light brownish gray (2.5Y 6/2); < 5% silt	
	₩	Sand, fine with 10% silt; light gray (2.5Y 7/2);	
	₩ 47	two 2 mm thick laminae of greenish gray (5GY 5/1) clay occ	
wet		Sand, fine with 10% clay as matrix; grayish brown (2.5Y 4/1); m	ur in this interval
	▩ /	, Basis Blown (2.51 4/1); m	uscovite present
	50		
	₩	Sand, medium with gravel up to 1/2-inch long; dark gray (2.5Y 4/	
	8	a 50 mm thick bed of clay is present at 51.5 feet	/1);
		Clayey Sand; light yellowish brown (2.5Y 6/3);	
		50 mm thick beds of greenish gray (10Y 5/1) clay are present	in the interval
[8]			
	60.0		
	Š.	Clayey Sand; light olive gray (5Y 6/2)	
[雲]		·	
※ ※ ※ ※ ※ ※ ※ ※ ※ ※		with beds of clay up to 0.5 feet thick; greenish gray (5GY	7 5/1)
∰ ∰ ₩		kaolinitized feldspars present throughout interval	
辑			
		zone of Sand, fine to medium; < 5% clay or silt; from 65 to 66 f	feet
		unit becomes sandier below 65 feet	
		section of the sectio	
※ ※ ※ ※ ※ ※ ※ ※ ※ ※ ※			
G. [359] - 1	70.0		

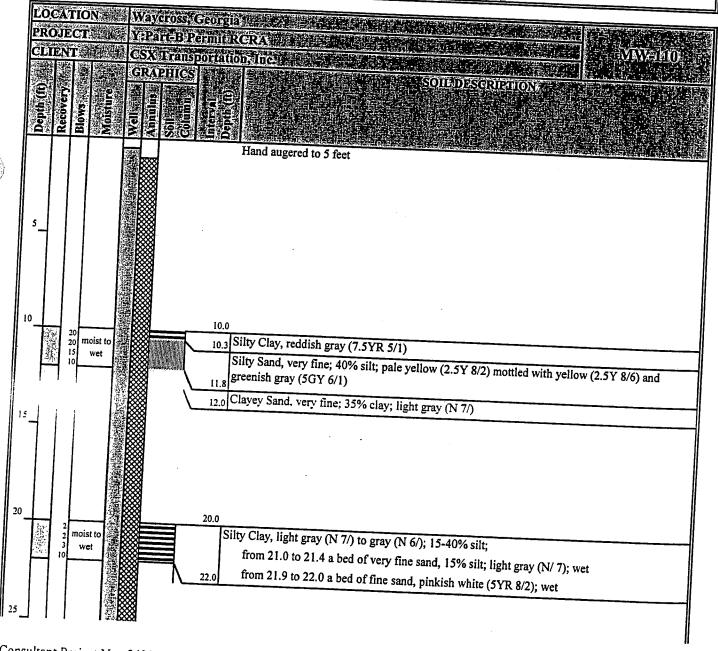
ECCATION:	CONTRACTOR OF THE PARTY OF THE			
PROJECT 32	ACCUSE OF THE PARTY OF THE PART	रेक्ट्या इस्तिस्त		
GATANTE - S	墓 (SXTFin	porestions inc.		MAN WEIGHT
	GRAPHICS		युगाम् ग्रेट्स्या	141(0))
		_3 !		
		Zāl,		
		Lost core	the state of the s	
		72.0		
		Sand, fine with	10-15% matrix clay; pale yellow (5Y 8/2 (5Y 5/1) color ocurrs	D) at 72 5 5 4 20
wet E				
75		Sand, fine with	medium; light greenish gray (10Y 7/1); <	5% silt
		70.0		
		(5GY 6/1)	ght gray (2.5Y 7/2); with a 1 foot thick be	ed of greater clay matrix that is greenish
30_ 3 8		80 o Clavey Sand: gre	feet is black (N 2.5/) with bog iron su	ggesting swamp complex
		Fat Clay: greenis	reenish gray (5GY 5/1); clay increasing wish gray (10Y 6/1)	ith depth
		01.5	•	
moist 🛞		Tat Clay, dark bi	luish green (5B 4/1)	
, 📳 🗮		84.0		
´┪╣		Clayey Sand, 209	% clay; greenish gray (10Y 6/1);	
		a 2-inch thick	k stramm and the t	
		I ME SARO CONTA	k swamp comlex bed is present at 87 feet tent increases with depth	
- }} ₩	₩}			
wet 🗱		Clayey Sand, 30%	% clay; pale olive (5Y 6/3)	
 		3.5		
		Sandy Clay; green	nish gray (5GY 6/1)	
78/		1		
moist				
■		,		
		0.0		
dry ‱	100	o Clayey Sand; pale o	olive (5Y 6/3); streaks of black organics a	

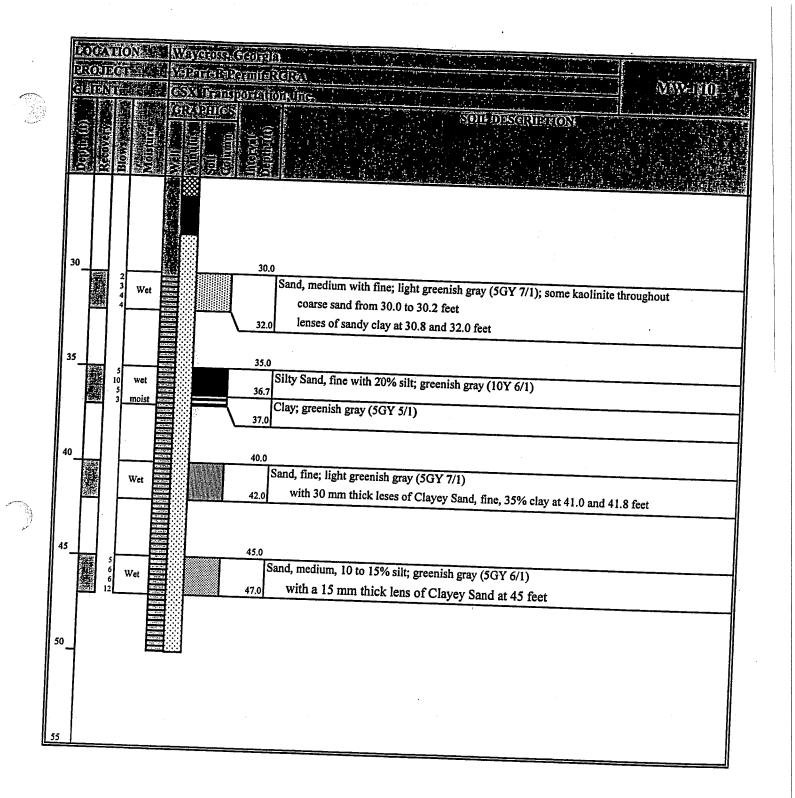
edvilor NGVD0 1979)	Ground M	133.00 ft	120ggal 8/27/01 8/27/01	I SAVEZ CONTRACTOR
Catility - 1.2.4(s.c		133.54 ft	COURT TOTAL COURT	VAV-(10)
40 PVG	T-Sugar		Daveloped and all form	
			Oren Reedy	A Company of the Comp
		30.0 ft	Reviewed By Christopher I Mattain P.C.	
svich Belleldinge	16:	50.0 ft	Dalling Company Partridge	
	Dimeter	2 in	Allan Kelly & Gary Oakes	
lotico);;	Slovsine	0.02 in	Drilling Equipment Drilmaster 400	
なる。大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大学の大	Opens #	%	Drilling Viction Mud Rotary	
rone de la company	il Crompage	1.0 ft	Well developed by purging.	
	TORNERS	26.0 ft	rasof parsing.	•
lenionite.	From Mark	26.0 ft		
	10歲數器	28.0 ft		ı
and (20/30)	E From The	28.0 ft		
一种,一种,一种,一种,一种,一种,一种,一种,一种,一种,一种,一种,一种,一	形 10 薄红紫绿黄色	50.0 ft		l l
orehole Diameter		Q in		ll l
urface Completion	flush to surfac	manhole v	ith 2'x2' concrete pad; locking expandable plug	

CSP-CSQ-ASS-C-Verya Darks		2.12 concrete pau, locking expandable plug
LOCATION	Waxeross Georgia	
PROJECT ^N	YeBarteBeremitaRer/A	
CUENT	ESXetterispoerioneling	MW-UV
		SOMEDECERITATION
Depth (ff) Recovery Blows	Well, Annul	
	Hand a	liger
	┋ 綴	
	፮▩	
⁵ -	5.0	
,		
5 Wet	William Landt here of	70. (10VD c/o)
6 Moist	11.0 lt. of it. green	ray (10YR 6/2), silty v. fine sand (45% silt)
	fine s	nish gray (10Y 6/1), sandy clay, with 25 mm thick lens of dk. red gray (7.5R 4/1), silty sand @ 11.8'
-		
	₩	
2	######################################	
² Moist	₩ It. gn. gray	y (5GY 7/1), clayey sand (35% clay) w/ 5mm thick lens of clay throughout
3	22.0	
	₩	
	₩	
	991	

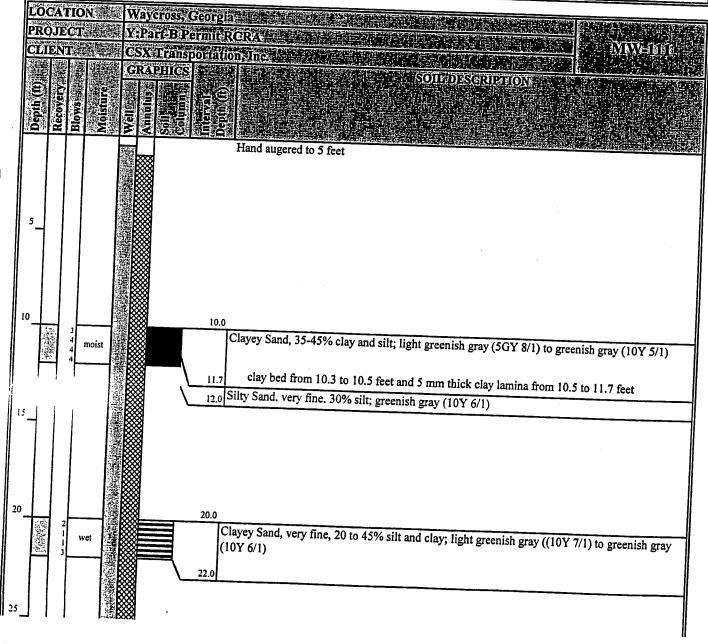


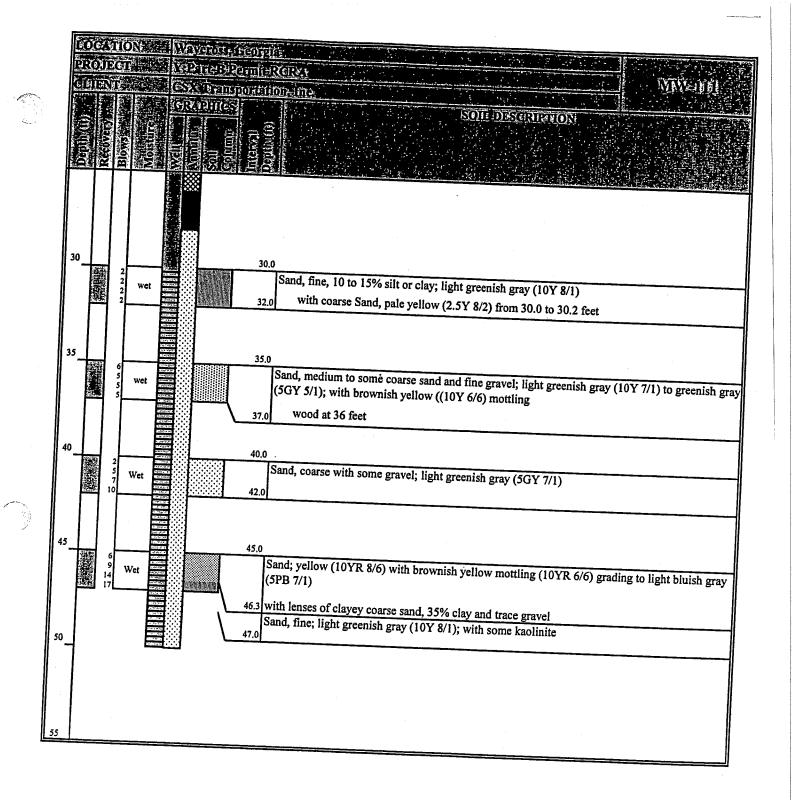
Clevation S	Ground 10	133.00 ft	Logger 8/28/01 8/28/01 8/28/01 8/28/01
Elevation (NGVD of 1929)	9 (9 (e 3 (e 3 (e 3 (e 3 (e 3 (e 3 (e 3	132.71 ft	0/20/01
Casing - See (SC)		30 A	Description 8/28/01 10 8/28/01 VAV-100 Description 8/28/01 10 8/2
40 PVC) 44 1	Diameter !	2 in	Solution S/28/01 S/28/01 S/28/01 Daysloped S/28/01 S
	Forest	30.0 ft	Reviewed 1994 (1995)
oreen .	TOME TO SE	50.0 ft	Reviewed by Christopher J. Mattair, P.G. Drilling Company Partridge
SCH40 PVC	Diameter	2 in	Partridge
lottea)	Slot Size	0.02 in	Lead Dille And Allan Kelly & Gary Oakes
	Open Market	%	Drilling Equipment Drilmaster 400
	From	1.0 ਜ	Drilling Method Mud Rotary Well developed the Mud Rotary
rout Sam	TOTAL	26.0 ft	Well developed by purging.
entonite	THE RESERVE AND ADDRESS OF THE PERSON NAMED IN	26.0 ft	
	TO AND	28.0 ft	
建筑工程 网络拉拉斯 计设计模型	From Will	28.0 ft	•
and (20/30)	TOTAL	50.0 ft	
oréholeDiameter 🎥			
rface Completion	flush to surface	8 in	ith 2'x2' concrete pad; locking expandable plug
	arrasii to surface	mannole w	1th 2'x2' concrete pad; locking expandable plug





Elevation		133.00 ft	120ggci 110 4 125 com 8/29/01 12 12 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15
(NGVD 66 1929)	TOGANA	132.71 ft	Gonstructed 8/29/01 8/29/01 8/29/01
Casing SE 4(SCH	Length	30 ft	DATE 0/29/01 0/29/01
(0.P.Y.C.) 第三章注意	Diameteria	2 in	From 8/29/01 8/29/01 10 8/29/01 10 10 10 10 10 10 10
	From Land	30.0 ft	
creen - 24 - 25	TO SERVICE	50.0 ft	Christopher J. Mattair, P.G. Drilling Company Partridge
SCH 40 PVC	Diameter	2 in	Lead Drilles Allan Kelly & Gary Oakes
lotted)	SIGNSIZE	0.02 in	Drilling Squipment Drilmaster 400
	Open disagr		Drilling (Gibot) Mud Rotary
rours and a second	Erom Tales	1.0 ft	Well developed by purging.
一种大学的一种大学的一种	TO E SE	26.0 ft	to the bod by purging,
entonice	Prom Sala	26.0 ft	
	Towns	28.0 ft	
ind (20/30)	From Page	28.0 ft	
THE CONTRACTOR OF STREET	To調體的	50.0 ft	
orehole Diameter 🎉		8 in	
rface Completion	flush to surface	manhole w	rith 2'x2' concrete pad; locking expandable plug



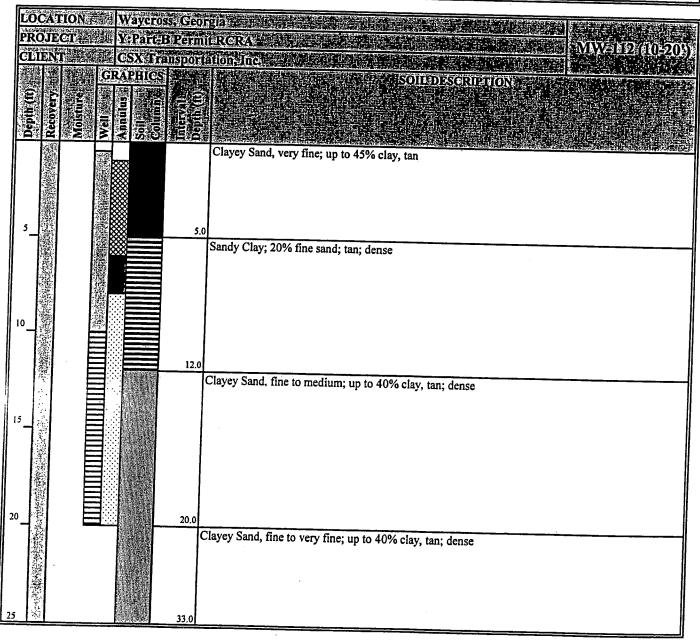


C	A S	RCADIS	LPABS MW	-111(10'-20') BORING AND N CONSTRUCTION	WELL
CSX, li Hump Y Waycross	Yard	Date Started Date Completed Hole Diameter Drilling Method Drilling Contractor	: 02/10/2015 : 02/10/2015 : 6.0" : Sonic : Тегта Sonic International	Driller : Total Depth Drilled : Prepared By : Ground / Top of Casing Elevation :	
<u> </u>	USCS	DESC	CRIPTION	DEVELOPMEN Development Technique : Surge and Development Dates : 02/12/201 Fluid Loss During Drilling : 25 gallons Water Removed During Development : 35 gallons WELL CONSTRUC	d Purge 5 s
6 7 8 9	AL.	Sandy Silt, 60% silt, 40% plasticity, tan until 6 ft bls moist	sand, fine grained, stiff, slight where it transitions to grey,	drilled hole Backfill Grout Portland Ce Bentonite S	ement lurry ellets
10 11 12 13	21	Silty Sandy Clay, 70% cla medium plasticity, fine gra	y, 15% silt, 15% sand, stiff, ined, light grey, moist	Gravel Pack	
14 Mi	AL .	Sandy Silt, 60% silt, 40% plasticity, light grey, moist	sand, fine grained, stiff, slight	Sand Pack GP#	74
17	м	Silty Sand, 65% sand, 35% grained, stiff, light grey, m	% silt, fine to medium oist	Gravel Pack Sand Pack Formation Collass Well Screen. 2 PVC SCH 40	ch diameter 0.01_slot
21 CI 22 SM	-	grey, moist	fat clay at 20 ft bls ine to coarse grained, light		
23 24 25 26 27 28 29 30 31 32 33		Silty Clayey Sand, 75% sa fine to coarse grained, sof End boring			

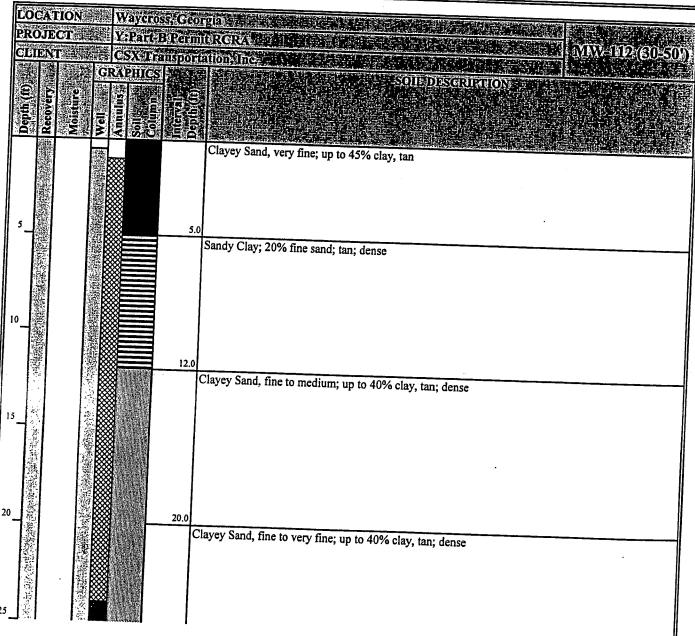
	9	A	RCADIS LPABS MW-111(76)'-80') BORING AND WELL CONSTRUCTION
CS	K, Inc p Yar	d	Date Started : 02/10/2015 Date Completed : 02/11/2015 Hole Diameter : 6.0" Drilling Method : Sonic Drilling Contractor : Terra Sonic International	Well Purpose : Monitoring Well Driller : Adam Marshall Total Depth Drilled : 79.5' Prepared By : Glenn Skawski
DEPTH (FT)	nscs	GRAPHIC	DESCRIPTION	Ground / Top of Casing Elevation : 131.05' / 130.80' DEVELOPMENT Development Technique : Surge and Purge Development Dates : 02/12/2015 Fluid Loss During Drilling : 50 gallons Water Removed During Development : 90 gallons WELL CONSTRUCTION
0		_		LAND SURFACE
1 2 3 4 5 6 7 8 9	ML		Sandy Silt, 60% silt, 40% sand, fine grained, stiff, slight plasticity, tan until 6 ft bls where it transitions to grey, moist	7_inch diameter drilled hole
10	CL		Silty Sandy Clay, 70% clay, 15% silt, 15% sand, stiff, medium plasticity, fine grained, light grey, moist	Backfill X Grout Portland Cement
13 14 15 16	ML		Sandy Silt, 60% silt, 40% sand, fine grained, stiff, slight plasticity, light grey, moist	Well cosins
17 18 19	SM		Siity Sand, 65% sand, 35% siit, fine to medium grained, stiff, light grey, moist	Well casing, 2 inch diameter, PVC SCH 40
20	CL		Sandy Clay, 70% clay, 30% sand, well sorted stiff, medium to hight plasticity, fat clay at 20 ft bis	
21 22 23 24 25		Se !	approximately 0.5" thick, fine to coarse grained, light grey, moist	
26 27 28	SM		Silty Clayey Sand, 75% sand, 15% silt, 10% clay, fine to coarse grained, soft, light grey, wet	
30 31	SM		Silty Sand, 80% sand, 20% silt, fine to very coarse	
32 33	JIN1	W	grained, well sorted, very soft, liquid consistency, light grey, angular, wet	

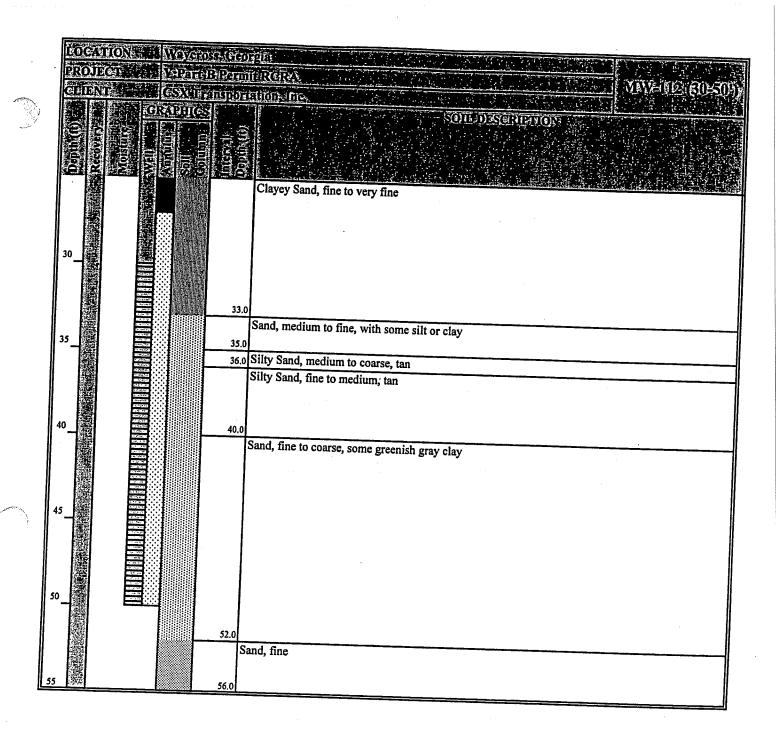
1	6	Al	RCADIS	LPABS MW-111	(70'-80') BORING AND WELL CONSTRUCTION
	, Inc. p Yar		Date Started	: 02/10/2015	Prepared By : Glenn Skawski
Waver		GA	Date Completed	: 02/11/2015	Ground / Top of Casing Elevation : 131.05' / 130.80'
DEPTH (FT)	nscs	GRAPHIC	DESC	CRIPTION	
35	_	Ø			WELL CONSTRUCTION
36 37 38 39			Not Recovered		
40	SM		angular, soft, color trans	0% slit, fine to very coars itions from light grey to d p to bottom, well sorted,	ark
50 51 52	SP		Poorly Graded Sands, fir angular, soft, grey and b	ne to medium pebble size lack	3 ,
53 54 55 56 57	CL		Sandy Clay, 70% Clay, 3 plasticity, fine to very coa green, wet	:0% sand, stiff, medium arse, angular, poorly sort	ed,
58	СН		Fat Clay, very stiff, high	plasticity, green, wet	6 inch dlameter drilled hole Bentonite Slurry pellets
67	SP		Poorly Graded Sands, fir angular, soft, tan, moist	e to very coarse grains,	
68	sc		Clayey Sand, 85% sand, to very coarse grained, g		ne
70	SP		Poorly Graded Sands, m trace clay <10% to 73.5' soft, greyish green, wet		A∏Gravel Pack ←-∑Sand Pack GP#1A ☐ Formation Collaspse
77 78 S 79 80	SC CH	X X	Lenses of fat clay and po very hard/stiff, grey wet, I Clayey Sand, 70% sand, stiff/hard, none to slight p Fat Clay, very stiff, high p moist	high plasticity in clays 30% clay, fine grained, lasticity, greenish tan, we	PVC SCH 40 , 0.01 slot

Dievotioner (NGVIDorationer	Ground 48	133.50 ft	Porga 8/30/01 8/30/01
(NGVD of 1929)		133.24 ft	Construcco 8/30/01 8/30/01 1/1/1/1/20/3/01/20/20/3/01/20/20/20/20/20/20/20/20/20/20/20/20/20/
Casing & Expense	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	10 ft	100pgct
(stainless steel) 35 a	The state of the s	2 in	Logg (or By David Pirkle
	Front Series	10.0 ft	Revieweight Christopher J. Mattair, P.G.
Screen 💮 💮 🕌	Total	20.0 ft	Delling Company Partridge
stainless steel.	Diameter	2 in	Lead Drille Allan Kelly & Gary Oakes
(-wire)	Slot Size	0.02 in	Drillings Equipmen Drilmaster 400
	Open and	%	Drilling Method Asia Mud Rotary
eroma.	Promise and	1.0 ft	Well developed by purging.
	TO SEE SE	6.0 ft	
ine Sand Seal	E rom Mark	6.0 ft	•
	To 38 262	8.0 ft	
and (20/30)	From Set	8.0 ft	
	TO STATE	20.0 ft	i
Borehole Diameter		8 in	
urface Completion /	flush to surface	e manhole v	vith 2'x2' concrete pad; locking expandable plug

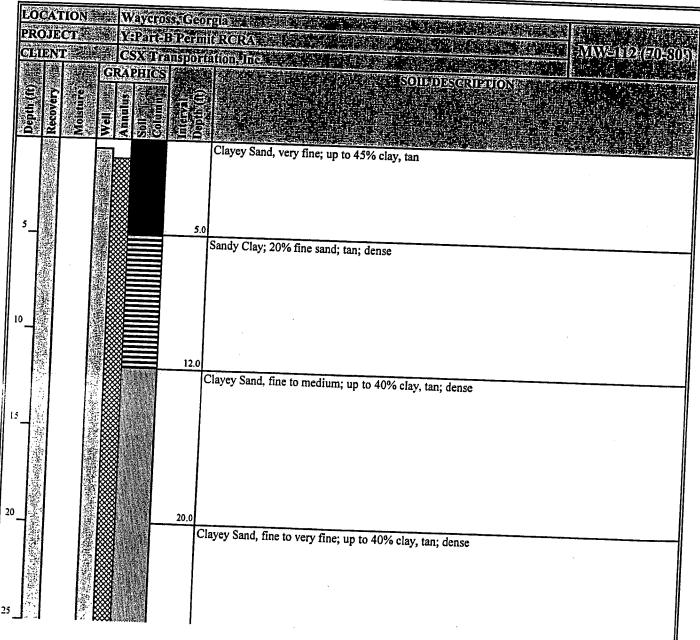


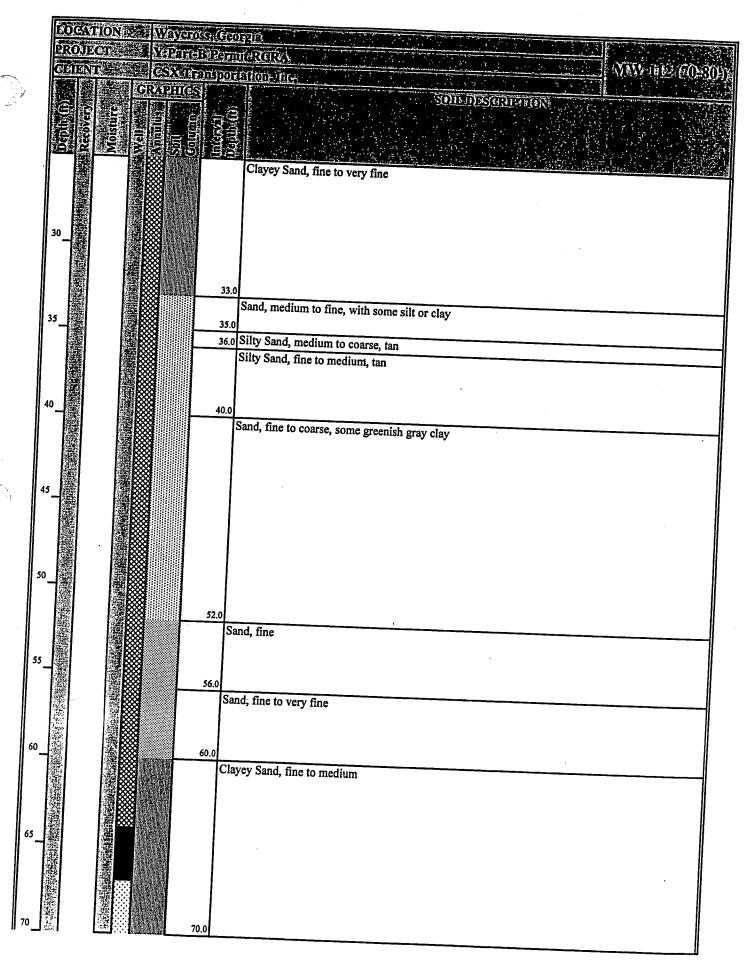
Elevation	Ground	133.50 ft	Edgect 45 15 om 8/30/01 10 8/30/01
(NGVD of 1929)	moseun	133.04 ft	Controced 8/30/01 8/30/01 8/30/01
Casing : w; 📜		30 ft	8/30/01 AV W 12 (80:50)
(stainless steel)	Diameter		
	E From Mark	30.0 ft	Reviewed By Christopher J. Mattair, P.G.
creen e	Sim in all	50.0 ft	Driffing Company : Partridge
stainless steel, 📆	Diameter 1	2 in	Partinge
eyire)	SionSize	0.02 in	Allan Kelly & Gary Oakes
	Open state	%	Drillinga retiring Drilmaster 400
rout	From E	1.0 ft	Drilling Method Mud Rotary Well developed by purging.
	TOMERES	24.0 ft	won developed by purging.
ine Sand Seal	Erom Marge	24.0 ft	•
The Sand Sear	TOTAL	27.0 ft	
	Eron W. W.	27.0 ft	
and (20/30)	TOPENSE	. 50.0 ft	
orehole Diameter		8 in	
		o III o	rith 2'x2' concrete pad; locking expandable plug
	The Surface	c mannole w	Atn 2'x2' concrete pad; locking expandable plug

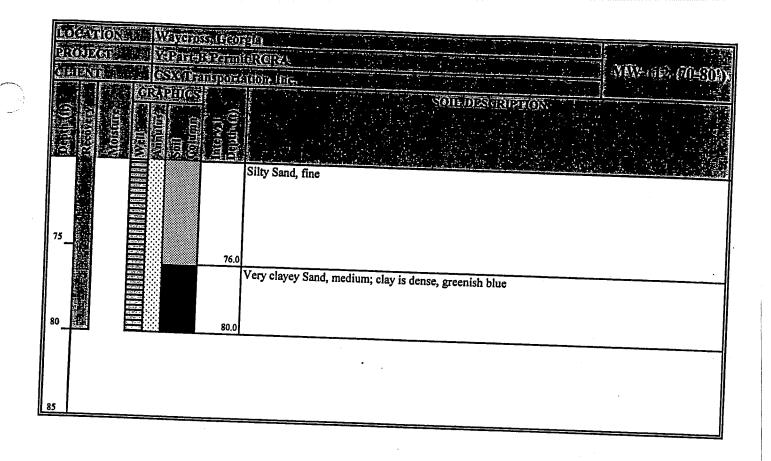




Elevation: 2	Ground Car	133.50 ft	Prom 8/30/01 8/30/01
(NGVD)of 1929)		132,90 ft	
Casing #17	# Langth # 14	70 ft	Develope: 8/30/01 16 8/30/01 (VAV-112) (FOESD)
stainless steel)	Diameter 2	2 in	Developers From 8/30/01 10 8/30/01 David Pirkle
creen .	From #	70.0 ft	Review CRE Control Pirkle
creen	107844128		Christopher J. Mattair, P.G.
tainless scel	Diameter	2 in	Partinge Partinge
wire)	SIOTSIZE	0.02 in	Read Deilig Allan Kelly & Gary Oakes
	Open was	0.02 111	Drilling Equipment Drilmaster 400
	From Male	1.0 ft	Drilling Method Mud Rotary
rout 3	Toler		Well developed by purging.
THE STATE OF THE STATE OF	Front See	64.0 ft	
ine Sand Seal	To see Esc	64.0 ft	
	From #212	67.0 ft	
ind (20/30)	Street Control of the	67.0 ft	
orehole Diameter	To the state	80.0 ft	
		8 in	
in take Completion	Illush to surfac	manhole w	rith 2'x2' concrete pad; locking expandable plug

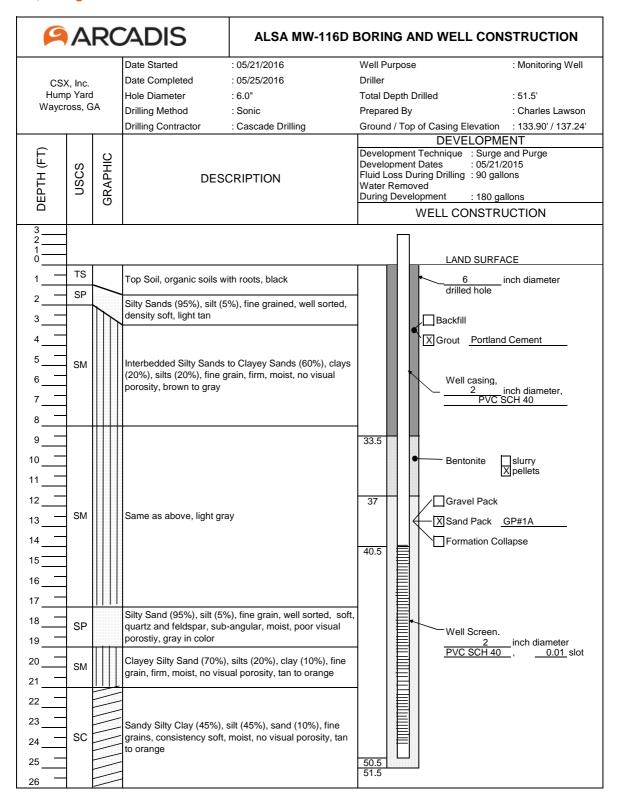








ALSA Well Construction Logs - June 2016 CSX Transportation, Inc. Waycross, Georgia

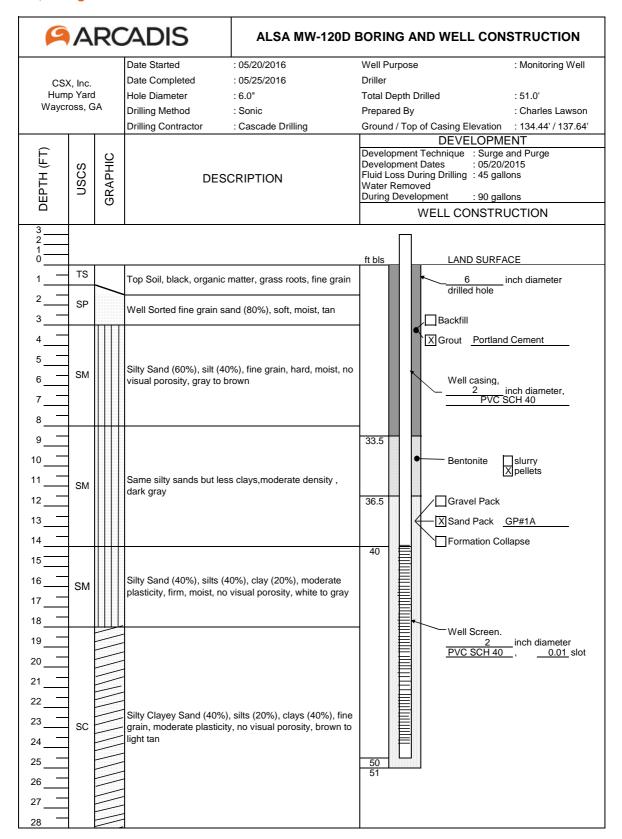




ALSA Well Construction Logs - June 2016 CSX Transportation, Inc. Waycross, Georgia

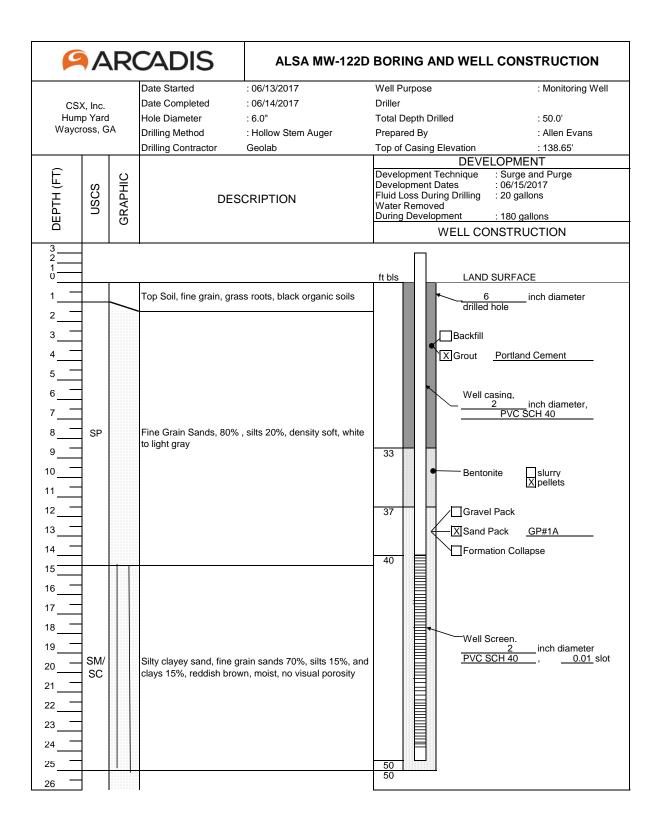
27 CH	Fat Clay, stiff, moist, gray	
29 CH	Same as above	
30	Stiff Green Clay, no fines, consistency visual porosity	v is hard, no
36 37 SM 38	Silty Sands (70%), silt (<30%), minor a fine grain, consistency soft, moist, no vigreen	amounts of clays, visual porosity,
39 SM	Same as above	
41 42 43 44 45 46 47 48 49 50	Lost core due to fine and coarse sand, gray	I, light green to







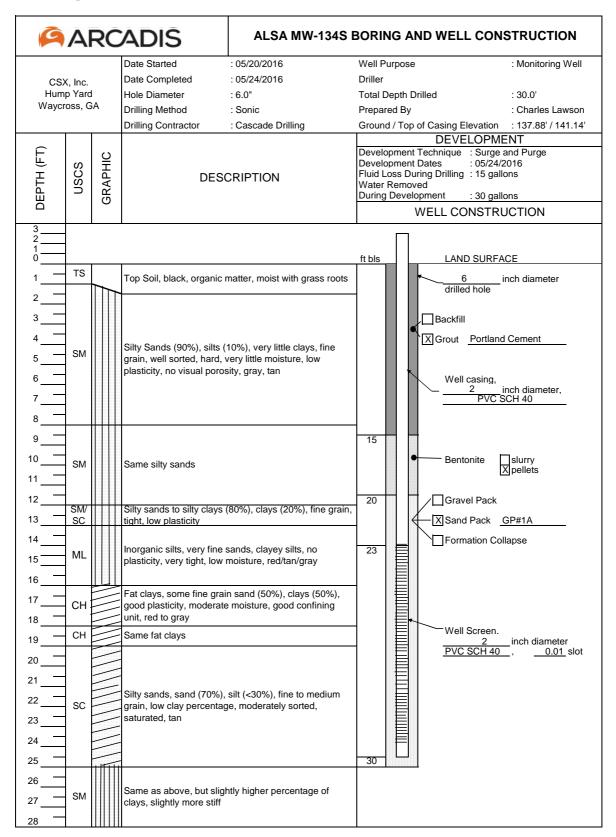






27	SP.	Poorly sorted fine grain sand, density firm, red to brown, moist, very little clays	
36		Silty clayey (30%) sand, fine to very fine grains (70%), consistency firm, gray, saturated	
47 — 48 — 49 — 50 — 51 — 52 — 51 — 55 — 55 — 57	SP .	Silty to fine grain sand, 70%, gray to green, with white lenses of sand about 1/8" thick, saturated, low visual porosity	
58 SM 59 C		Upper portion of core fine to medium grain sand, gray, density is loose; lower portion of core is silty clay to clay, stiff, green	

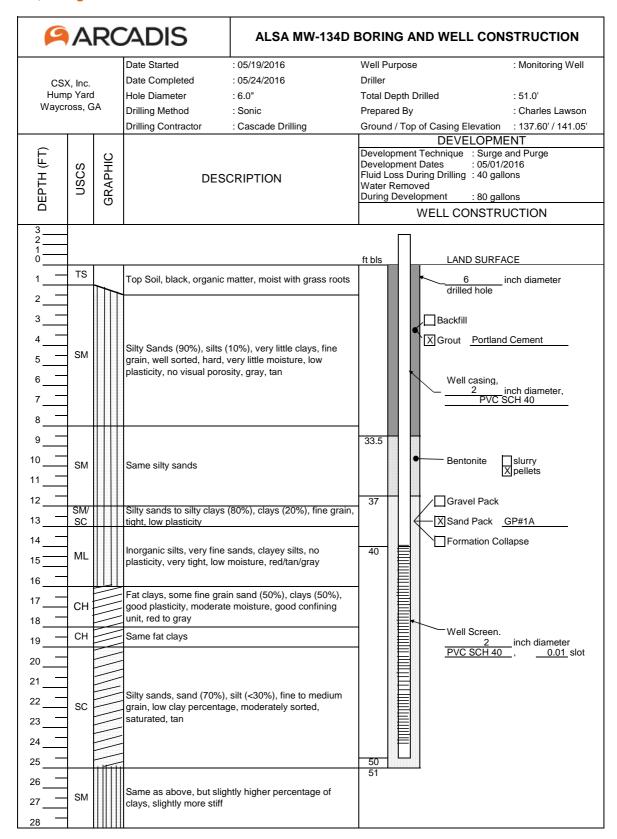






29 SM Same as above

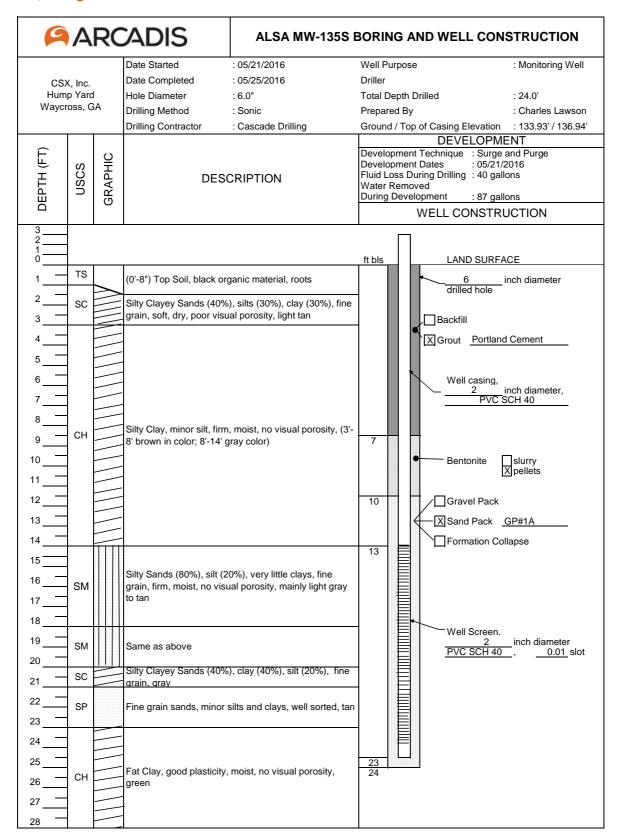




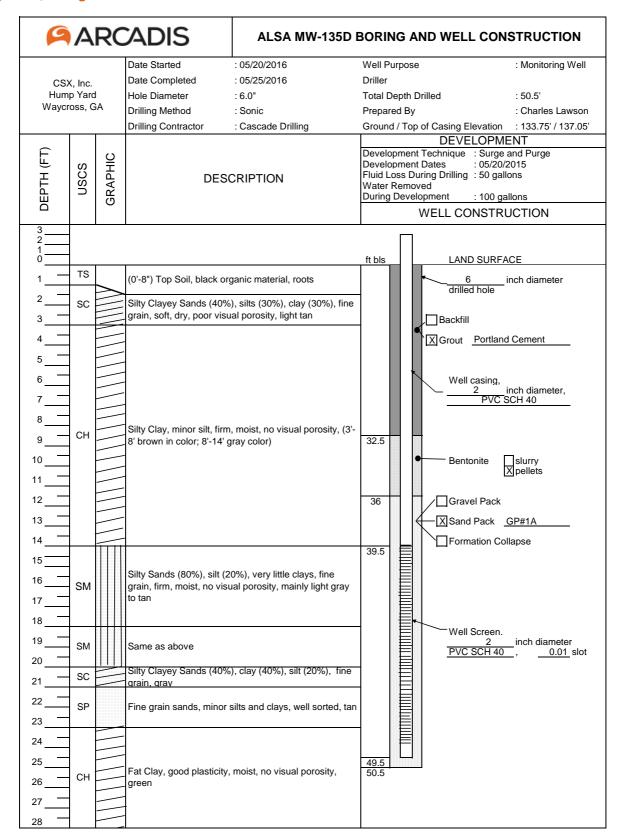


		П	П		
²⁹ — s	SM			Same as above	
30					
31					
32					
	SC			Fine grain sands (60%), silty clays (40%), moderate plasticity, no visual porosity, moist, tan with gray	
33				streaks	
34					
35					
36]			Silty sands, fine to medium grain sand (70%), silt (<30%), low percentage of clays, moderately well	
37	SM			sorted, moderate visual porosity, saturated, density	
-			Ħ	firm. light tan	
38					
39					
40					
41				Some gravel, fine to coarse grain sands, some silts,	
42 - 5	SP			poorly sorted, quartz and feldspar, sub-angular, good	
43				visual porosity, density soft, tan/gray/yellow	
44					
-					
45					
46		Ш	H		
47 s	SP		Ш	Some gravel, very coarse sands, quartz and feldspar,	
48				sub-angular, poorly sorted, gray	
49 —	SP			Sama as above	
50	אכ			Same as above	
00		1 11	11	U L	





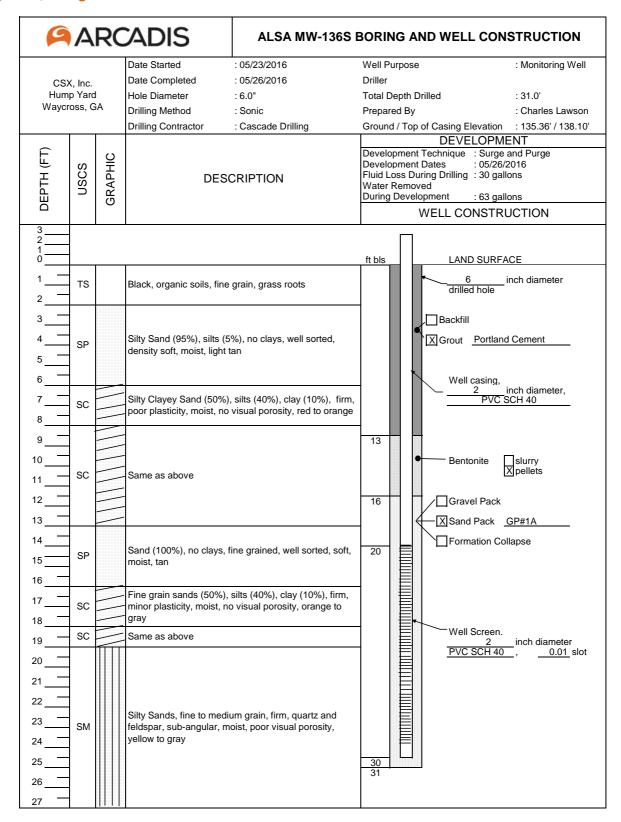






29 30 31 32 CH 33 34 35	Fat Clay, firm-stiff, green	
36 37 38 39 40	Clayey Silty Sand (70%), silts (20%), clay (10%), fine to medium grained, poor visual porosity, quartz and feldspar, sub-angular, tan	
41 42 43 44 SP 45 46 47 48	Silty Sand (90%), silt (10%), fine to coarse grained, poorly sorted, soft, moderate visual porosity, quartz and feldspar, sub-angular, saturated, gray to light green	
49 SC 50	Clayey Silt (80%), clay (20%), firm, green	

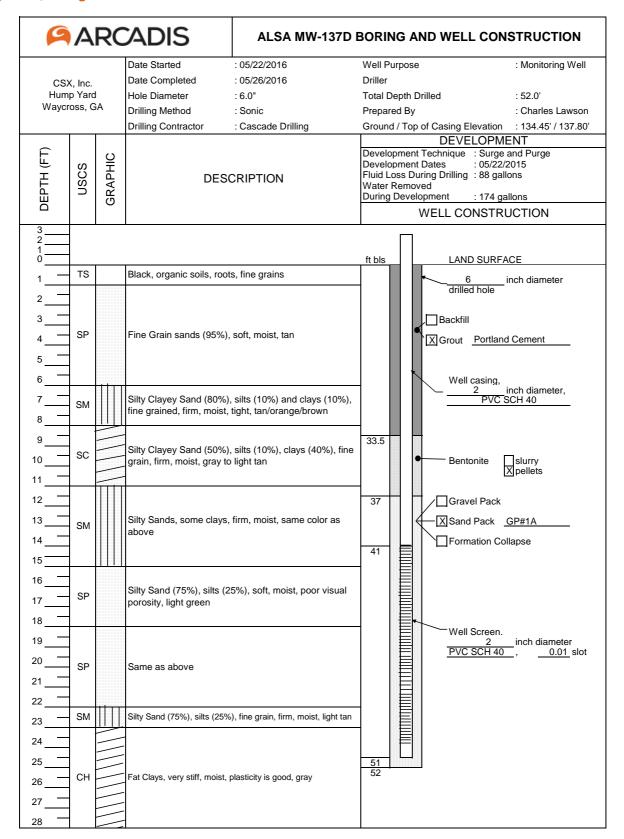






28	SP	Well Sorted sands (80%), silts (20%), no clays, density soft, moist, poor visual porosity, gray to light gray
29 30 31		
32	ML	Silty Clay, some fine grain sands, hard and stiff, moist, low visual porosity, slight plasticity, tan/gray/greenish color
34		
36		

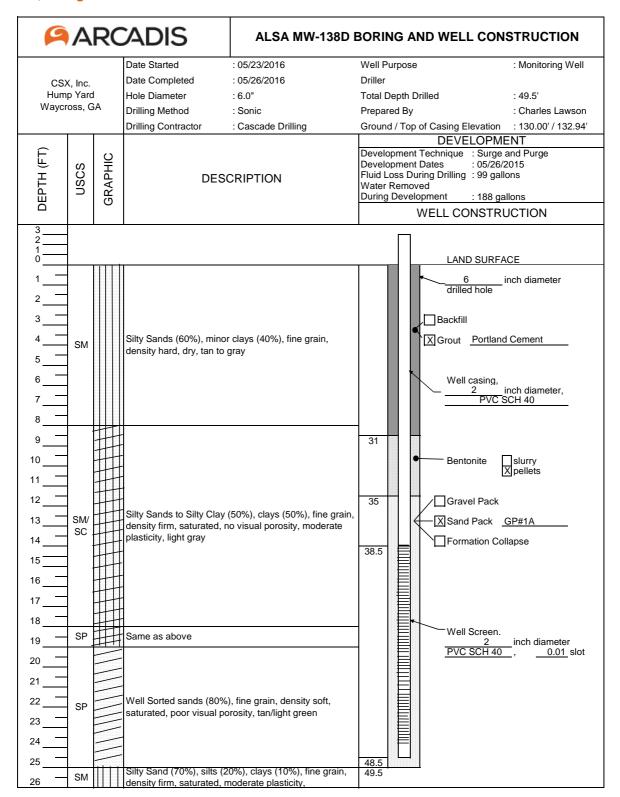






		$\overline{}$		
29	СН		Same as above	
30				
31	SC		Clayey Sand, fine grains, firm, moist, low visual	
32	00		porosity, increasing clay content with depth, gray to tan	
34				
35	ML		Clay, inorganic, very tight, hard, low moisture, low plasticity, green	
36				
38	sc		Clayey Sand (80%), clays (20%), fine grained, soft, saturated, green	
-				
40			Clayey Sand (80%), clays (20%), fine grained, firm,	
41 —	SP		moist, poor visual prosity, green/gray color	
			most. 2001 Yisual Diosity, dicellidiay colo	
42			Sand (100%), fine to coarse grained, soft, quartz and feldspar, sub-angular, saturated, moderate visual	
43				
=				
44	SP			
45			porosity, orange to yellow	
46				
40				
4/				
48				
49	SP		Same as above but decreasing grain size, saturated,	
			color change to greenish/gray	
50				







27 M	ИL		All clays, no fine grains, stiff, consistency firm, greenish/bluish
29 30 31 M 32 33	ИL		Same as above, some fine grains, consistency hard, minor plasticity, greenish/bluish color
34 35 36 M 37 38	ИL		Same stiff clays, with fine grains, same color
39 SI	SM		Silty sands (75%), clays (25%), consistency firm, saturated, same color (bluish/greenish)
-	iM/ SP		Silty Sands (80%), silts (20%), well sorted, fine to medium grain, density firm, saturated, no visual porosity, greenish/bluish
44 45 46 47 S 48 49 50	SP		Sands (95%), silts (5%), fine to coarse grain, poorly sorted, density soft, quartz and feldspan, sub-angular, saturated, good visual porosity